 **ORY / summit-22**

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Centralized Authentication with Apache APISIX and Ory

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About me

Apache APISIX Committer

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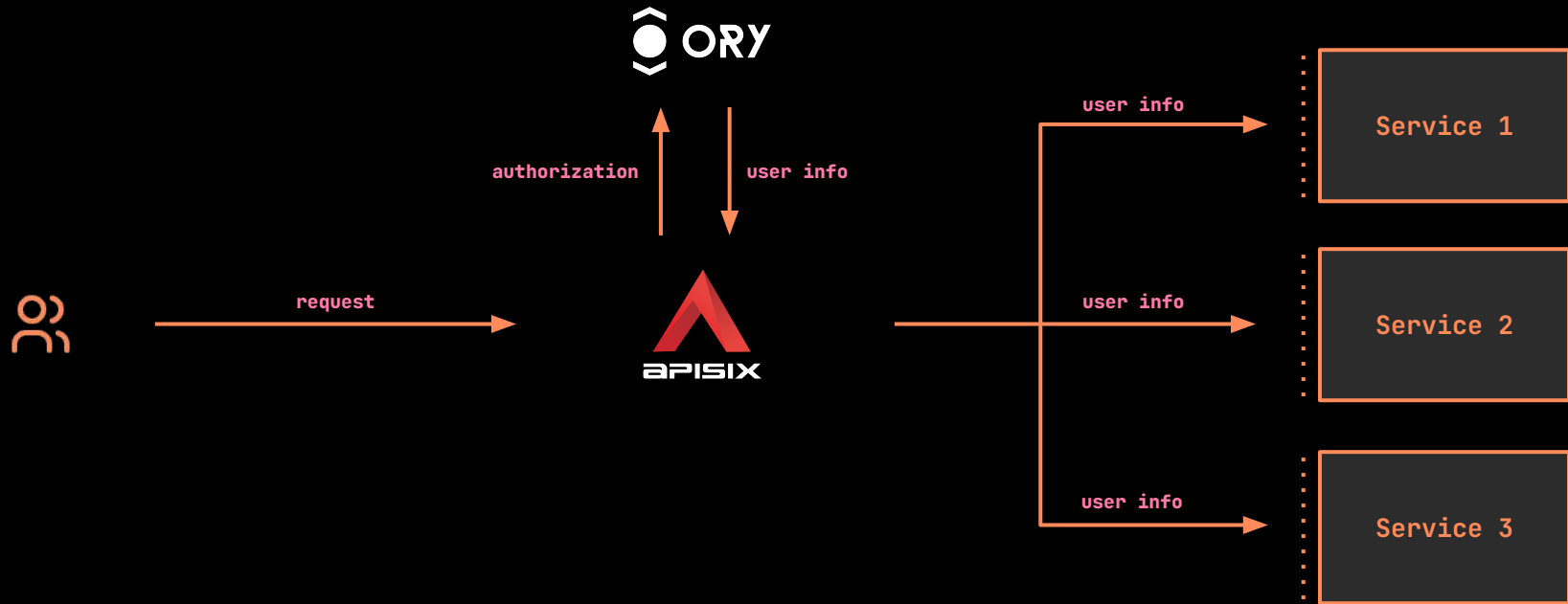


Agenda

- 01 **API Authentication**
- 02 **API Gateway**
- 03 **Apache APISIX**
- 04 **Centralized Authentication**
- 05 **Ory Hydra as an IDP**
- 06 **OIDC Plugin**
- 07 **Demo OIDC Plugin with Ory Hydra**



API Authentication



API Authentication



HTTP BASIC AUTHENTICATION

The simplest way to handle authentication is through the use of HTTP, where the username and password are sent alongside every API call.



API KEY AUTHENTICATION

This method creates unique keys for developers and passes them alongside every request. The API generates a secret key that is a long, difficult-to-guess string of numbers.



