



Catalyst

powerful APIs for building **microservices**

Fernando Rocha

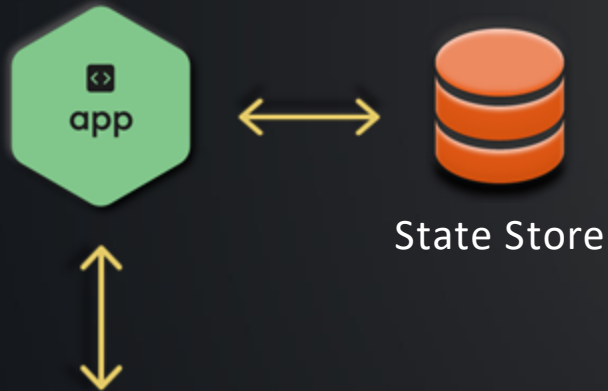
Customer Success Engineer @ Diagrid



How would you build a pizza delivery system?

Pizza Store 🏪

- Handles customer orders
- Maintains order state
- Interfaces with customers



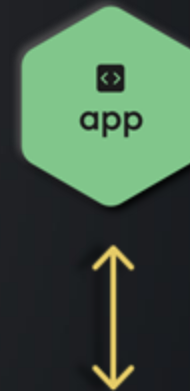
Pizza Kitchen 👨‍🍳

- Manages pizza preparation
- Tracks kitchen operations



Pizza Delivery 🛵

- Manages delivery process
- Tracks deliveries




Message
