ca technologies | API CONFERENCE

@SVENWAL

API From Scratch to Live in an Enterprise Environment

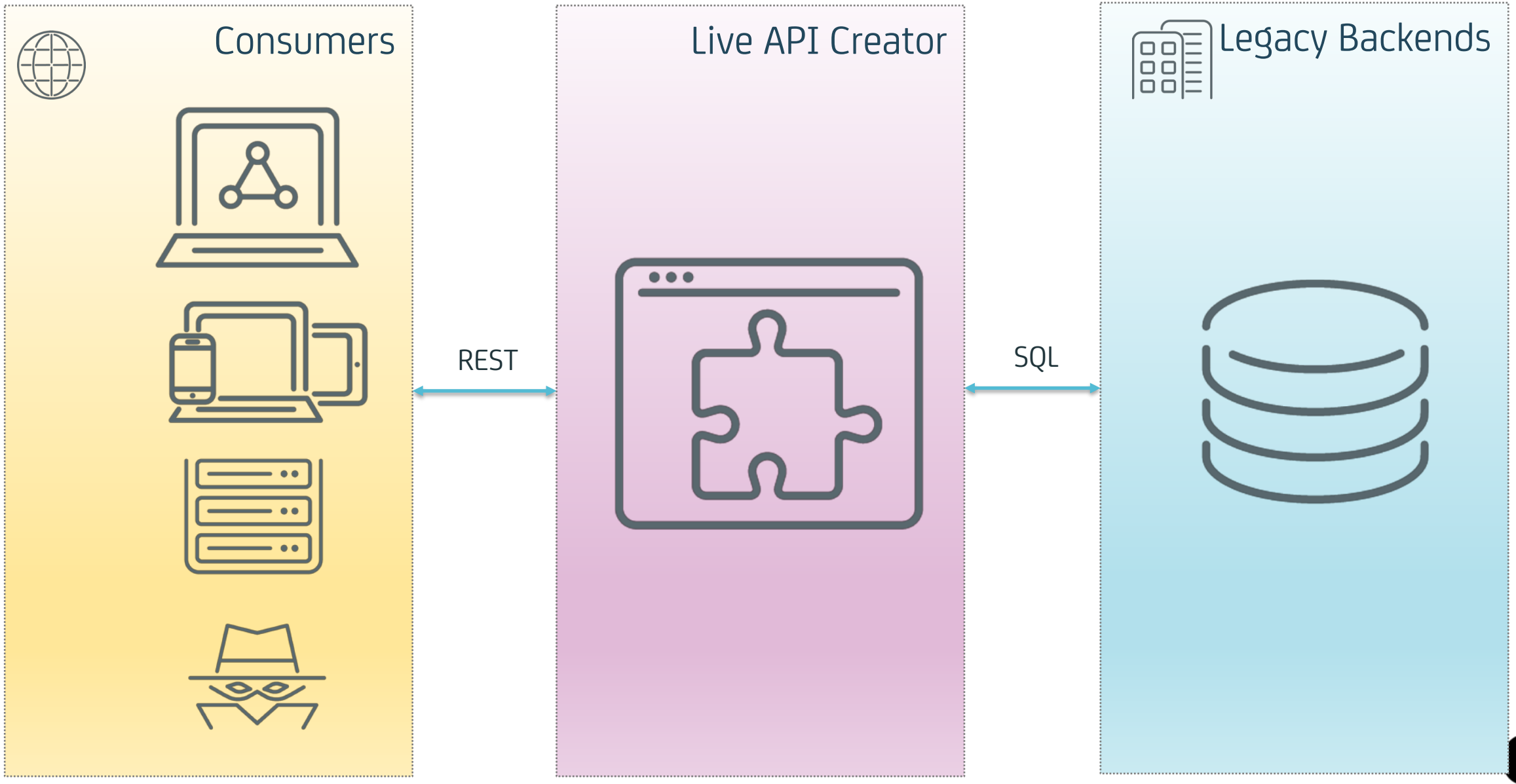
Enterprise Use

Enterprise use?

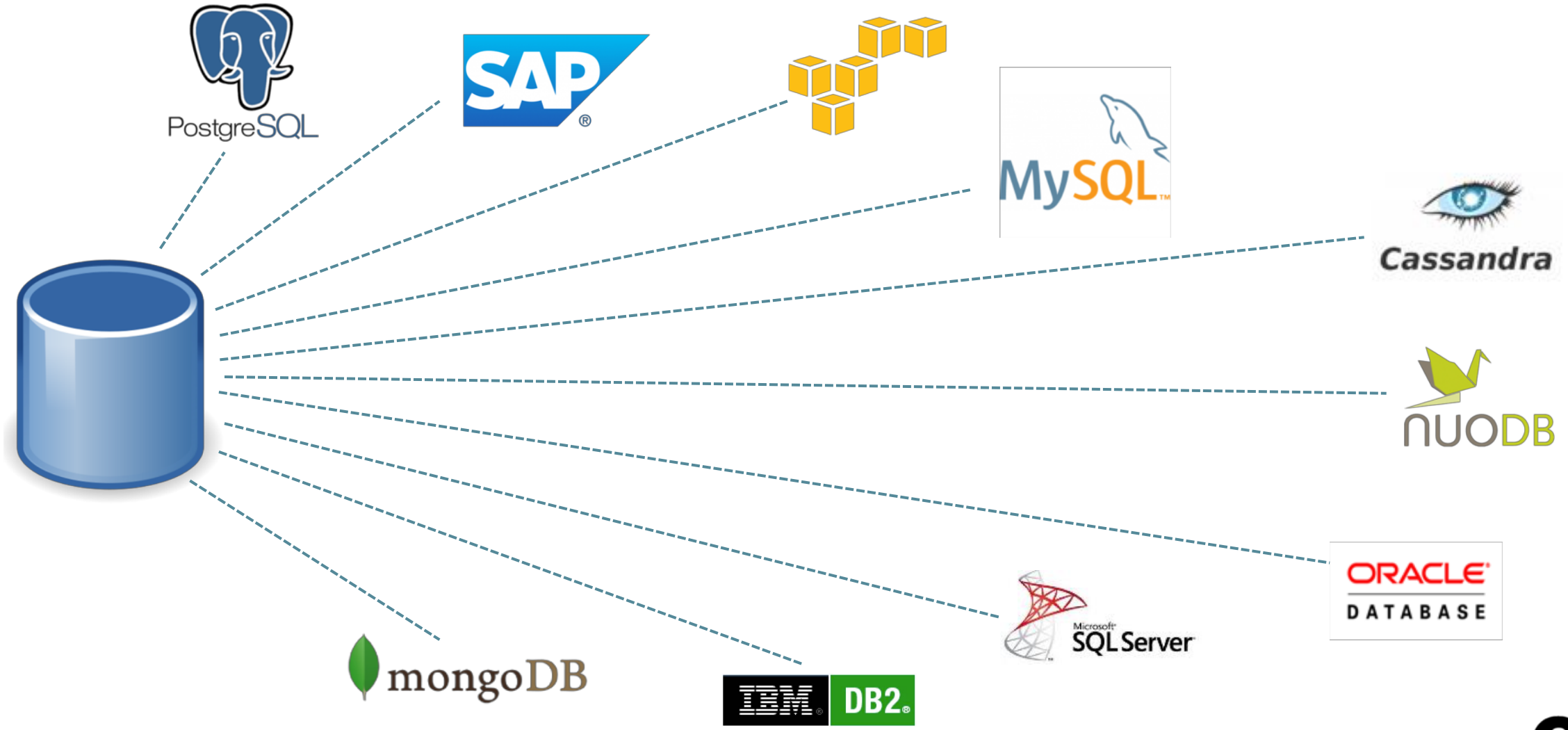
- API Management being a core **but not standalone solution**
- API Management not being used by a project / department / division but with an **enterprise strategy**
- **Integration** with enterprise architecture is critical for success
- Getting access to instances / creating own instance must be integrated into company **workflows**
- **Central settings vs. per project settings** must be taken care of