OAUTH AUTHENTICATION

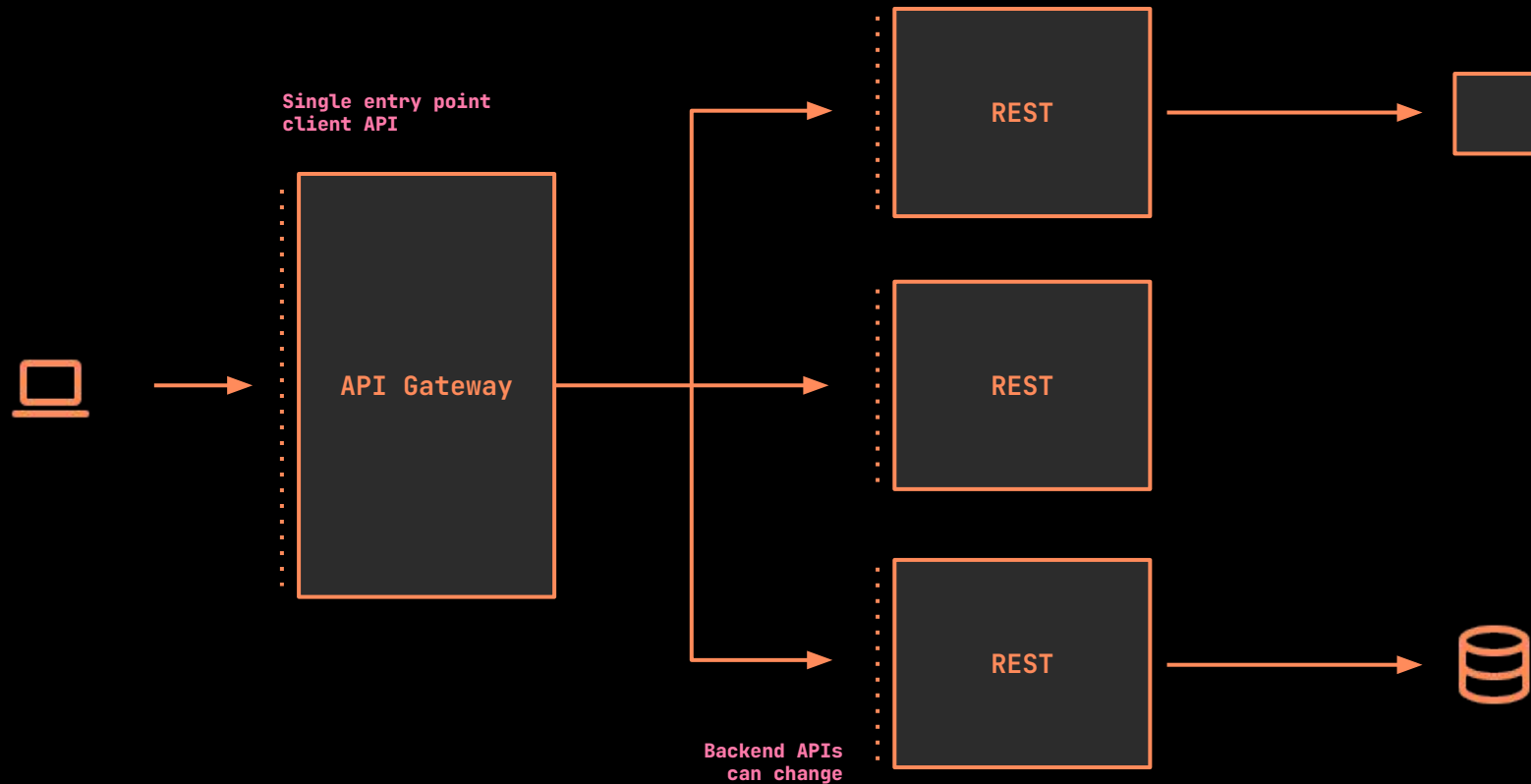
This framework can orchestrate approvals automatically between the API owner and the service, or you can also authorize developers to obtain access on their own.



OR... NO AUTHENTICATION

There's always the option of applying no authentication at all. This approach is commonly used in internal APIs hosted on-premise but is not a recommended practice.

