
AWS
re:Invent
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BWP201

Build with prototypes: Be a customer-obsessed developer

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Agenda

1. Buy with Prime
2. Invent and simplify – the journey of prototype
3. Demo
4. Feedback we've heard from Buy with Prime partners
5. Key takeaways
6. What's next

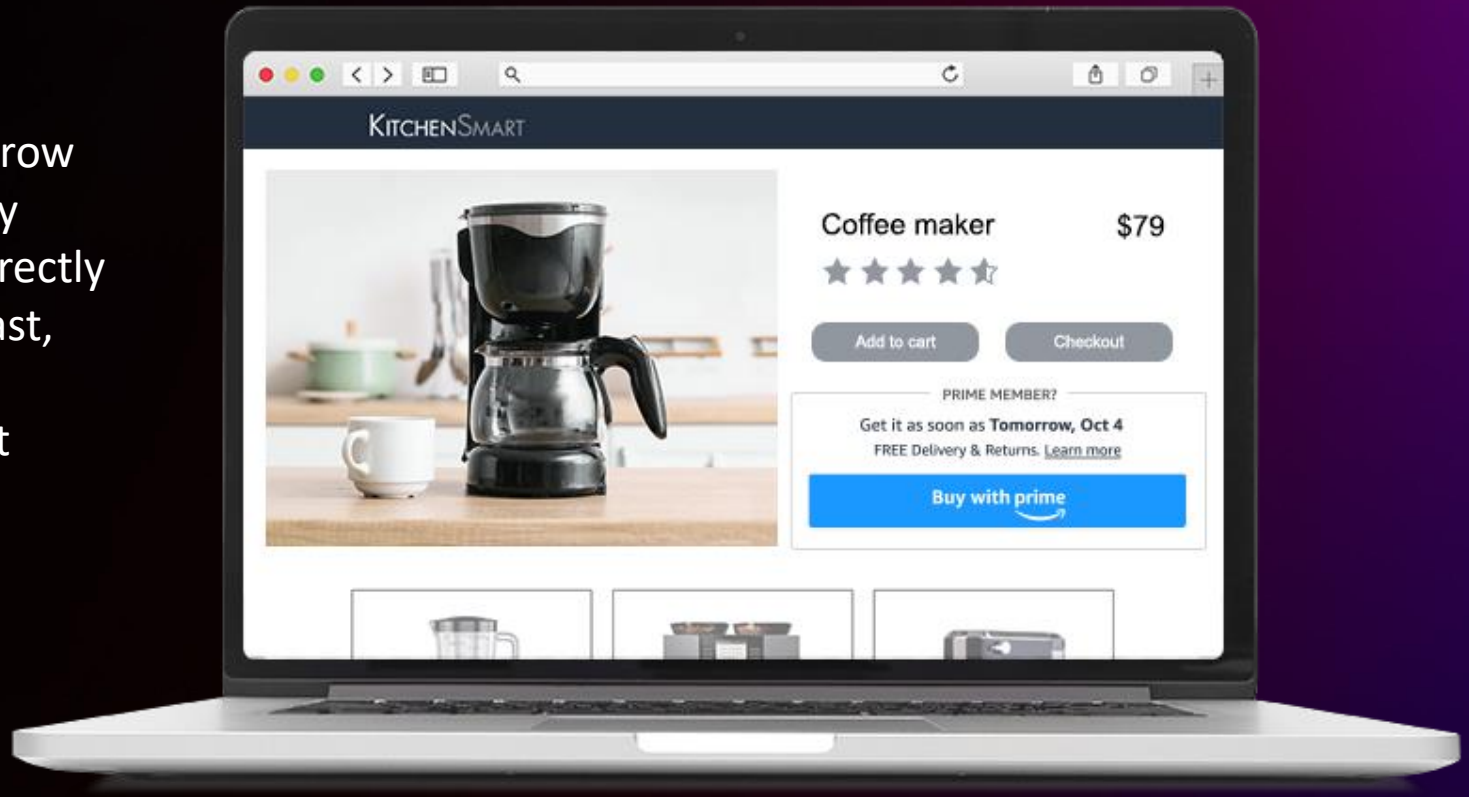


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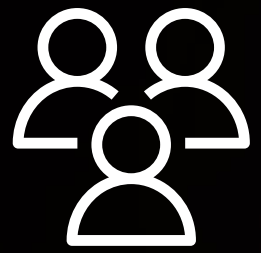
Buy with Prime

Buy with Prime empowers merchants to grow their direct-to-consumer (DTC) business by letting millions of Prime members shop directly from their site, while enjoying the same fast, free delivery, easy returns, and seamless checkout experience Prime members trust on Amazon.com.



