eBay Connect 2021
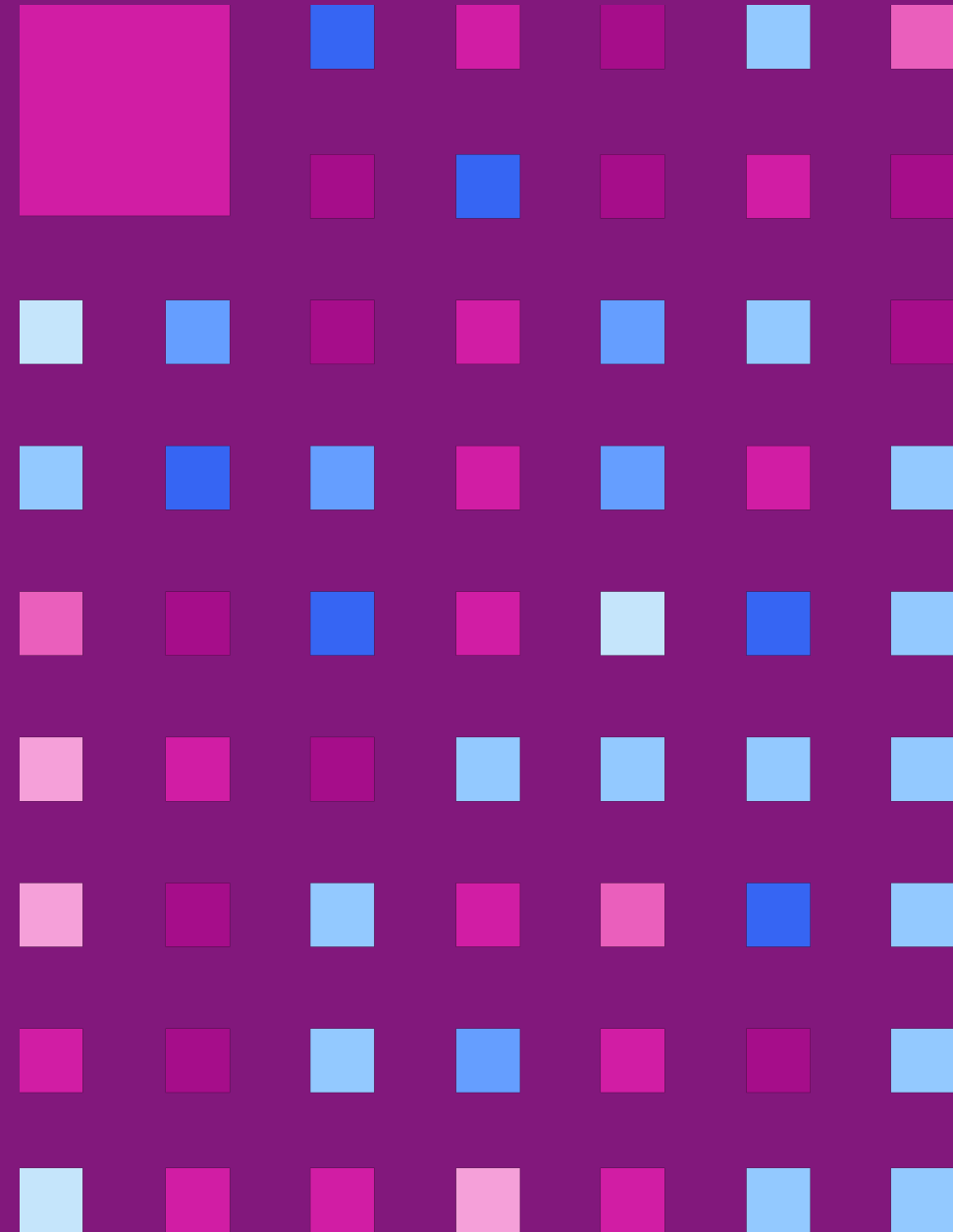
Notifications

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eBay Connect 2021
Agenda

Notification Highlights

Key Concepts

Notification API Deep Dive

SDK Support

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Notification Highlights

- **API-First** approach

- **Full API support**

- **AsyncAPI Specification 2.0** based contracts

- **Enhanced security** for messages

- Advanced **monitoring, alerting** and **retry** capabilities

- **SDK** support

Key Concepts

Message Schema

Message Integrity

Endpoint Verification

Notification Schema

Consistent schema across all use cases

AsyncAPI Specification 2.0 based contracts

Header: X-EBAY-SIGNATURE

```
{
"metadata": {
    "topic": "string",
    "schemaVersion": "string",
    "deprecated": "false"
  },
  "notification": {
    "notificationId": "string",
    "eventDate": "string",
    "publishDate": "string",
    "publishAttemptCount": "integer",
    "data": {
        ...
    }
  }
}
```

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Message Integrity

Elliptic Curve Cryptography for message integrity checks

Backward compatibility in case of key rotation

SDK Support!