API Creation

API Creation – SQL & JavaScript



CA Live API Creator



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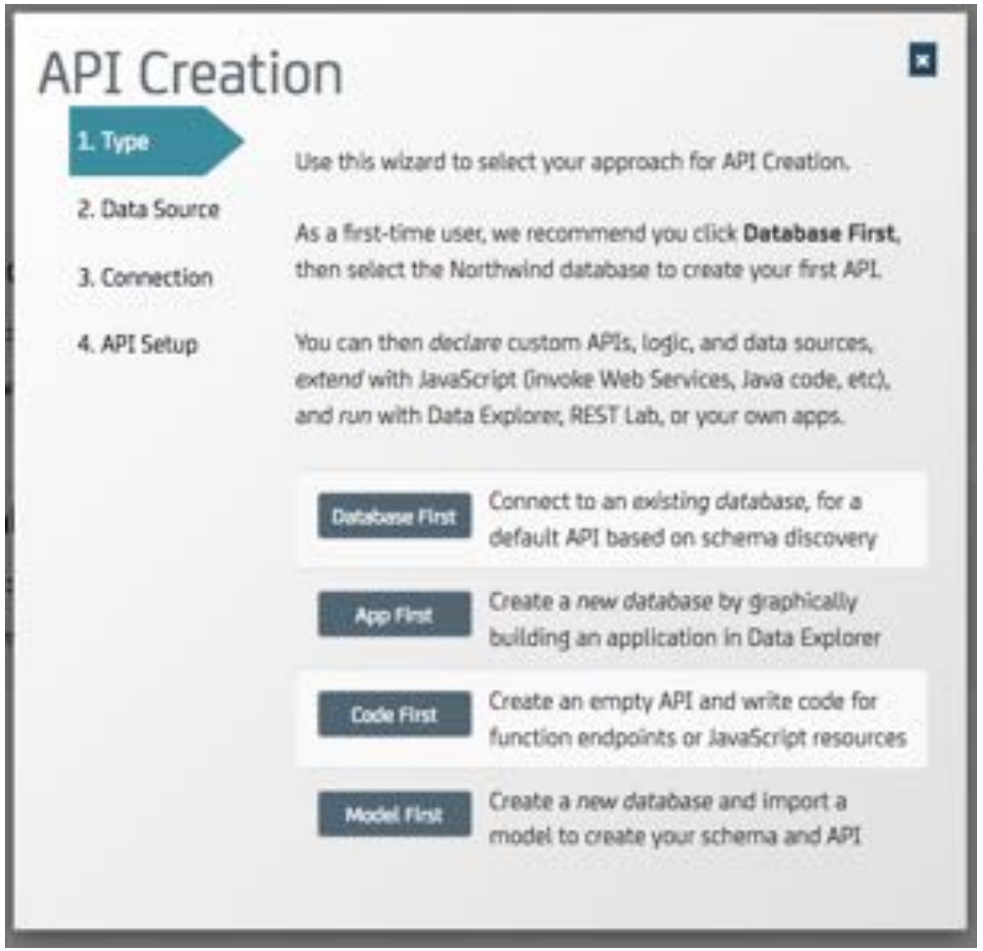
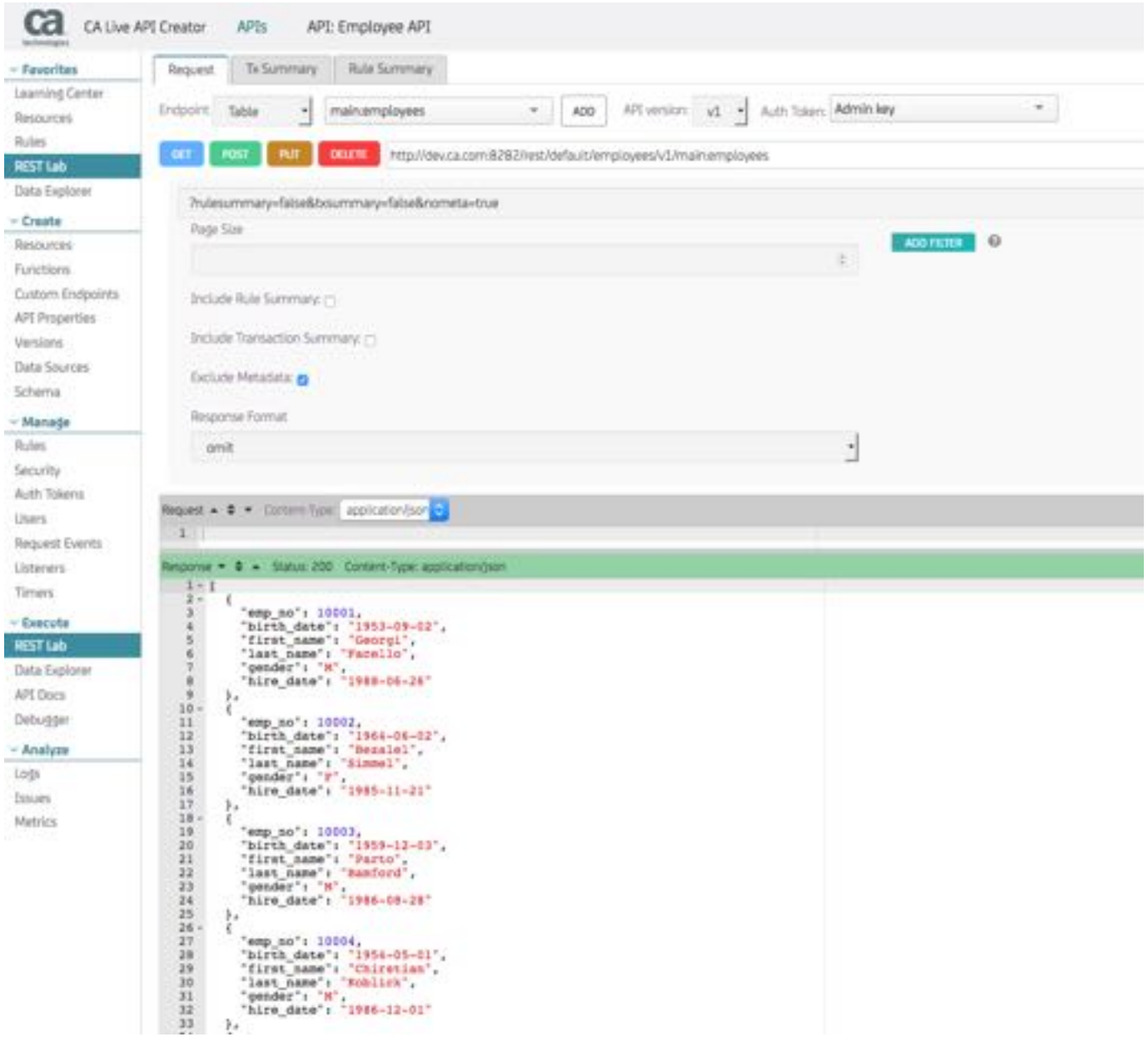
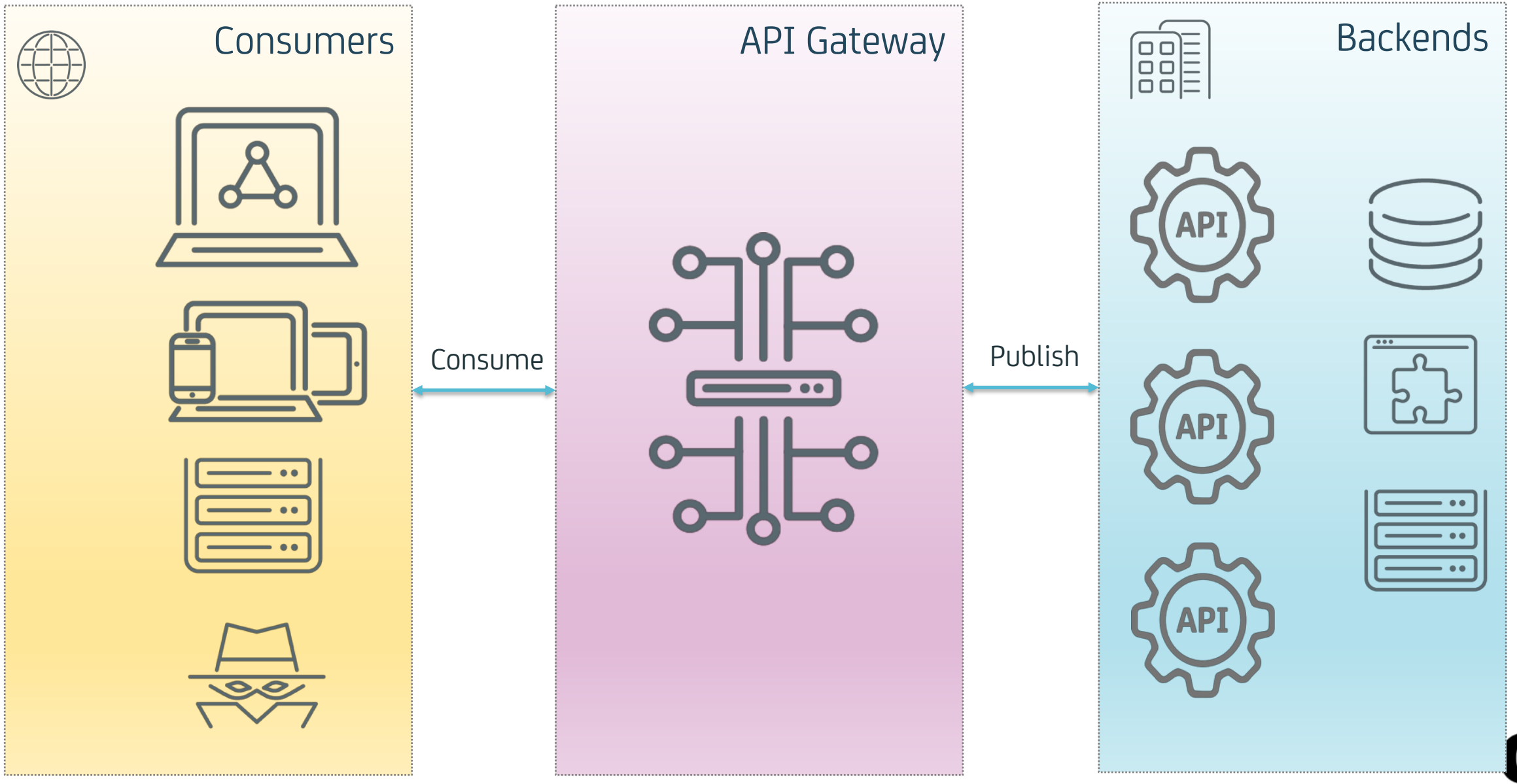
CA Live API Creator