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Key stakeholders



Merchant



Shopper



Partner

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Goals

- Use industry patterns to inform our product roadmap
- Enable feedback flywheel
- Iterate quickly

Challenges

- Unstable pre-release APIs
- Industry expertise external to Amazon
- Preserve developer experience

We needed a way to get our APIs into developers' hands, fast

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Feedback is essential



Ownership



Expertise



Insights

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Engaging the developer community



Problem

- Development was a waiting game
- Dependent on service availability
- APIs were being built in a vacuum

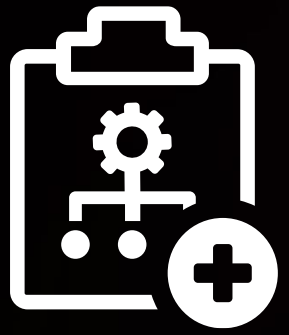


Solution

- Get builders building
- Create feedback mechanism

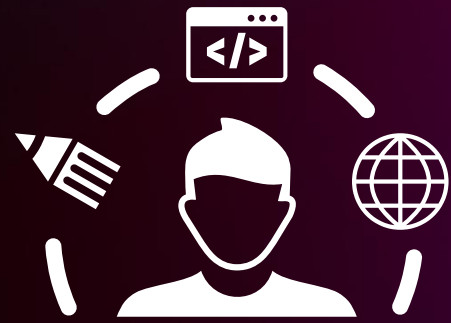
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What is a prototype?



- High-fidelity model of our service
- Developers can drill down and build from Day 1

Developer experience



- Provide tangible feedback
- Review integration patterns
- Estimate with data

"If a picture is worth a thousand words, then a prototype is worth a thousand meetings."

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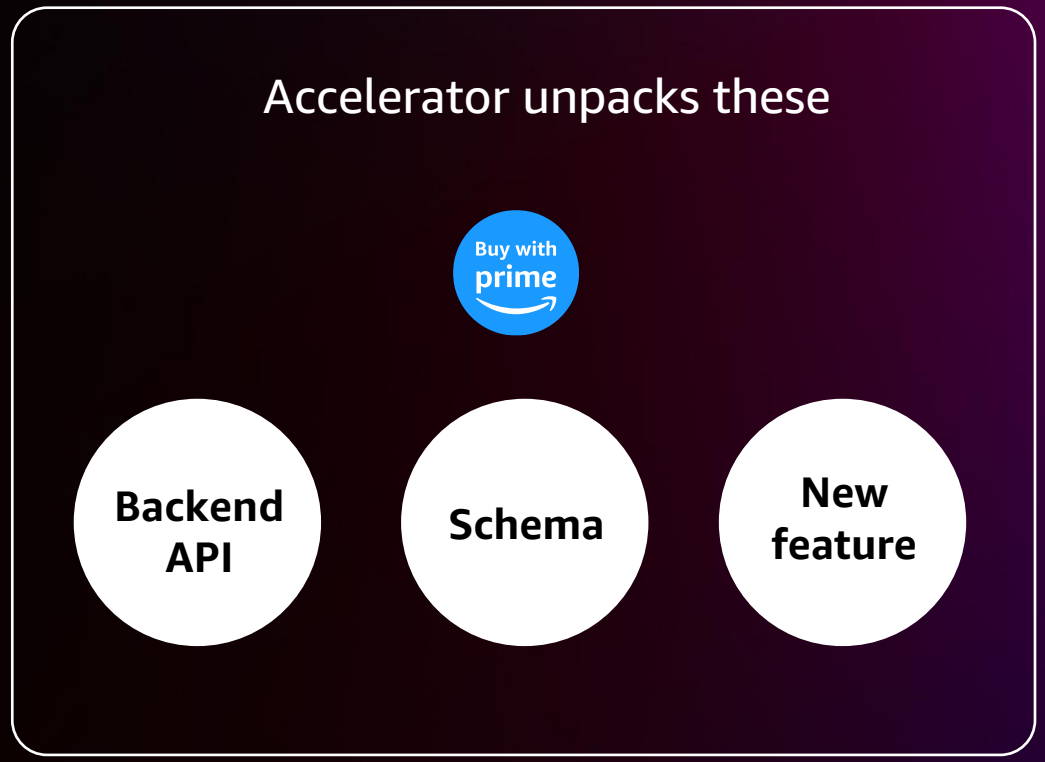
The prototypes we built

