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Future-Proofing Client Lifecycle Management

Part 1- Using Postman to call APIs

Getting your environment variables setup and doing the authentication

Using Postman to Call Fenergo APIs

- Download and Install Postman **https://www.postman.com/downloads/**
- Create a new project.
- Create an Authentication API Call
- Configure Variables so the Access Token and Tenant Id is available to other API calls
- Make a Fenergo API Call to Query a Legal Entity.

Some Required Details

- Client Credential
  - Client Id
  - Client Secret
  - Scope
- Tenant Id
- The URL endpoint for the Fenergo Identity Provider
- The URL endpoint for the Fenergo API Gateway

In Summary

- Created 2 API Methods in Postman
- Authorization Request
- Parsed the response and set some Postman Variables
- Made a QUERY Api call to retrieve Legal Entity Data

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Part 2 - Creating an Entity with APIs

On the Fenergo SaaS Platform

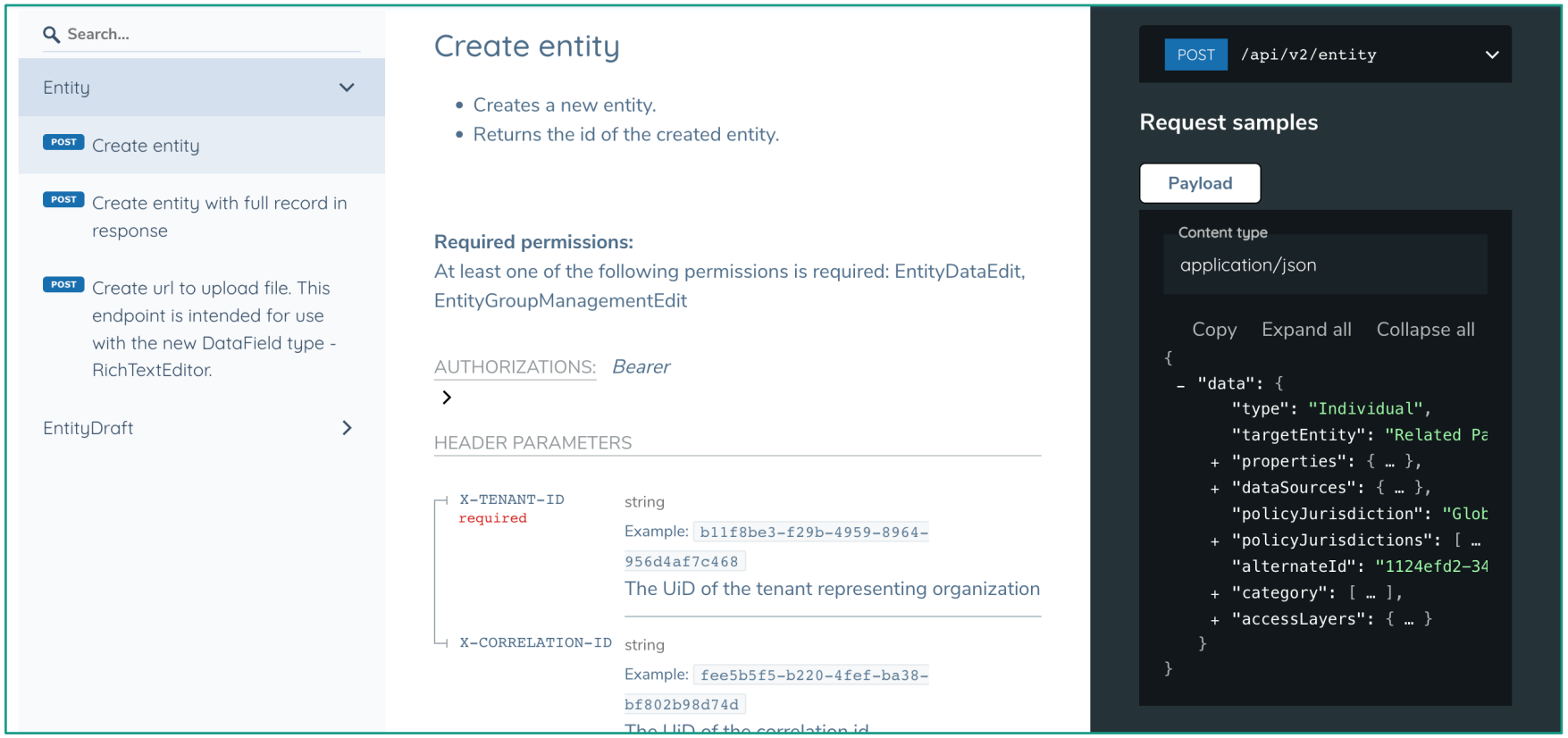
George McGrane

Using Postman to Create an LE

- Before this – Review the video to Make API calls with Postman.
- Look at the Create Legal Entity Swagger Document Specification
- Take the boilerplate request and edit it
- Make the API call
- View the LE record created on the Fenergo UI

Look at the Redoc Spec

- The API document we want to look at is available on the Fenergo Document Portal at: ***https://docs.fenergox.com/api-docs/entitydata-command-v2***



In Summary

- Took the default sample request from the API Specification.
- Broke it down and simplify the request.
- Made the API Call to Create the new Legal Entity
- Looked at the Entity in the Fenergo User Interface
- Retrieved back the Entity with the API.

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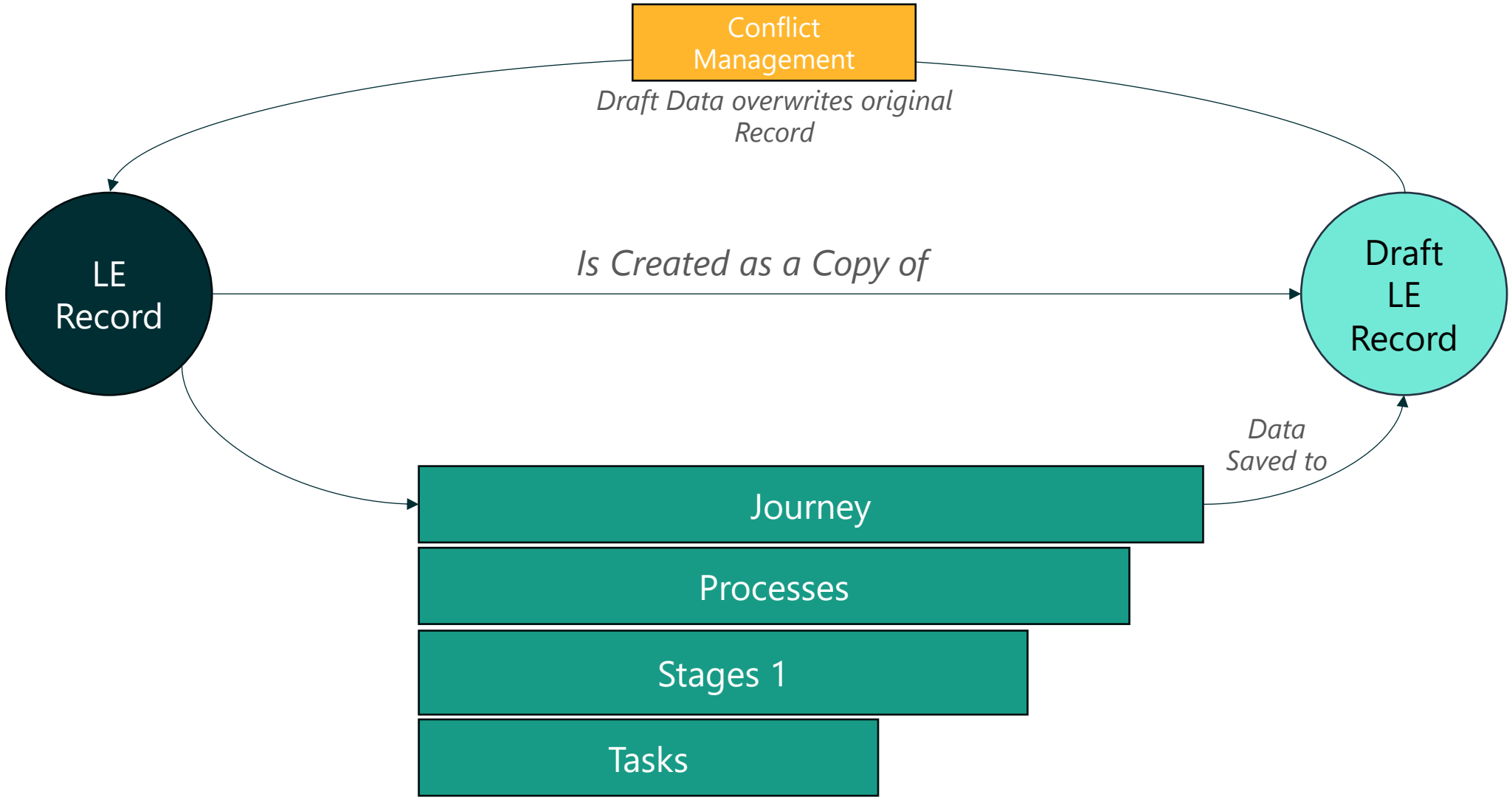
Part 3 - Creating a Journey and Draft LE Record with APIs (explaining that pattern)