API Gateway

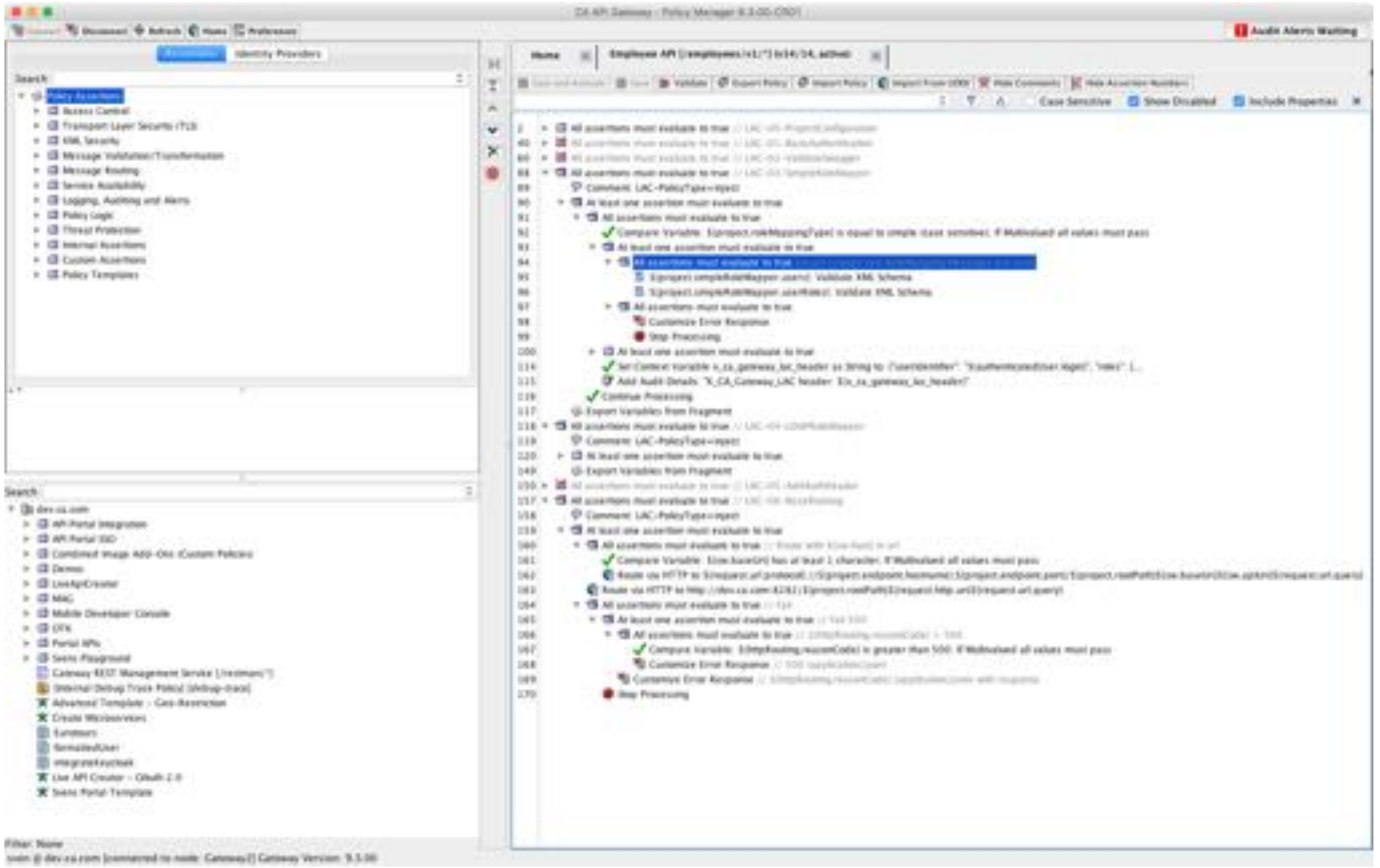
API Gateway – The Core



API Gateway – Main Functions

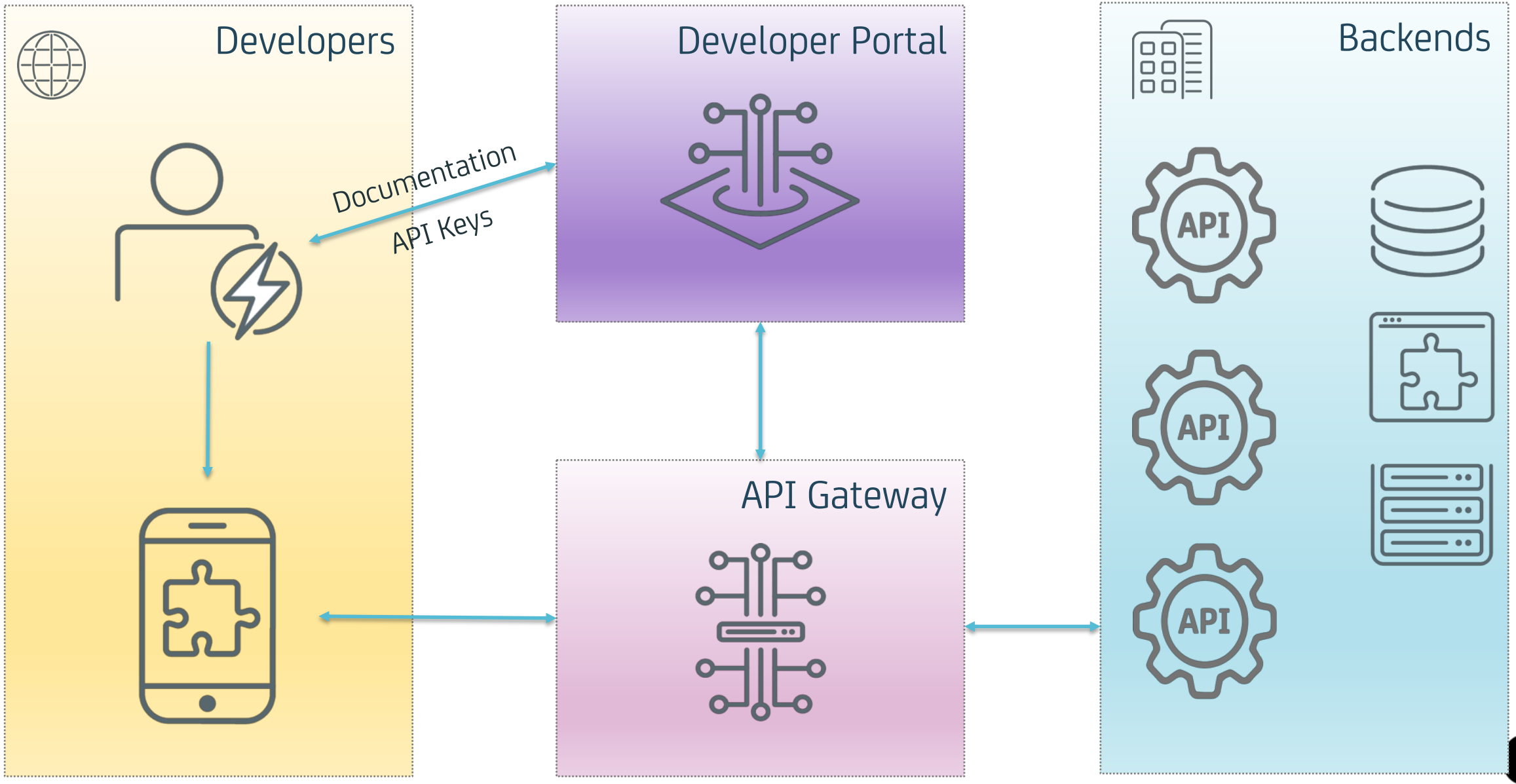
- Security, Security, Security – did I mention Security…?
  - Authentication
  - Message security (SQL, JavaScript, …)
- Rate limits and quotas
- Integration / orchestration
- Mediation
- Caching