- GraphQL API accelerator
  - A mockup of the Buy with Prime APIs
- Blueprint application
  - That interacts with the Buy with Prime services

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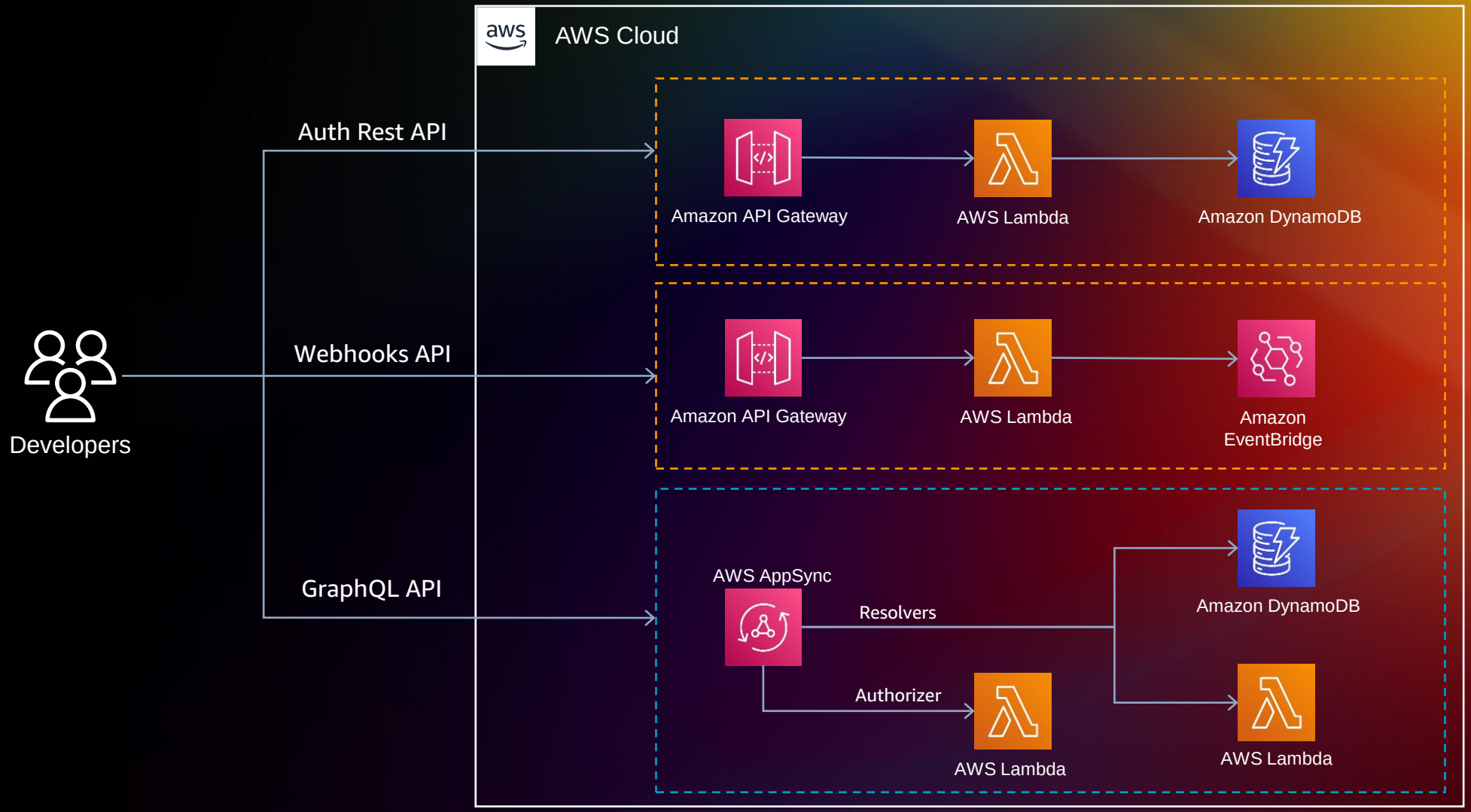
The GraphQL API accelerator

- Abstract version of the backend API
- Insight of schema and data model
- Accelerate developers' lifecycle