George McGrane

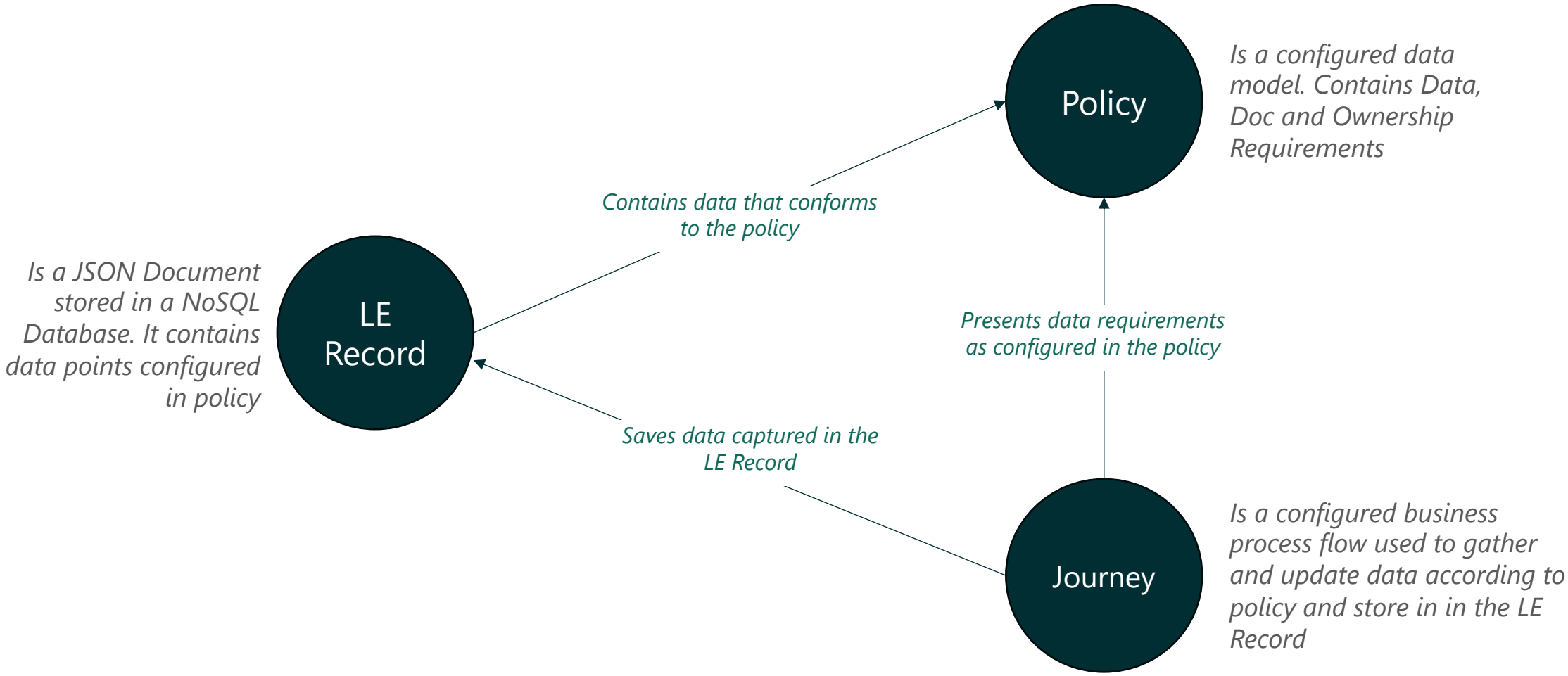
Using Postman to Create a Journey and Draft LE Record

- Before this – Review the video to Make API calls with Postman.
- Understand what the pattern means in the context of managing data and process on the Fenergo SaaS Platform.
- Understand the relationship between LE Data, Policy and Journey
- Look at the Create Journey API Request
- Look at the Create Draft LE Data API Request
- Update the draft record and compare it against the original.