CA Policy Manager



Developer Portal

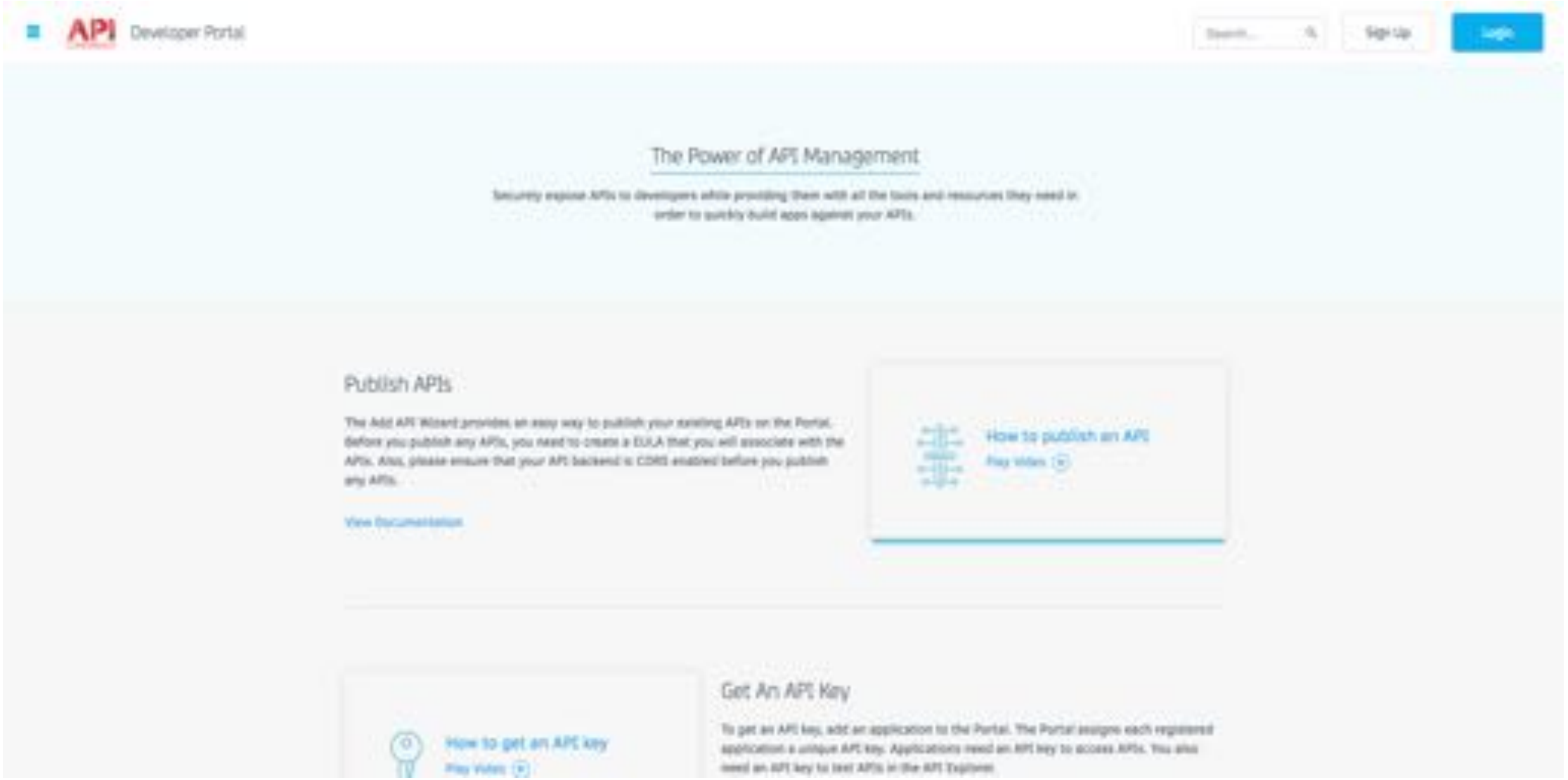
Developer Portal



Developer Portal – Main Functions

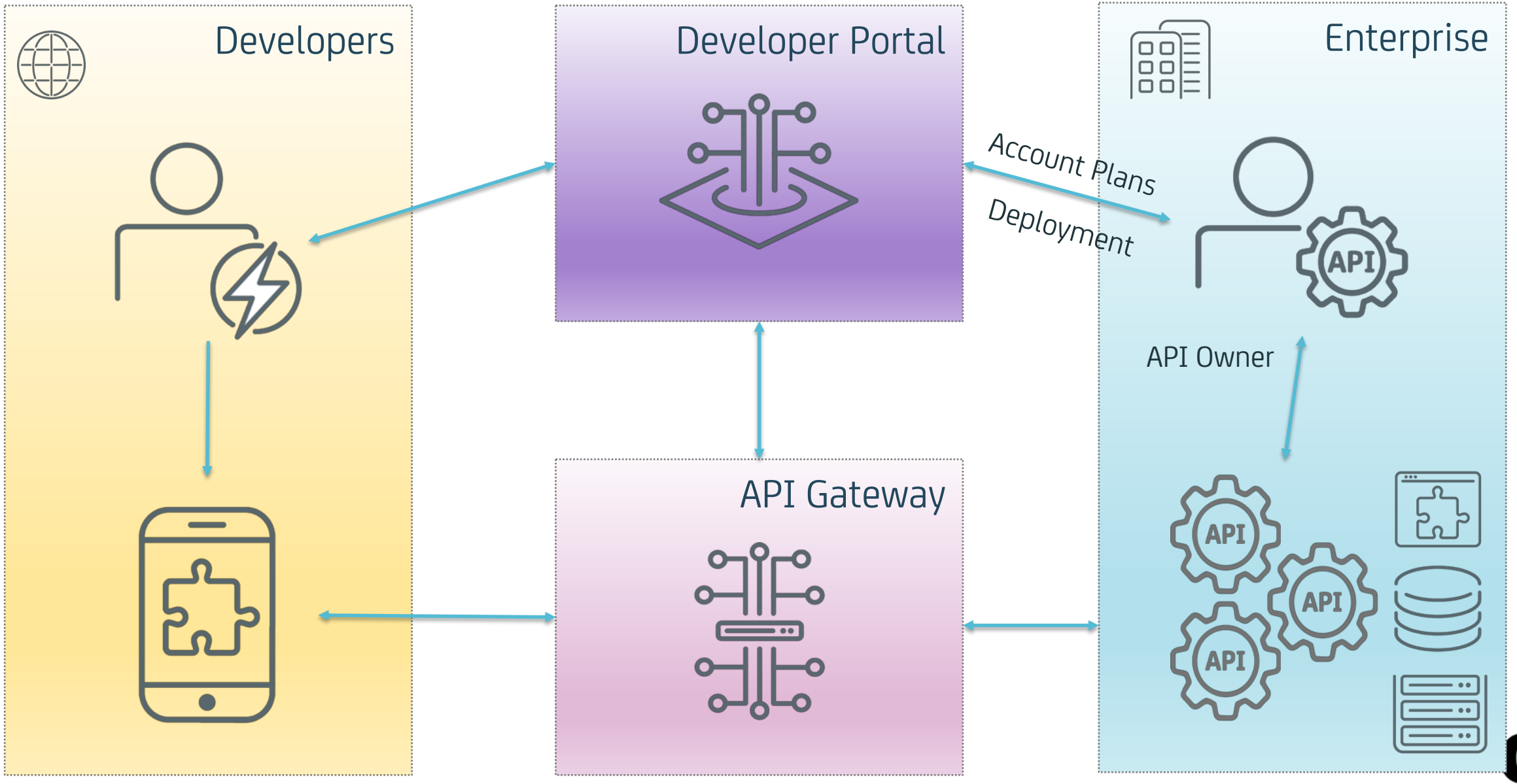
- Self service
- Discovery
- Documentation
- API Explorer
- API Keys