broker



Developer challenges

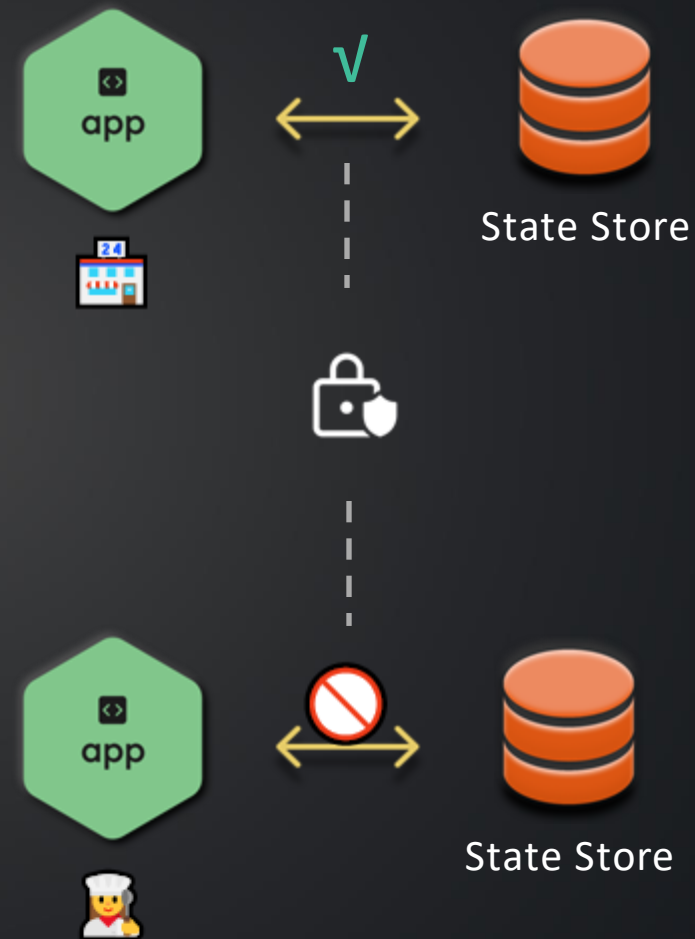
Access control

Service orchestration

Distributed tracing

Resiliency

Infrastructure selection



Developer challenges

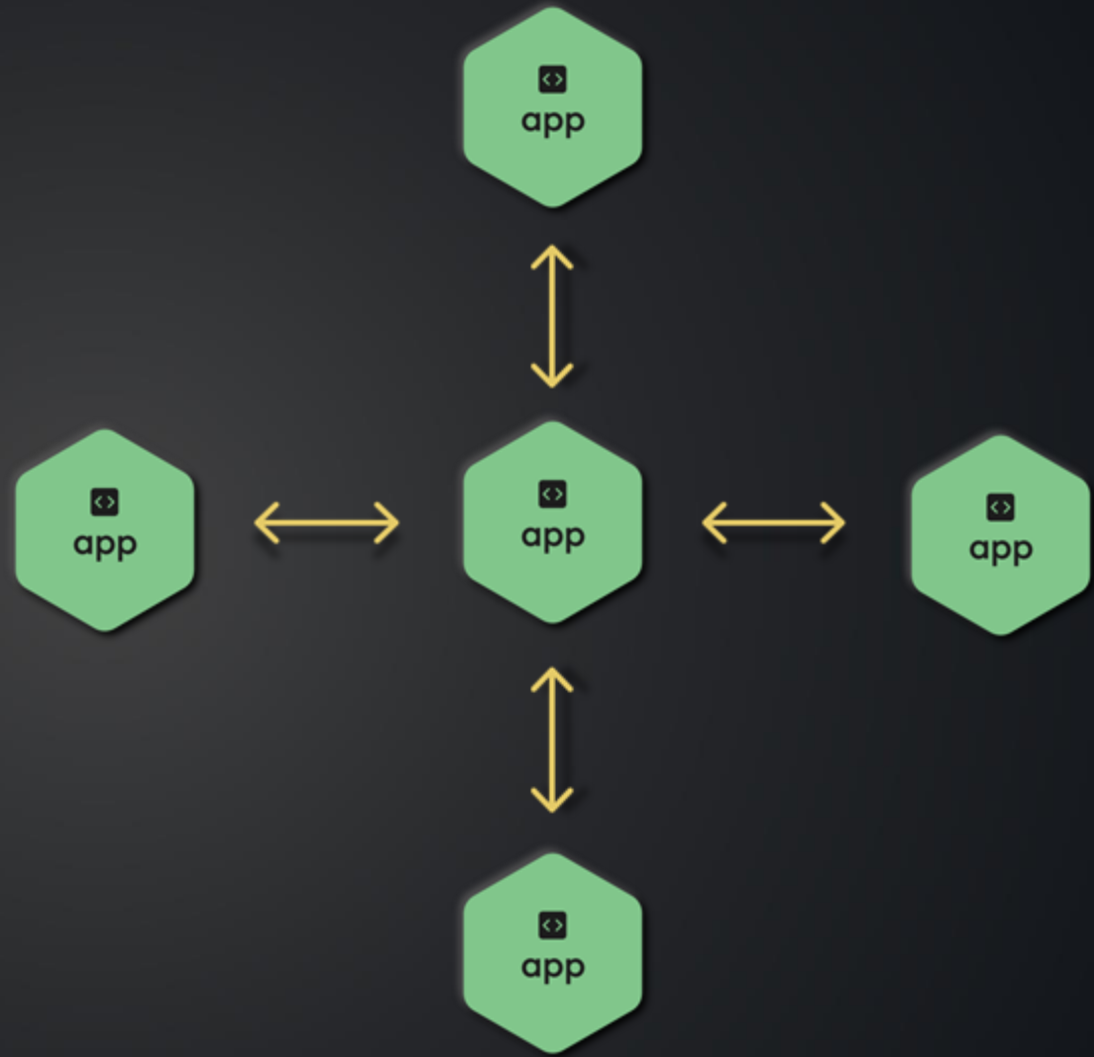
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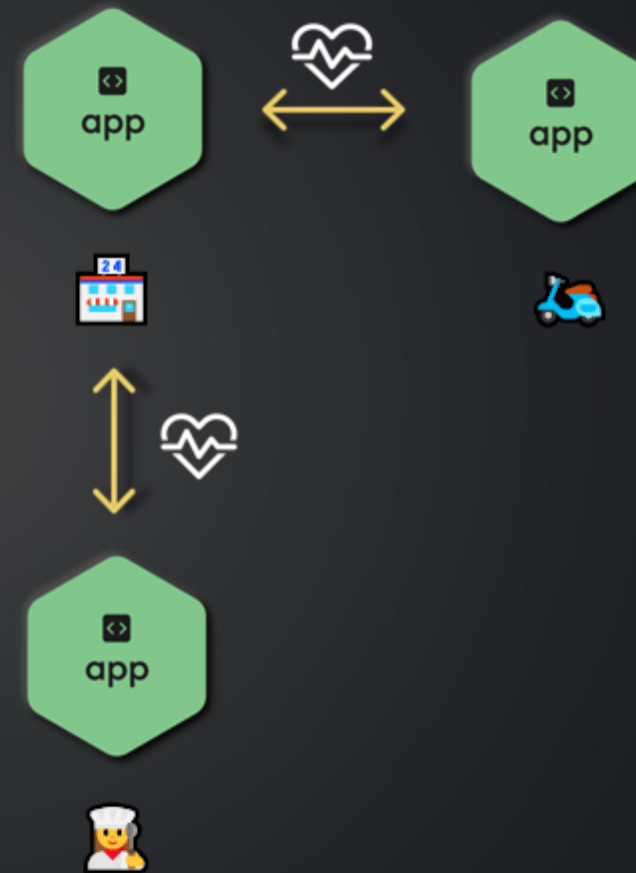
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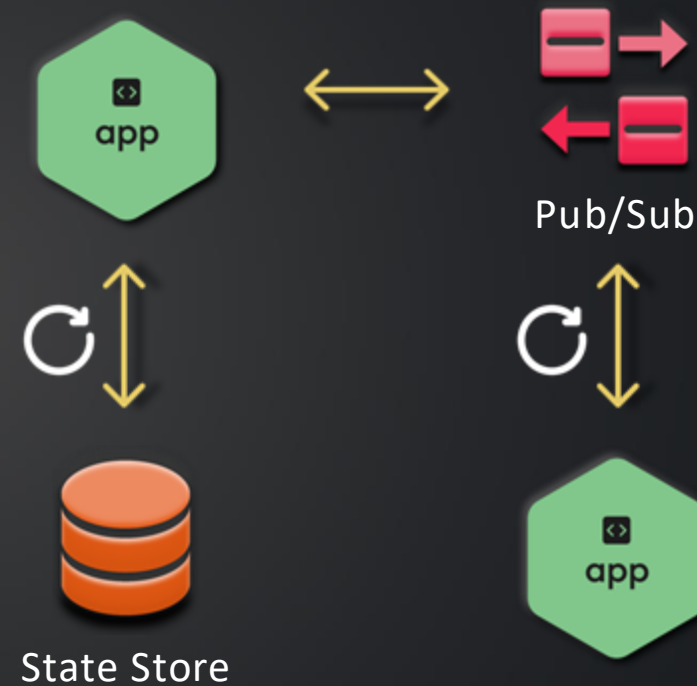
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AWS Dynamo DB