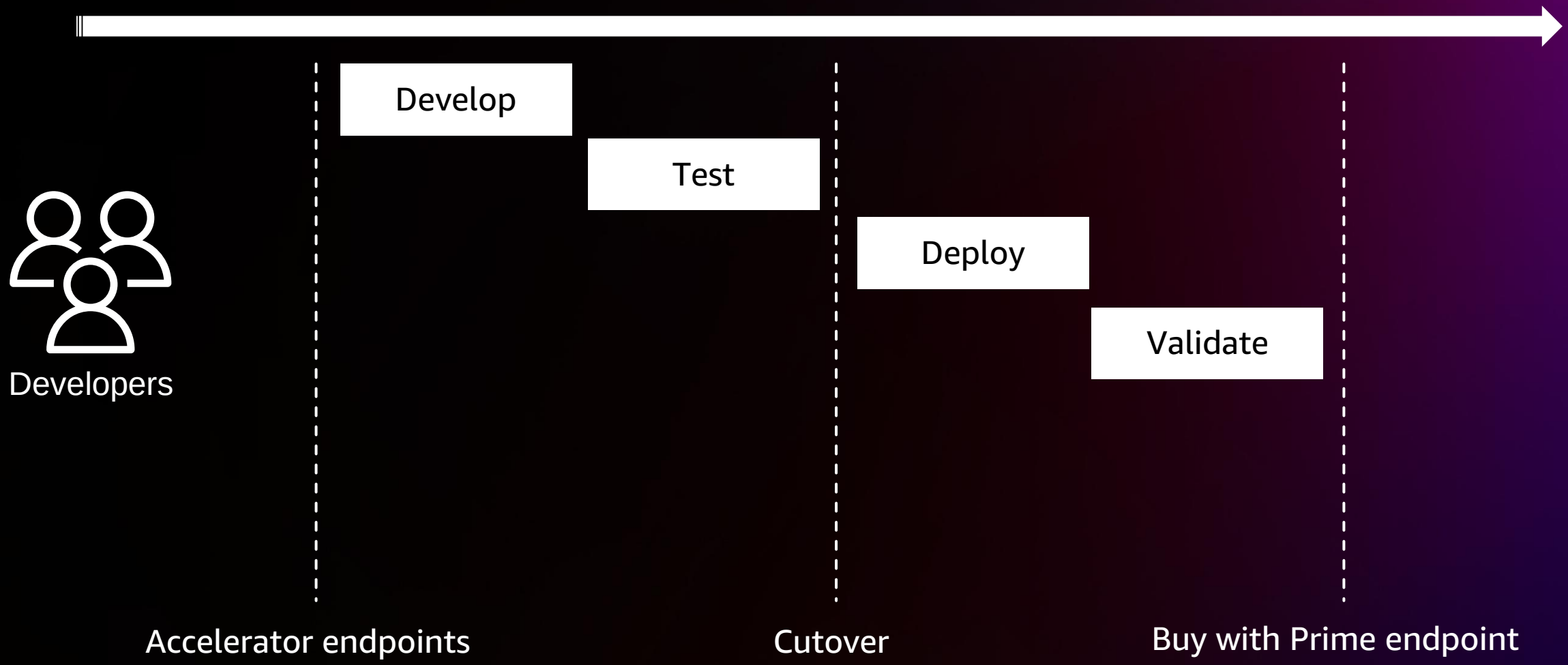
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GraphQL API accelerator architecture