Understanding the Pattern



Relationship between LE Data, Policy & Journey



Policy & Journey Scope

- When we use the term “Scope” it relates to “Which” Policy or Journey we want to work with.
- Clients can have multiple Policy's and Journey Types.
- Configuring Scoping Rules dictates which one gets used and when.

- We want to make an API call that creates a Journey for a given Legal Entity. We must know which one to use so we can do that via APIs.

Let's Look at the Redoc Specs

- The API Specifications we want to look at are available on the Fenergo Document Portal.

- *Journey Logic Engine : {baseUrl}/api-docs/journey-engine-v2*
- *Journey Command : {baseUrl}/api-docs/journey-command*
- *Entity Data Command : {baseUrl}/api-docs/entitydata-command-v2*
- *Entity Data Query : {baseUrl}/api-docs/entitydata-query-v2*

In Summary

- Created a new Verified LE
- Looked at the available Journeys in Scope
- Created a Journey Instance for the Legal Entity
- Created a Draft Record and associated to the Journey Instance
- Updated the Draft Record
- Retrieved back the Draft Record to see the changes

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Part 4 - The Eventing Pattern

Events and Working with Webhooks on Fenergo

George McGrane

Events and Webhooks

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'Event'

- *a thing that happens or takes place.*
- *occurrence of something important or noteworthy*

'Webhook'

- *web based call-back mechanism.*
- *a means to notify a 3rd party system of an event via an api*

Events and Working with Webhooks

- Before this – Review the video on working with Entity Data Journeys & Draft LEs.
- Understand what is meant by the eventing pattern including what is an event and what is a webhook.
- Look at creating test webhook endpoints in the UI and API.
- Generate some events and look at the content.
- The role of a Corelation Identifier.
- Understand the HMAC signature and validating event messages.

Events and Working with Webhooks

- What Does an Event Notification Look Like?