Azure CosmosDB



GCP Firebase



Redis



AWS SQS



Azure Service Bus



GCP Pub/Sub



Redis



RabbitMQ



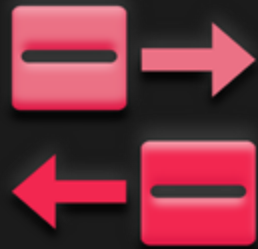
Catalyst

now in public beta

fully-managed developer APIs powered by Dapr



workflow



pub/sub



invoke



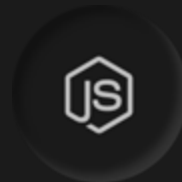
state



binding

- security
- resiliency
- observability

accessible from any language or framework



integrated with 30+ infrastructure services



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dapr

**24k**

GitHub Stars

**7.7k**

Discord Users

**1M**

Pulls/month

**14/173**

CNCf Projects

**3.7k**

Contributors

**300k**

Doc views/month

Distrib

Applica

Runtime

dapr.io

[Read the article](#)

Demo



How it works

1

Create an App ID

Generate an API token for your microservice to secure API calls

2

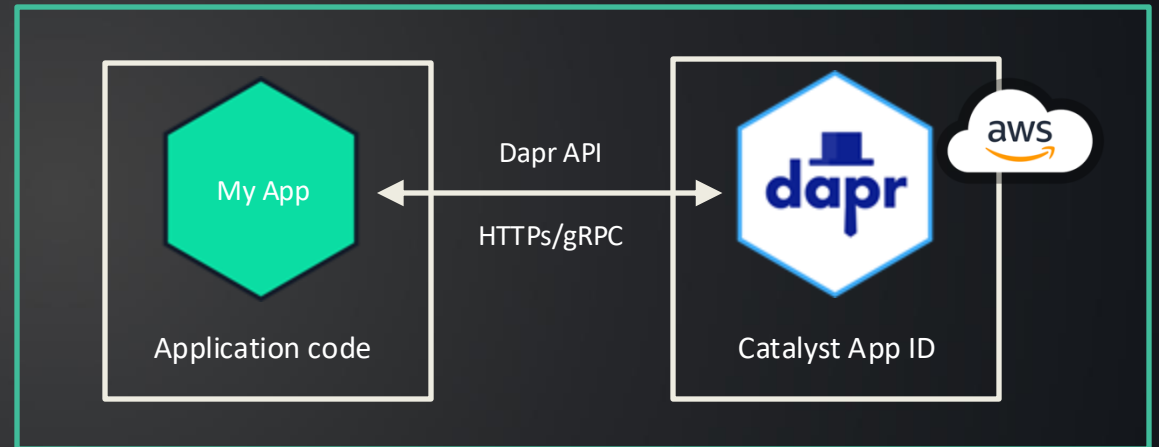
Configure API resources

Use Diagrid services or external infrastructure connections

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Connect your apps

Make and receive requests from Catalyst to your applications



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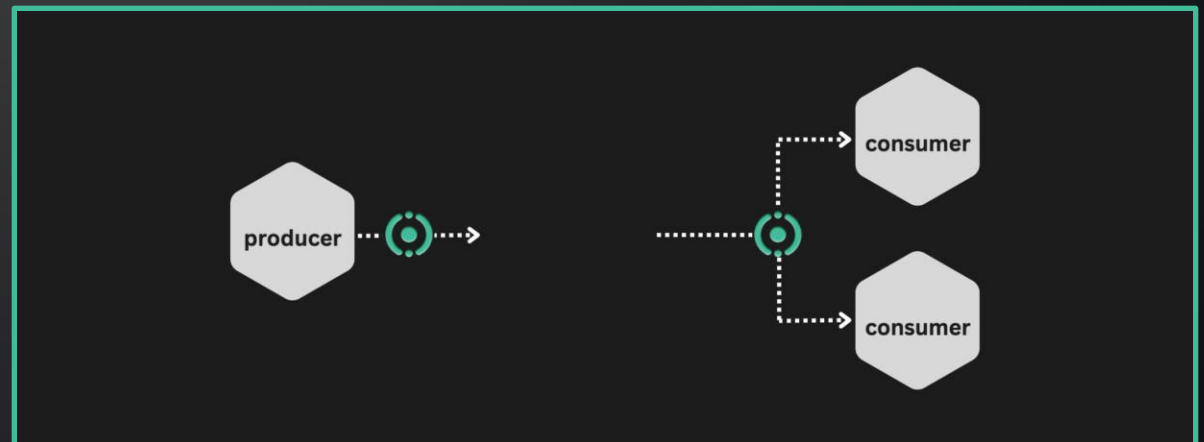
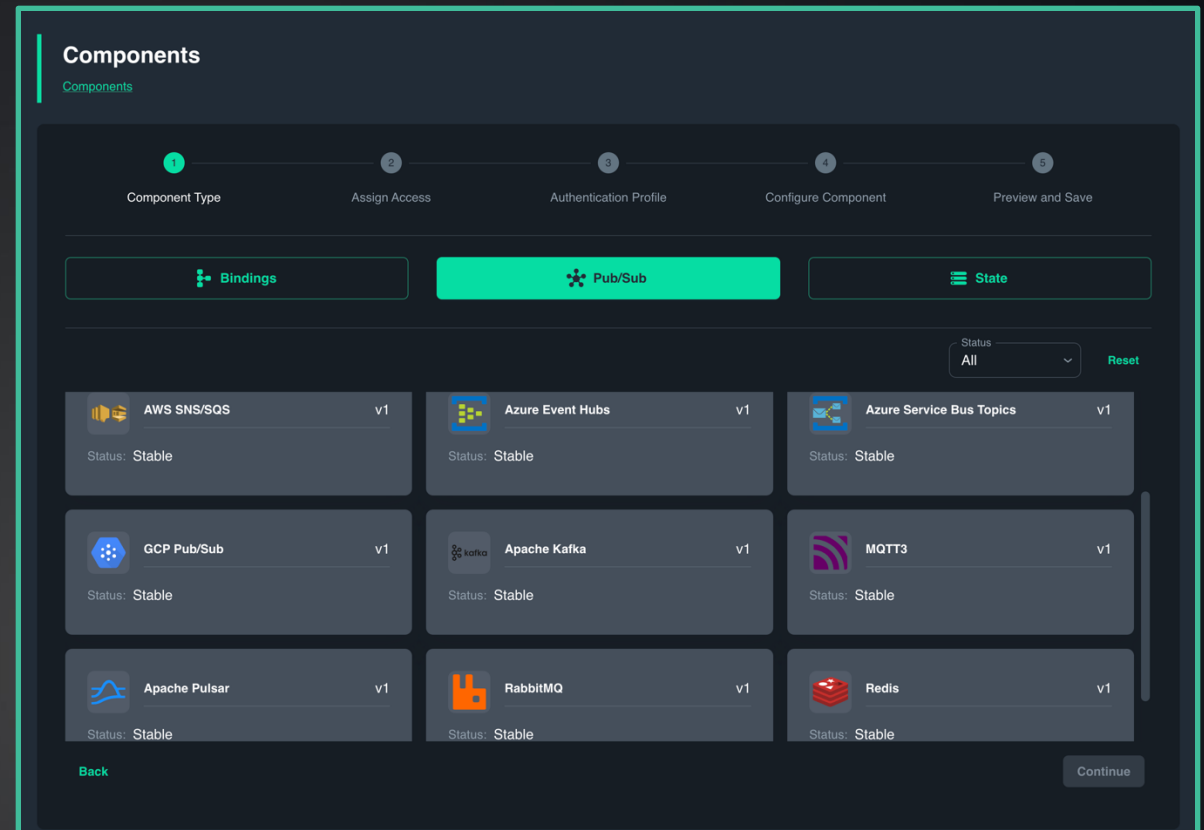
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The screenshot displays the 'App ID - node-subscriber' configuration page. At the top, there's a breadcrumb 'App IDs > Details'. The main section is divided into two columns. The left column contains configuration fields: 'node-subscriber' with a 'ready' status, an 'API TOKEN' field with a copy icon and a refresh button, an 'App Connection' section with a 'available' status, and three fields for 'APP URL' (tunnel.dev.diagrid.io), 'APP TOKEN', and 'PROTOCOL' (http), each with a copy icon. A 'Remove Endpoint' button is at the bottom of this section. The right column features a 'Quick Actions' sidebar with links: 'Test API Calls', 'Visualize Workflows', 'Visit Call Graph', 'View API Logs', and 'API Reference'. Below these is a tabbed interface with 'Overview' and 'Metrics' tabs. The 'Overview' tab shows an 'API Configuration' section with a 'Components' list (including 'aws-sns-sqs' and 'pubsub', both 'ready') and a 'Workflow Store' status of 'None Disabled'. Below this is a 'Pub/Sub Subscriptions' section with two subscriptions: 'subscription-a' (aws-sns-sqs, A) and 'subscription-b' (aws-sns-sqs, B), both 'ready'. Search bars and status dropdowns are present on the right side of the components and subscriptions lists.