CA Developer Portal



API Management

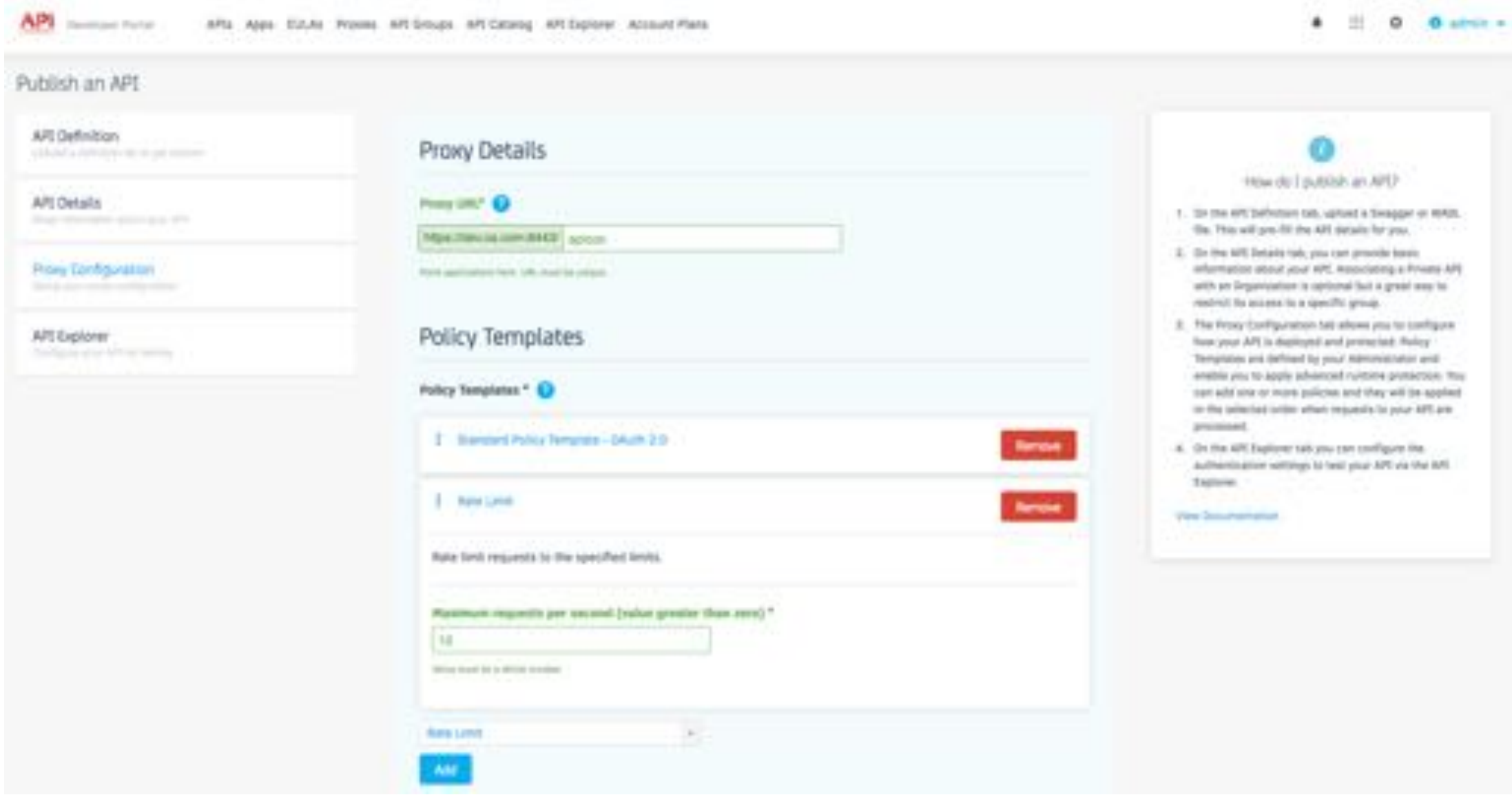
API Management



API Management– Main Functions

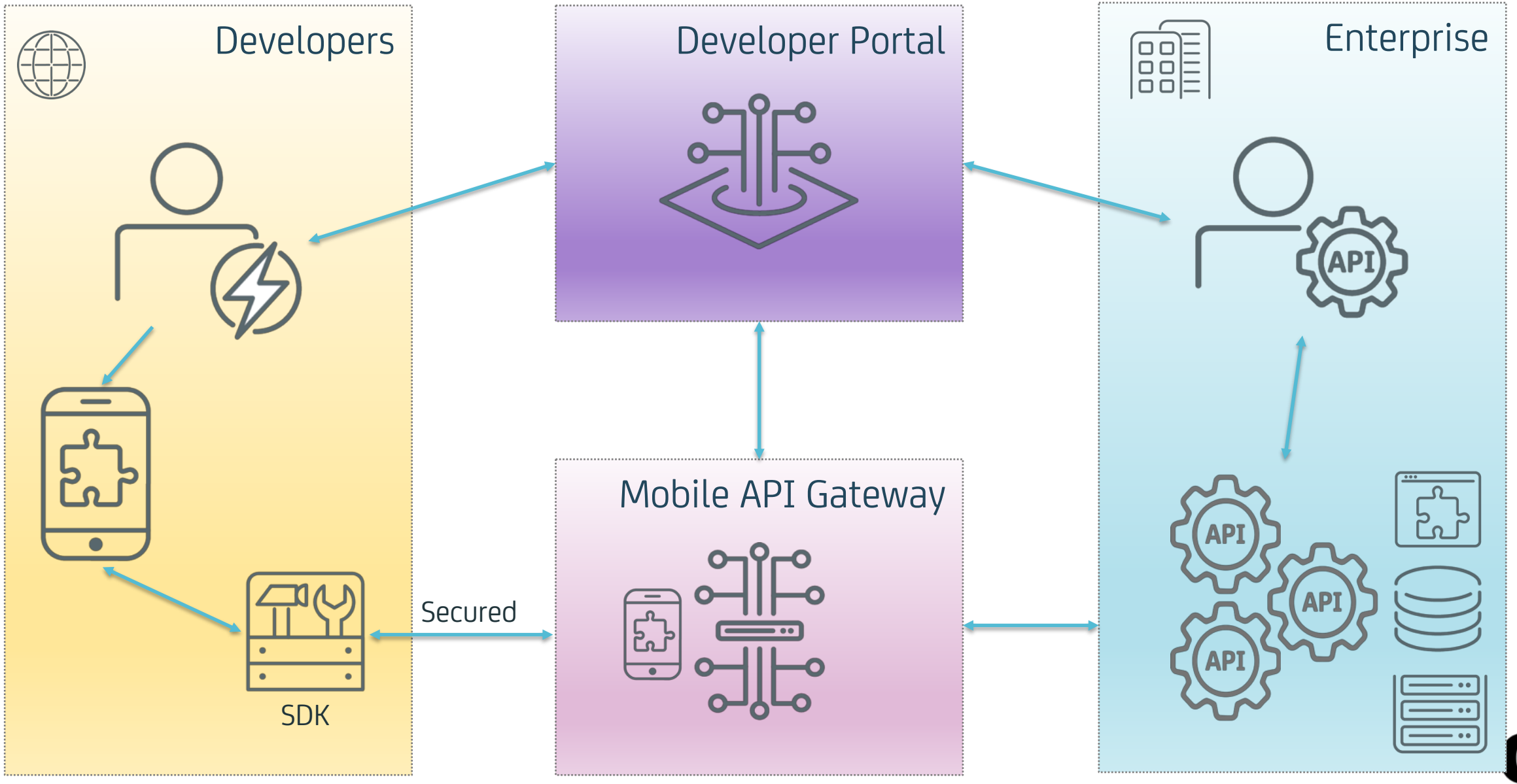
- Publishing
- Versioning
- Policies
- Plans
- Monitoring & Analytics