X-EBAY_SIGNATURE-HEADER decoded

```
{
    "alg":"ecdsa",
    "kid":"key_id",
    "signature":"MEYCIQCfxfIWuxmWclBQJ9c5/X7iGDJqs2RC...",
    "digest":"SHA256"
}
```

Payload integrity validation algorithm

Step 1

Fetch the public key using the key_id from the header.
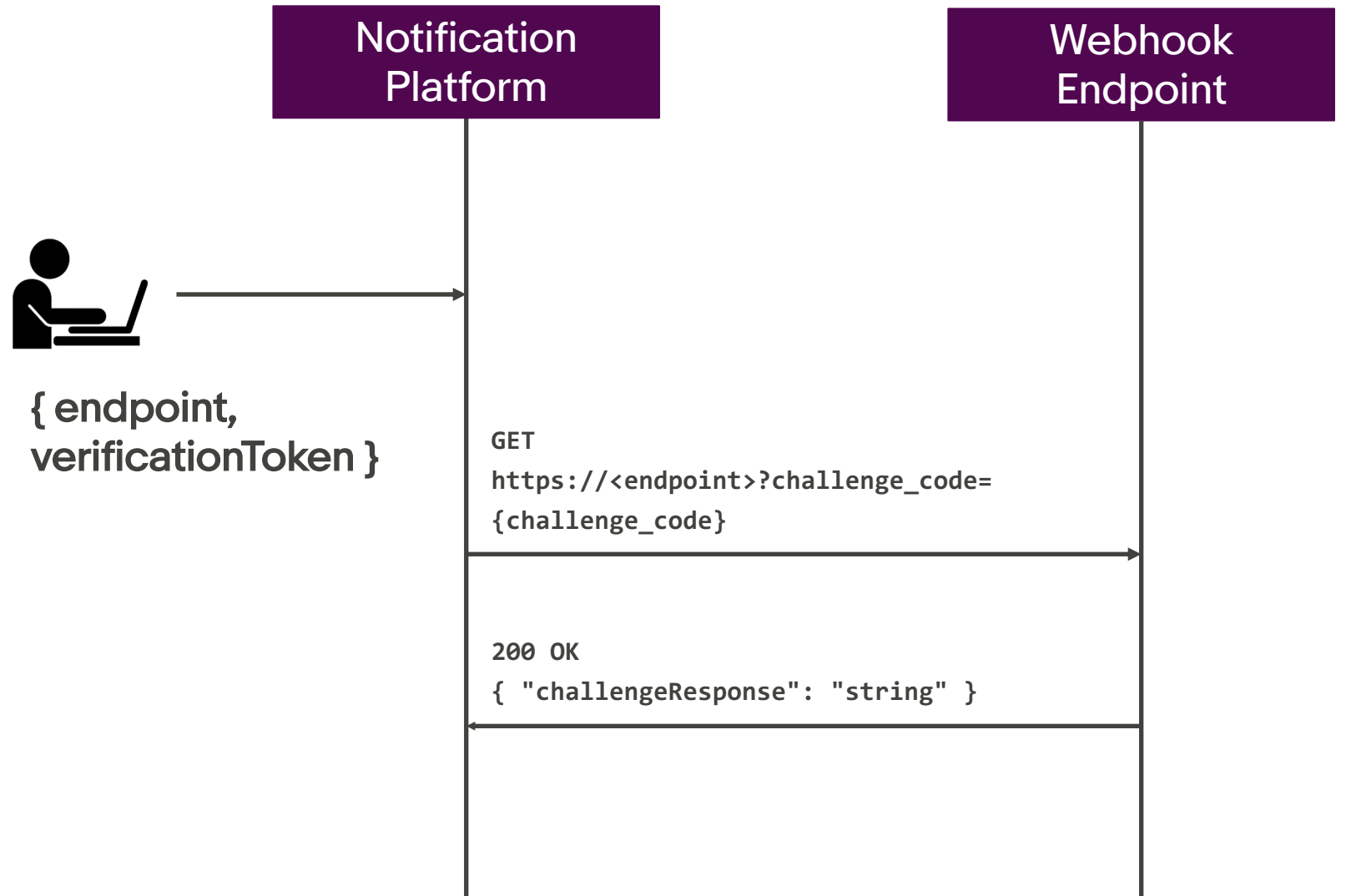GET commerce/notification/v1/public_key/{key_id}