API Gateway



API Gateway Features

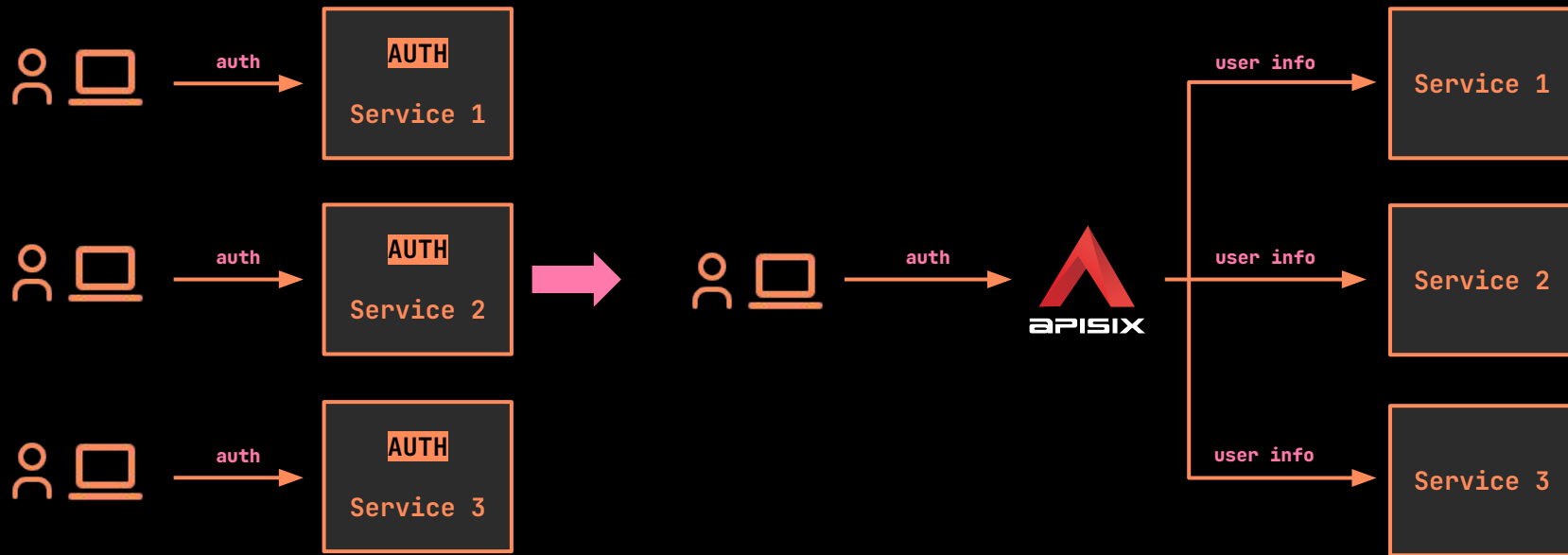
- Routing
- Request Aggregation
- Authentication
- Authorization
- Rate Limiting
- Caching
- Retry Policies / QoS
- Load Balancing
- Logging / Tracing / Metrics
- Headers / Method / Query Strings / gRPC / Transformation
- Configuration / Administration REST API
- And many more...