API Publishing



Mobile SDK

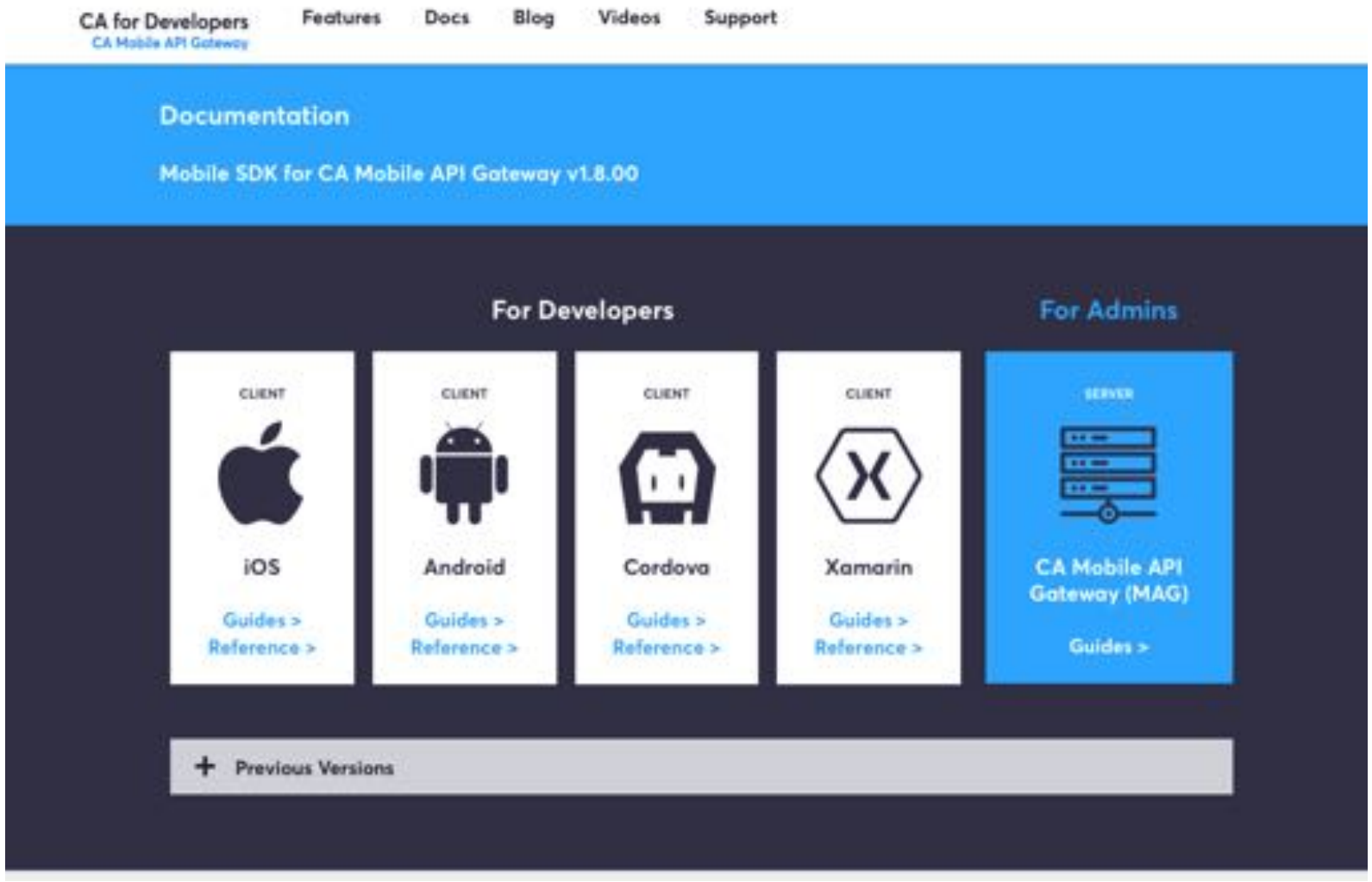
API Management

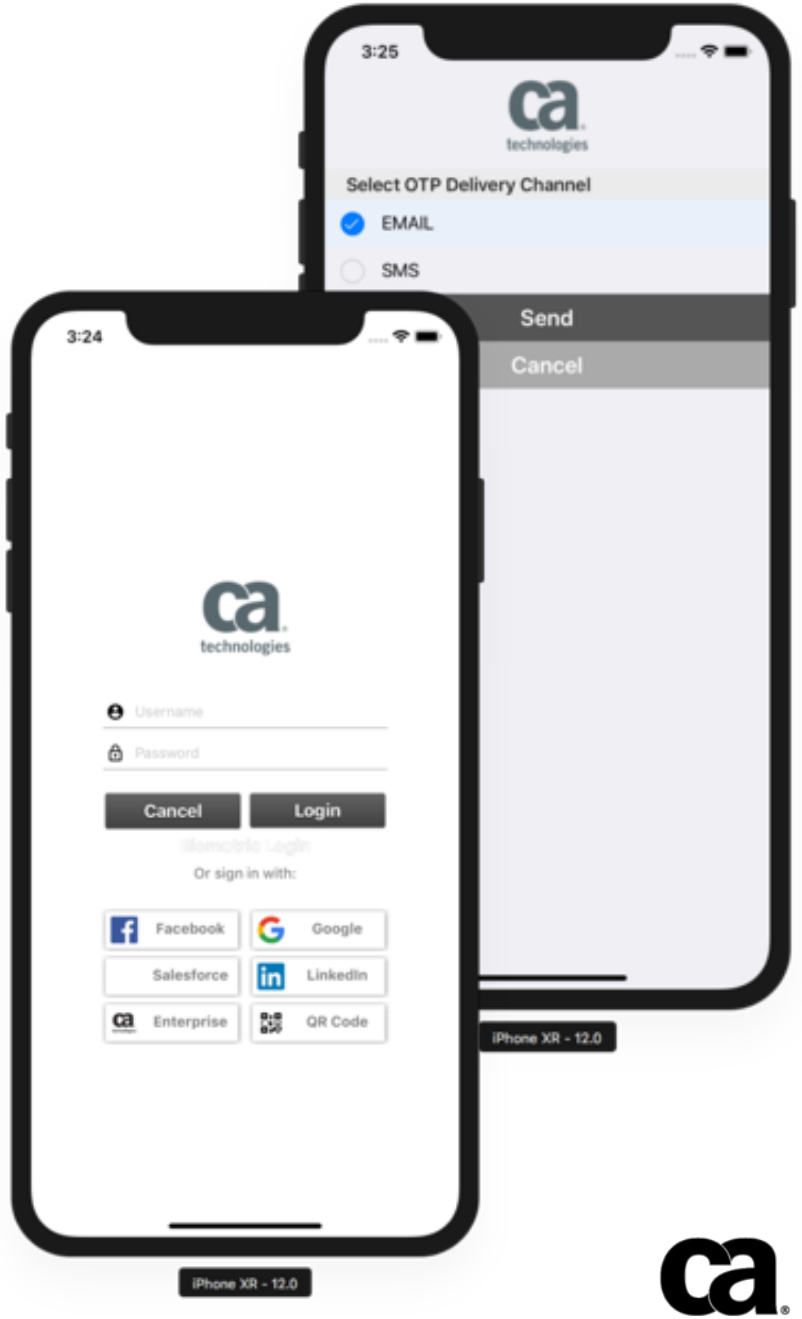


Mobile API Gateway

- Mobile Security
- Policies on Gateway
- SDK on Clients
- OAuth, OpenID Connect, Mutual Trust, Identifier, …
- Easy to use