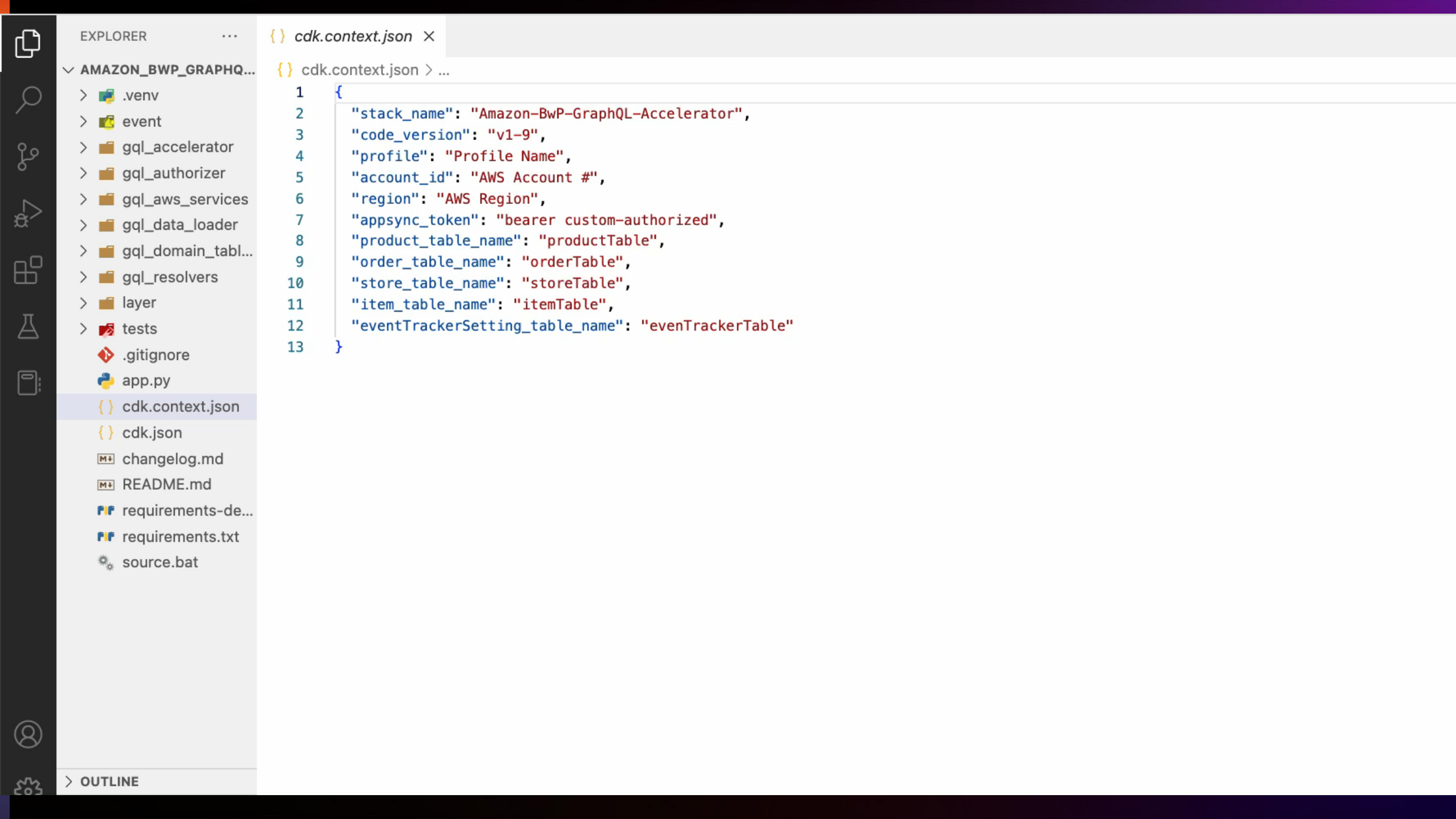


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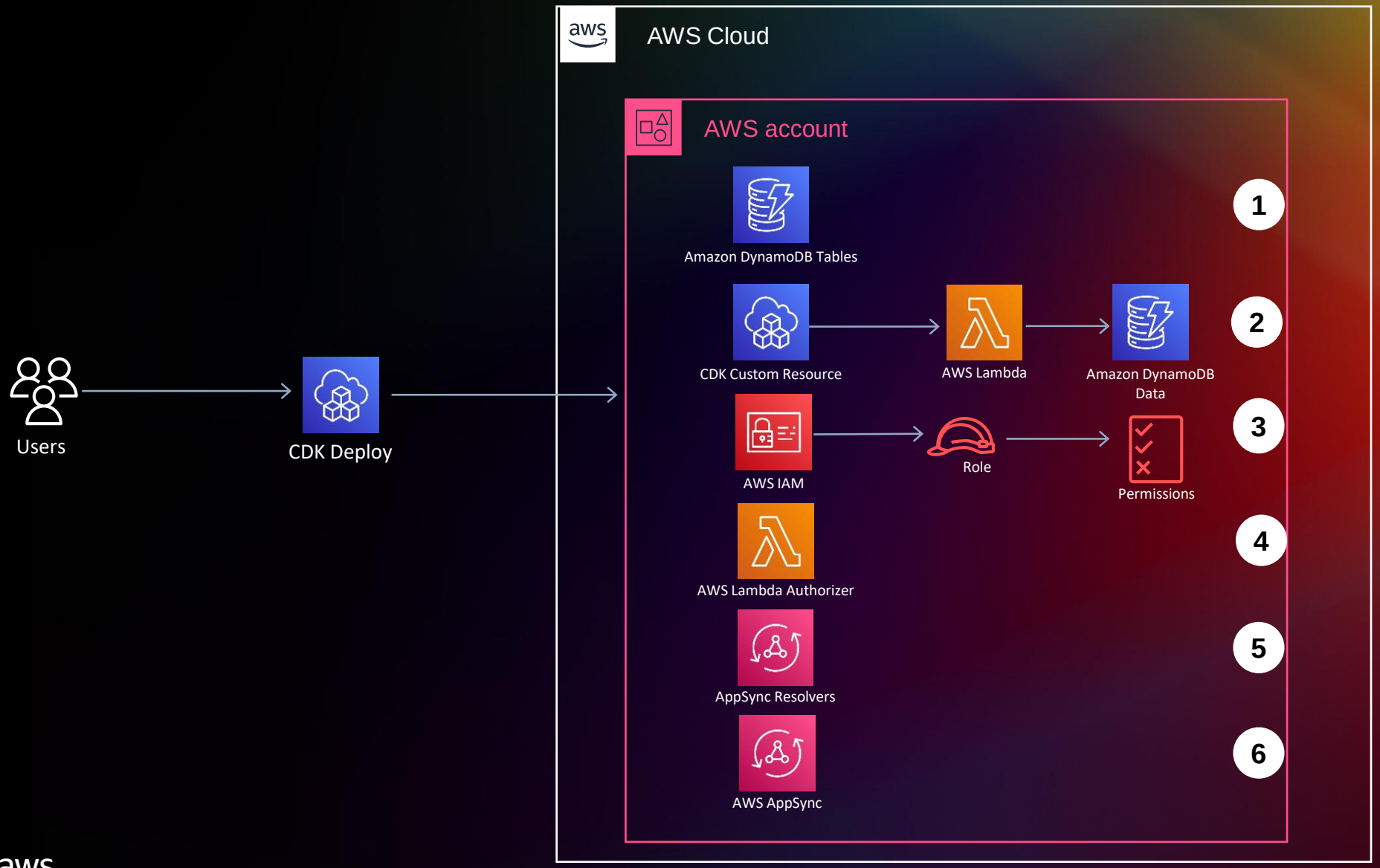
Lifecycle with GraphQL API accelerator



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EXPLORER
AMAZON_BWP_GRAPHQ...
.venv
event
gql_accelerator
gql_authorizer
gql_aws_services
gql_data_loader
gql_domain_tabl...
gql_resolvers
layer
tests
.gitignore
app.py
cdk.context.json
cdk.json
changelog.md
README.md
requirements-de...
requirements.txt
source.bat
OUTLINE
cdk.context.json
cdk.context.json > ...
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}

GQL API demo



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Enrich the developer experience