Step 2

Initialize your crypto library and verify payload.
fn(algo, digest,PublicKey,signature,payload)

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Endpoint Verification

Guarantees authenticity of the endpoint for receiving notifications

Checks can happen on a periodic basis

SDK Support!

Notification Platform

Webhook Endpoint

{ endpoint, verificationToken }

```
GET
https://<endpoint>?challenge_code=
{challenge_code}
```

```
200 OK
{ "challengeResponse": "string" }
```

Where challengeResponse =
SHA256(challengeCode,verificationToken,endpoint)->toHex()

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Notification API Deep Dive

Browse Topics

Configure Your App

Create and Manage Destinations

Create and Manage Subscriptions

Topic

Browse available topics, learn about authorizations required to subscribe, supported formats, and schema versions

Supported methods

```
GET /commerce/notification/v1/topic/
GET /commerce/notification/v1/topic/{topic_id}
```

Supported topics

MARKETPLACE_ACCOUNT_DELETION
AUTHORIZATION_REVOCATION

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Topic: Resource

```json
{
    "topicId": "SAMPLE_TOPIC",
    "description": "Sample topic",
    "status": "ENABLED",
    "context": "DEVELOPER",
    "scope": "APPLICATION",
    "authorizationScopes": [
        "https://api.ebay.com/oauth/api_scope"
    ],
    "supportedPayloads": [
        {
            "format": ["JSON"],
            "schemaVersion": "1.0",
            "deliveryProtocol": "HTTPS",
            "deprecated": false
        }
    ]
}
```

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Config

Update your application configurations

Supported methods

PUT /commerce/notification/v1/config

GET /commerce/notification/v1/config

Config resource

```
{
   "alertEmail": "alert@email.com"
}
```

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Destination

Create and manage your destinations

Note: Your endpoint should be up and ready to respond to the verification challenge

Supported methods

POST /commerce/notification/v1/destination

PUT /commerce/notification/v1/destination/{destination_id}

DELETE /commerce/notification/v1/destination/{destination_id}

GET /commerce/notification/v1/destination/{destination_id}

GET /commerce/notification/v1/destination/

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Destination: Resource

```json
{
    "destinationId": "TEST_DESTINATION_ID",
    "name":"test destination",
    "status":"ENABLED",
    "deliveryConfig": {
        "endpoint":"https://<webhook>/",
        "verificationToken": "71745723-d031-455c-bfa5-f90"
    }
}
```

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Subscription

Create and manage your subscriptions

Supported methods

POST /commerce/notification/v1/subscription

PUT /commerce/notification/v1/subscription/{subscription_id}

DELETE /commerce/notification/v1/subscription/{subscription_id}

GET /commerce/notification/v1/subscription/{subscription_id}

GET /commerce/notification/v1/subscription

POST /commerce/notification/v1/subscription/{subscription_id}/enable

POST /commerce/notification/v1/subscription/{subscription_id}/disable

POST /commerce/notification/v1/subscription/{subscription_id}/test

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Subscription: Resource

```json
{
    "subscriptionId": "36c3b9be-31da-499f-912c-38dcf4e790ad",
    "topicId": "SAMPLE_TOPIC",
    "status": "ENABLED",
    "creationDate": "2021-06-04T15:10:12.807182",
    "payload": {
        "format": "JSON",
        "schemaVersion": "1.0",
        "deliveryProtocol": "HTTPS"
    },
    "destinationId": "52e4c4e7-d89f-4594-a5b3-8e4516b7275b"
}
```

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SDKs

Our SDKs are currently in Node.js and Java

Deployable SDKs that incorporate

- Endpoint verification algorithm

- Message integrity check validation
    - Integration with Notification API
    - Credentials externalized
    - LRU cache enabled

- Generic for any topic
    - OpenAPI-powered code generation
    - Topic specific message processors

Git:
https://github.com/eBay/event-notification-java-sdk
https://github.com/eBay/event-notification-nodejs-sdk

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Demo

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