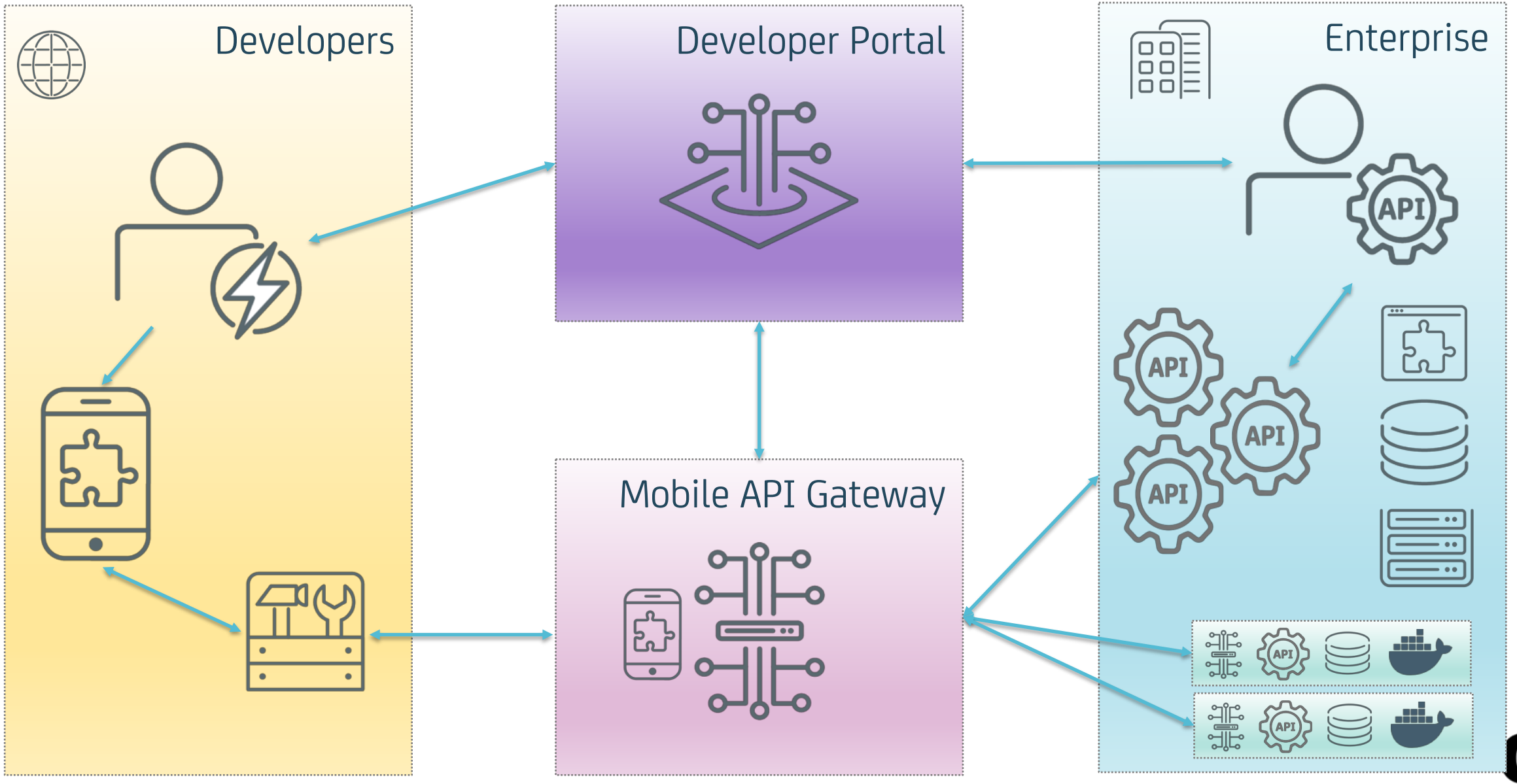
CA Mobile API Gateway





Microgateway

Microgateway

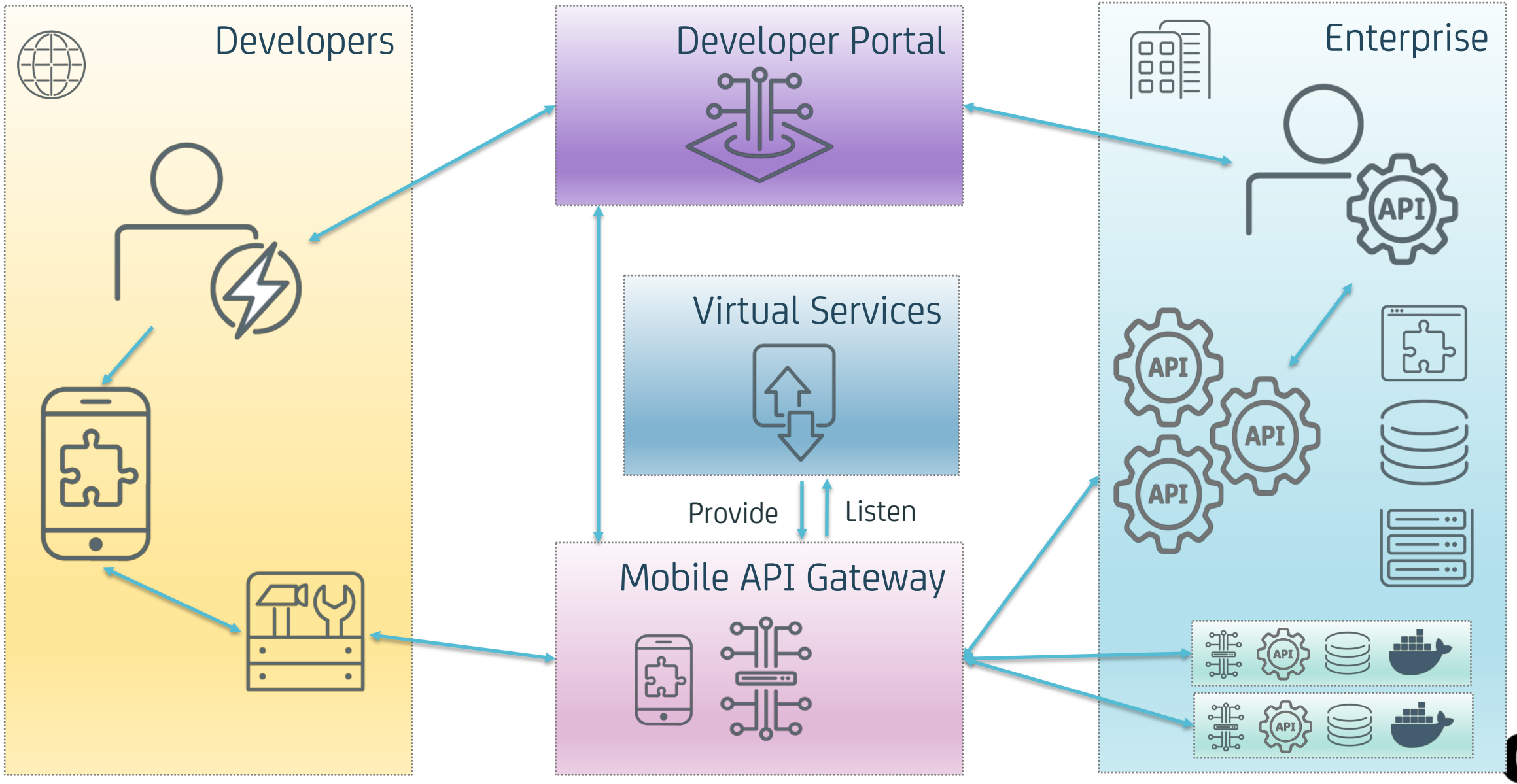


Microgateway

- Docker based
- No team external knowledge needed