Queries and mutations



Mock data



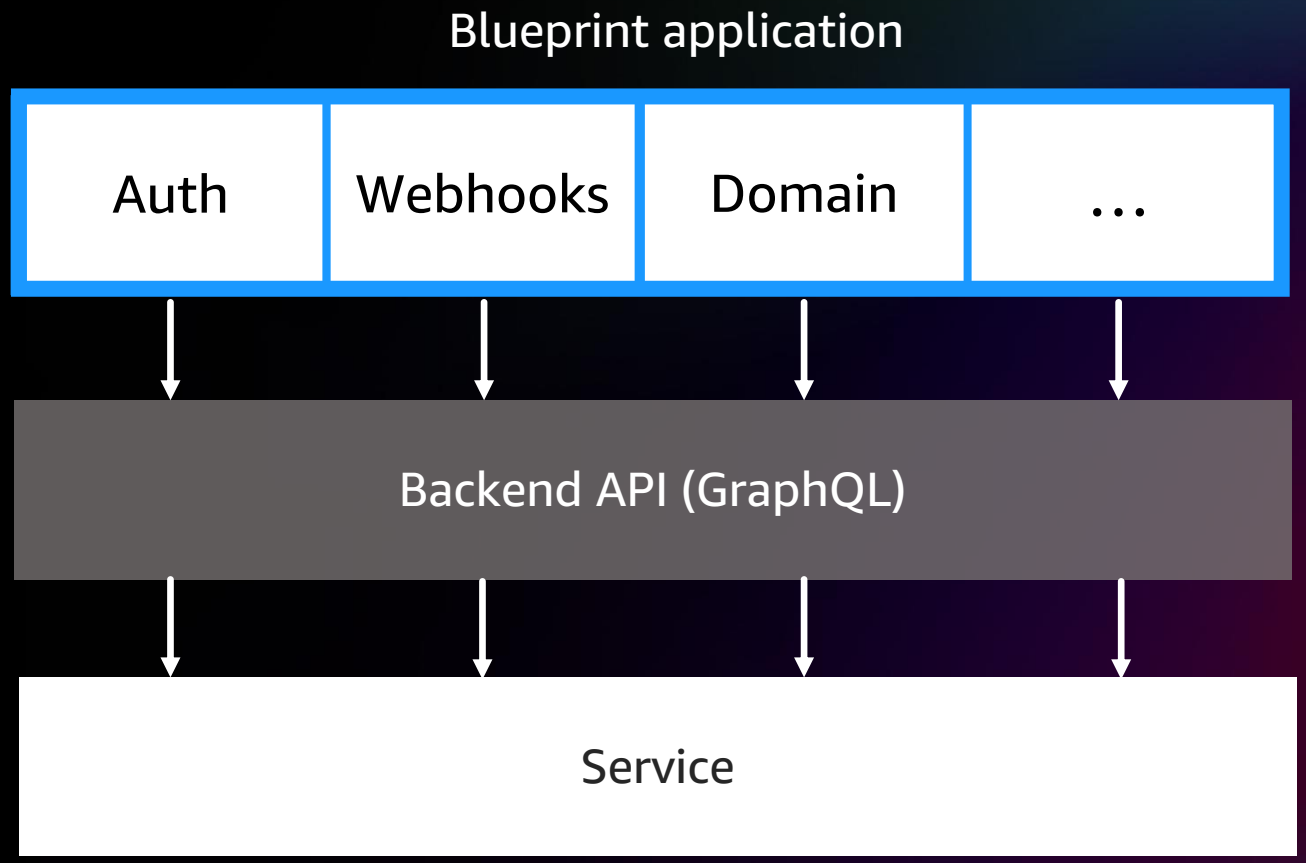
Un-release features

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So, what’s around the corner?

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Blueprint application



- Illustration of an application consuming Buy with Prime APIs
- Provides developers tangible artifacts they can use as reference for integration

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Accelerating development with the Blueprint