What is Apache APISIX

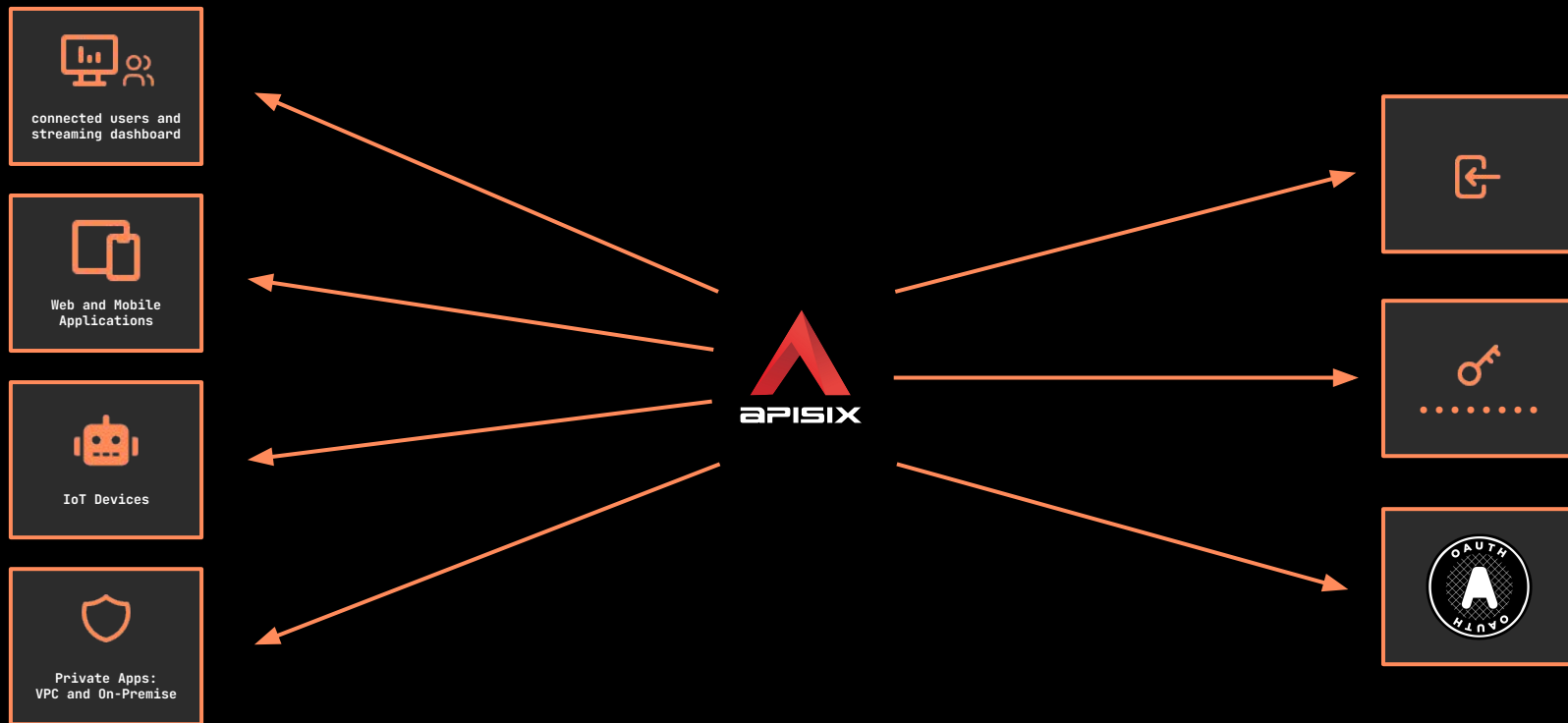
- One of the fastest-growing top projects of the Apache Software Foundation in 2022
- Cloud native API gateway
- It has rich traffic management features
- Many well-known organizations use APISIX in production
- APISIX has a user-friendly dashboard
- It support plugin hot reloading
- You can write custom plugins



What is Apache APISIX



What is Apache APISIX



Centralized Authentication Benefits

- Security
- Interoperability
- High performance
- Observability
- Easy of development

Ory Hydra for OAuth 2.0 Authentication

- Enables third-party solutions to access your APIs
- Acts as an Identity Provider like Google, Facebook, or Microsoft
- Enables your browser, mobile, or wearable applications to access your APIs
- Revokes access tokens at any time
- Limits what type of information your backend services can read from each other

Just Do It

- Multi-container app (backend, apisix, etcd, and Ory Hydra together) with Docker compose. Taken from 5 mins tutorial
- Set up Ory Hydra as a Generic Identity Provider
- Configure Apache APISIX OIDC Plugin for ASP.NET WEB API
- Perform the client credentials grant and authorization flows
 - github.com/Boburmirzo/hydra-apisix source code on GitHub.

07

Demo

References

- [Apache APISIX official website](#)
 - [Apache APISIX GitHub repo](#)
 - Read [Getting Started](#) guide
 - Watch Video Tutorial [Getting Started with Apache APISIX](#)
 - [Download Apache APISIX](#)
 - Read the full written [guide on our docs](#)
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-
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Questions?