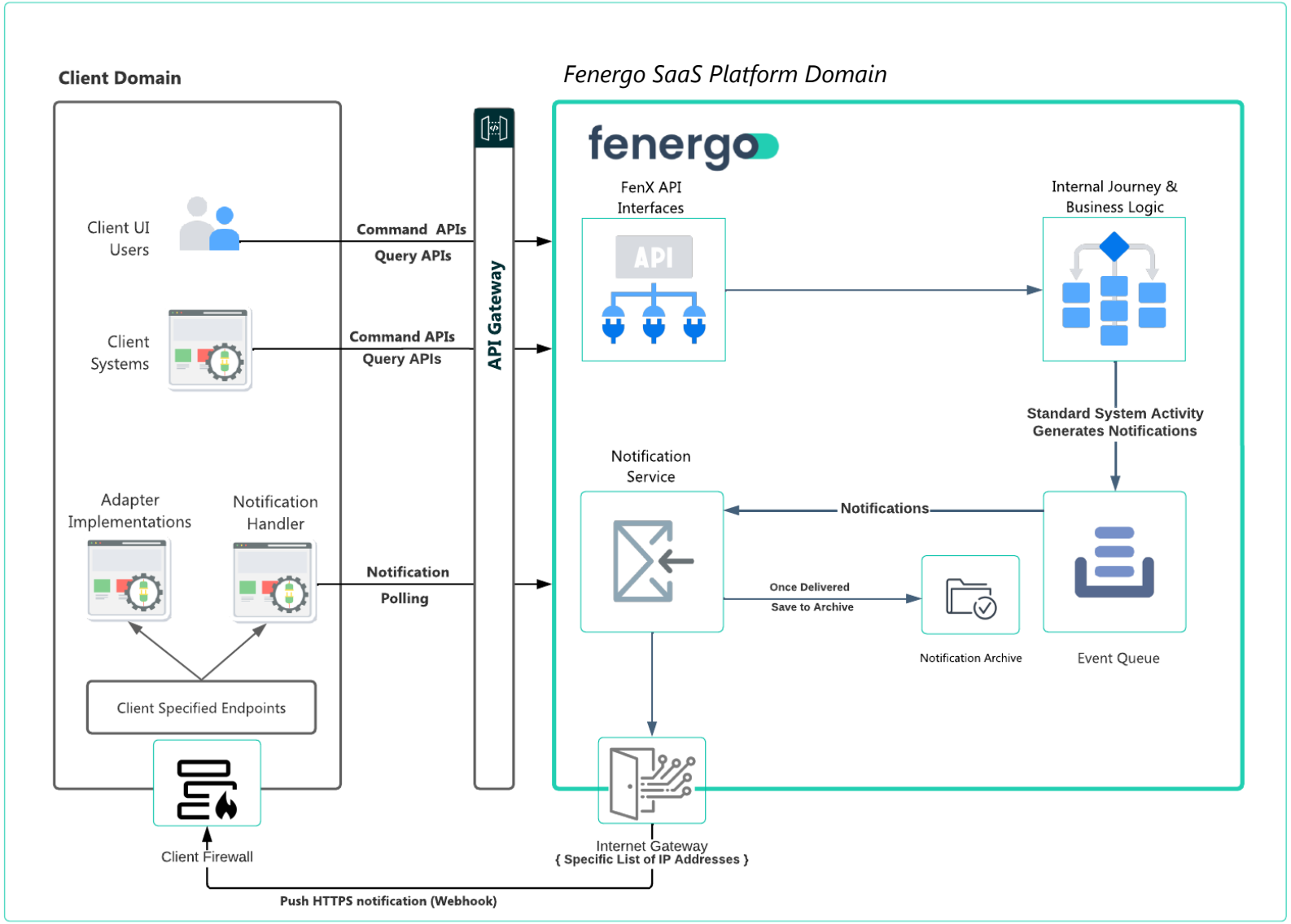
- It is a simple JSON message

- Contains all the details required to trace the source of the ‘ **Event** ‘


```
{
    "Id": "c9843b58-4bf5-54d5-8ecd-487b8b495d08",
    "TenantId": ”XXXXX-xxxx-xxxx-xxxx-XXXX",
    "EventType": "entitydata:draftupdated",
    "RelativeUrl": "entitydataquery/api/entity/ebd6f93d-db65-4352-9774-841deb6e185e/draft/a7fb46df-d474-49d8-83bf-1b97fa063f06",
    "Payload": {},
    "When": "2024-04-08T10:55:31+00:00",
    "CorrelationId": "54a11189-1b6c-4449-9b6e-bdd7a450ecc7",
    "CausationId": "93f6a1f2-6934-4a7a-9d1a-258cfd8d0ecb"
}
```