Explore



Install Blueprint App
Run tests and experiment

Plan



View prototype code
Develop high confidence estimates

Develop



Develop your own application
Fork or reference Blueprint code

Test



Modify app as per your scenarios
Test your own use cases

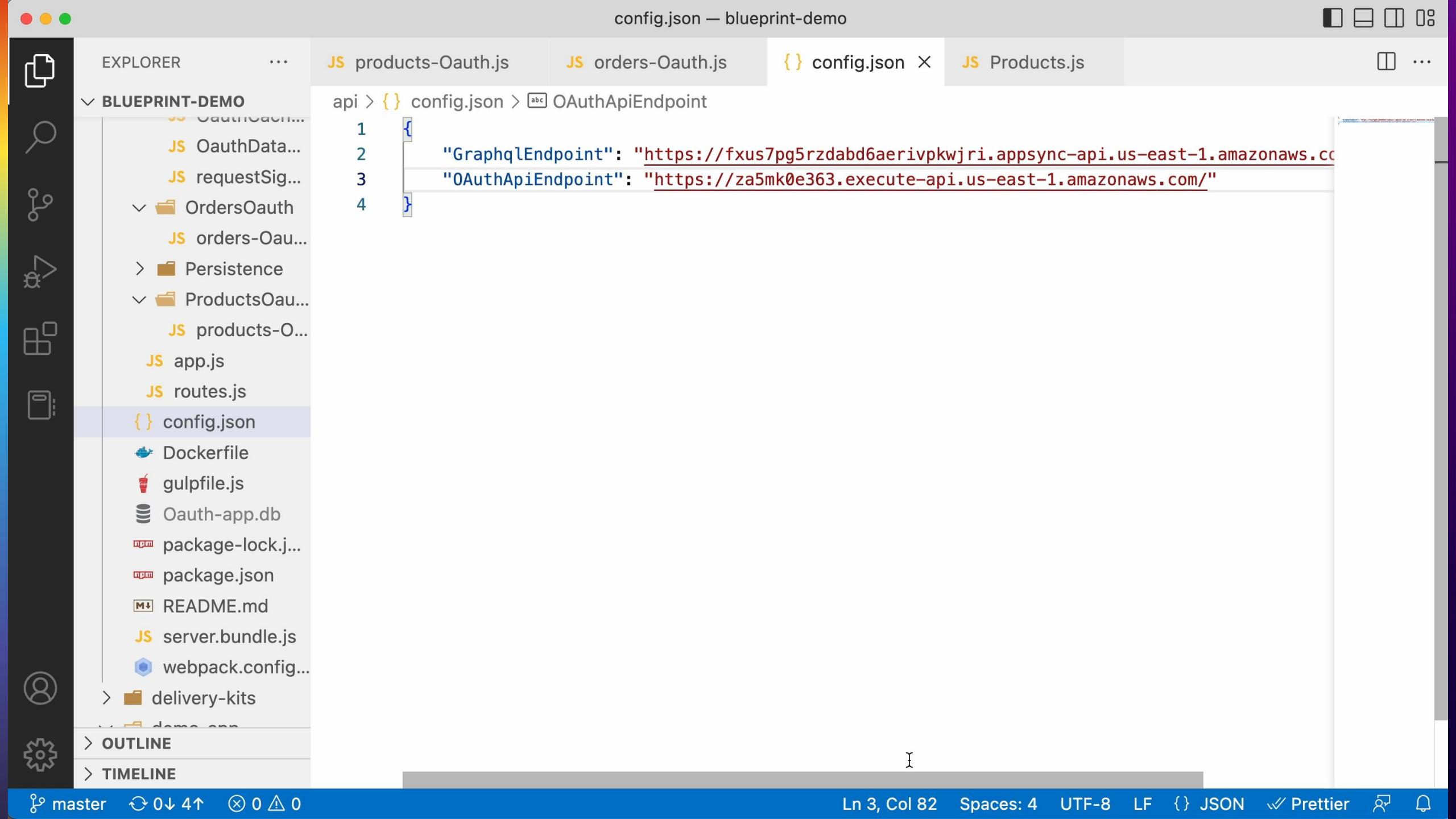
Deploy



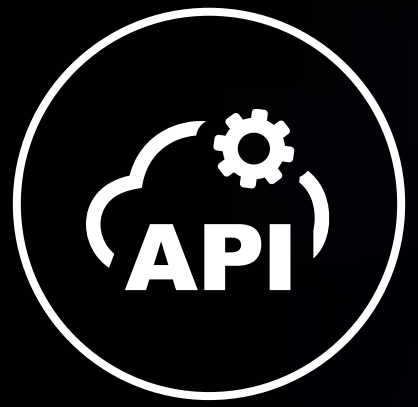
Commit your code
Deploy and run integration

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config.json — blueprint-demo
EXPLORER
BLUEPRINT-DEMO
OauthData...
requestSig...
OrdersOauth
orders-Oau...
Persistence
ProductsOau...
products-O...
app.js
routes.js
config.json
Dockerfile
gulpfile.js
Oauth-app.db
package-lock.j...
package.json
README.md
server.bundle.js
webpack.config...
delivery-kits
OUTLINE
TIMELINE
products-Oauth.js
orders-Oauth.js
config.json
Products.js
api > { } config.json > OAuthApiEndpoint
1 {
2 "GraphqlEndpoint": "https://fxus7pg5rzdabd6aerivpkwjri.appsync-api.us-east-1.amazonaws.co
3 "OAuthApiEndpoint": "https://za5mk0e363.execute-api.us-east-1.amazonaws.com/"
4 }
master
0↓ 4↑
0 0
Ln 3, Col 82
Spaces: 4
UTF-8
LF
{ } JSON
Prettier

Developers can now . . .



Consume the API



Deal with Auth Tokens



Handle exceptions, retries, etc.



Understand data structure

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Buy with Prime partner testimonials

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"The Buy with Prime API Accelerator greatly simplified our development turnaround time by giving us the ability to prototype and architect our integration before the production APIs were available." – *Gregg Mojica, CTO/CoFounder, Alloy*

"As soon as you sent us this, it meant we were unblocked right away." – Kestutis Kazlauskas, CTO, SixAds

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Key takeaways

- Focus on prioritizing customer needs above everything else
- Continuous improvement
- Prototyping brings the voice of the customer to us
- Build using AWS managed services to provide secure, reliable, and scalable model

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What's next

- Learn more about Buy with Prime in the AWS demo theater
- Join the Buy with Prime community to be part of the new ecommerce world



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Thank you!

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