Interacting with the Catalyst APIs

Diagrid CLI

Test the API without authoring or deploying client and server applications

API explorer

Test the API without authoring or deploying client and server applications

Dapr SDK

Instrument your application to invoke another service using the Dapr Service Invocation API


Connect to order-processing-wf project

To connect your applications to the Dapr APIs hosted by Catalyst, use the OSS Dapr SDKs.

You can configure the Dapr client to use your Catalyst project endpoint as the Dapr host endpoint.

All apps connecting to your project must also have a corresponding App ID and include the API auth token when making requests to Catalyst.

 **Configure SDKs**

 **Develop Locally**

 **Make API Requests**

HTTP URL (DAPR_HTTP_ENDPOINT)
`https://http-prj269088.api.cloud.diagrid.io`

GRPC URL (DAPR_GRPC_ENDPOINT)
`https://grpc-prj269088.api.cloud.diagrid.io`

PORT
`443`

EGRESS ADDRESS
`54.151.113.238`

INGRESS ADDRESS
`a8eae345e72a44febaf80be43b9c37c0-1063571502.us-west-1.elb.amazonaws.com`

POST	<code>http(s)://DAPR_HTTP_ENDPOINT/v1.0/invoke/cart/method/order</code>
GET	<code>http(s)://DAPR_HTTP_ENDPOINT/v1.0/state/inventory/item50</code>
POST	<code>http(s)://DAPR_HTTP_ENDPOINT/ v1.0/publish/mybroker/order-messages</code>
GET	<code>http(s)://DAPR_HTTP_ENDPOINT/v1.0/secrets/vault/dbaccess</code>
POST	<code>http(s)://DAPR_HTTP_ENDPOINT/v1.0-beta1/workflows/dapr/wf/start</code>



What we don't have time to talk about today, but you should go further...

Bindings

Workflows

Outbox pattern

Advanced resiliency

And more...



Find more about Catalyst at:


diagrid.io/catalyst

github.com/diagrid-labs

github.com/rochabr/catalyst-apiworld-demo



Thank you!

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 [@rochabr](https://github.com/rochabr)