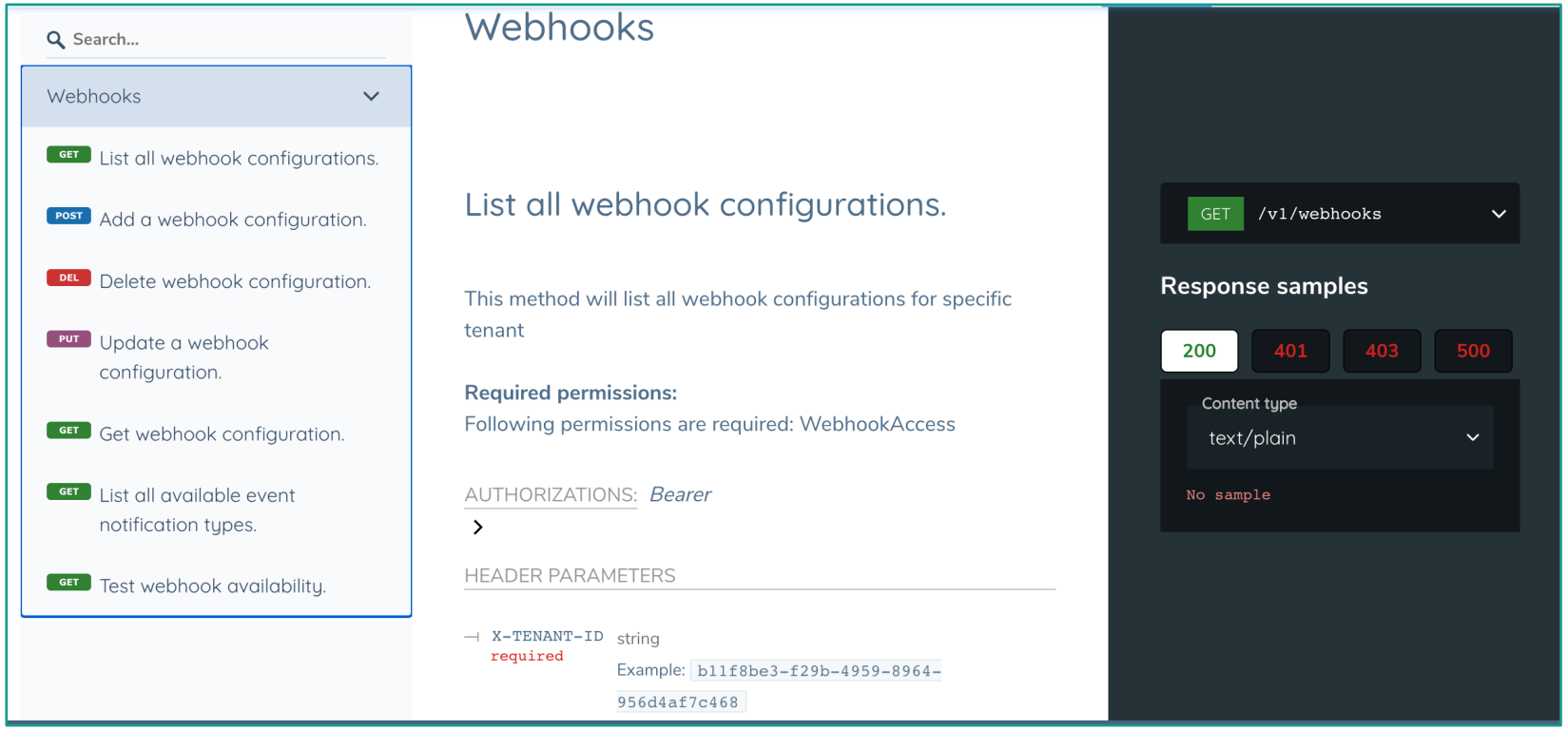
The '*eventing*' pattern and what it does.

- *Events are generated as client UI or system users interact with the platform.*
- *When an event happens, a "Notification" of that event is generated.*
- *Clients have two options for working with these notifications.*
- *Clients can Poll a **polling endpoint** or have notifications delivered to a **webhook destination**.*



Events and Working with Webhooks

- Full Details are covered on the Developer hub. The APIs will be looking at:
- *webhooks API: {baseUrl}/api-docs/eventnotifications-webhooks*



- **note – not a command / query pattern.*

Webhook Signature

- Signature allows the recipient to VERIFY the sender.
- Signature can ONLY be calculated using “HMACSHA256” with the Shared Secret and the full webhook HTTP Body.

Headers

connection	`close`
content-length	`412`
content-type	`application/json`
x-amzn-trace-id	`Root=1-6613cd23-bd45943565249399a99a5f4b; Sampled=0`
x-fenx-signature	`sha256=E3F4416F1640323B6EC48341EDC0E87FAFF9BD07DF74CAB5...`
host	`webhook.site`

**example for another day ☺*

Using the '*CorrelationId*'

- A **Correlation Identifier** is something that can be used to trace the **source** of an '***event***' to the notification generated and sent, after that '***event***' occurs.
- Add a correlation id to your API (such as Update Draft Entity) and that same Id will be sent back as the Correlation Id in the body of the Event Notification
- Let's add the `x-correlation-id` header to our API call and see it being returned in the webhook.

In Summary

- Looked at what is meant by the *eventing pattern,* what an event is and what a webhook is.
- Created a test webhook endpoint using the API.
- Generated some events using other API calls and looked at the content of the event notifications generated.
- Explored the use of a Corelation Identifier.
- Looked at a HMAC signature and validating event messages.
  (more to come on this).