- No team external approval needed
- Central security and monitoring enabled
- Flexibility as in Edge Gateway for adminstrators

Service Virtualization

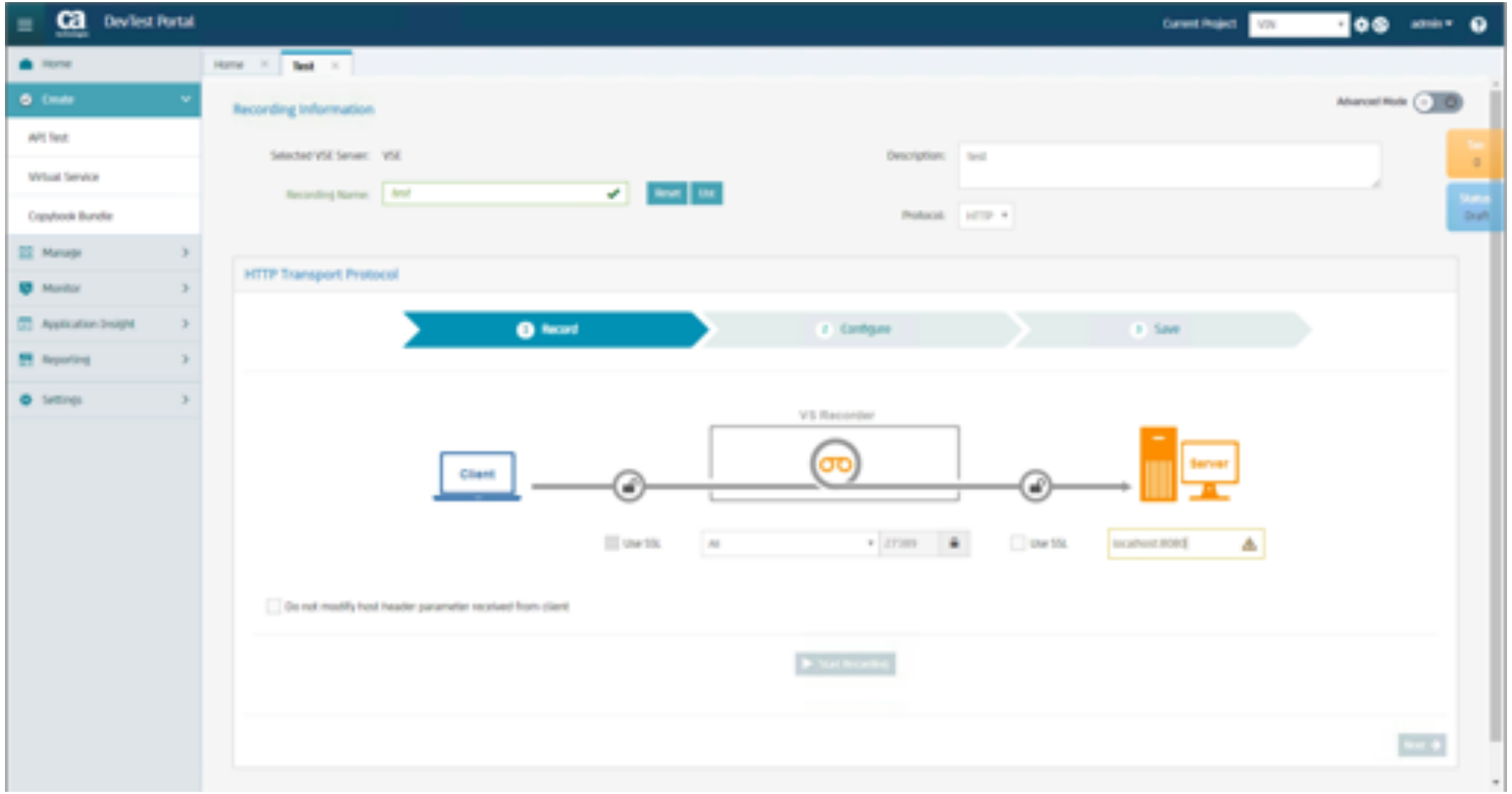
Service Virtualization



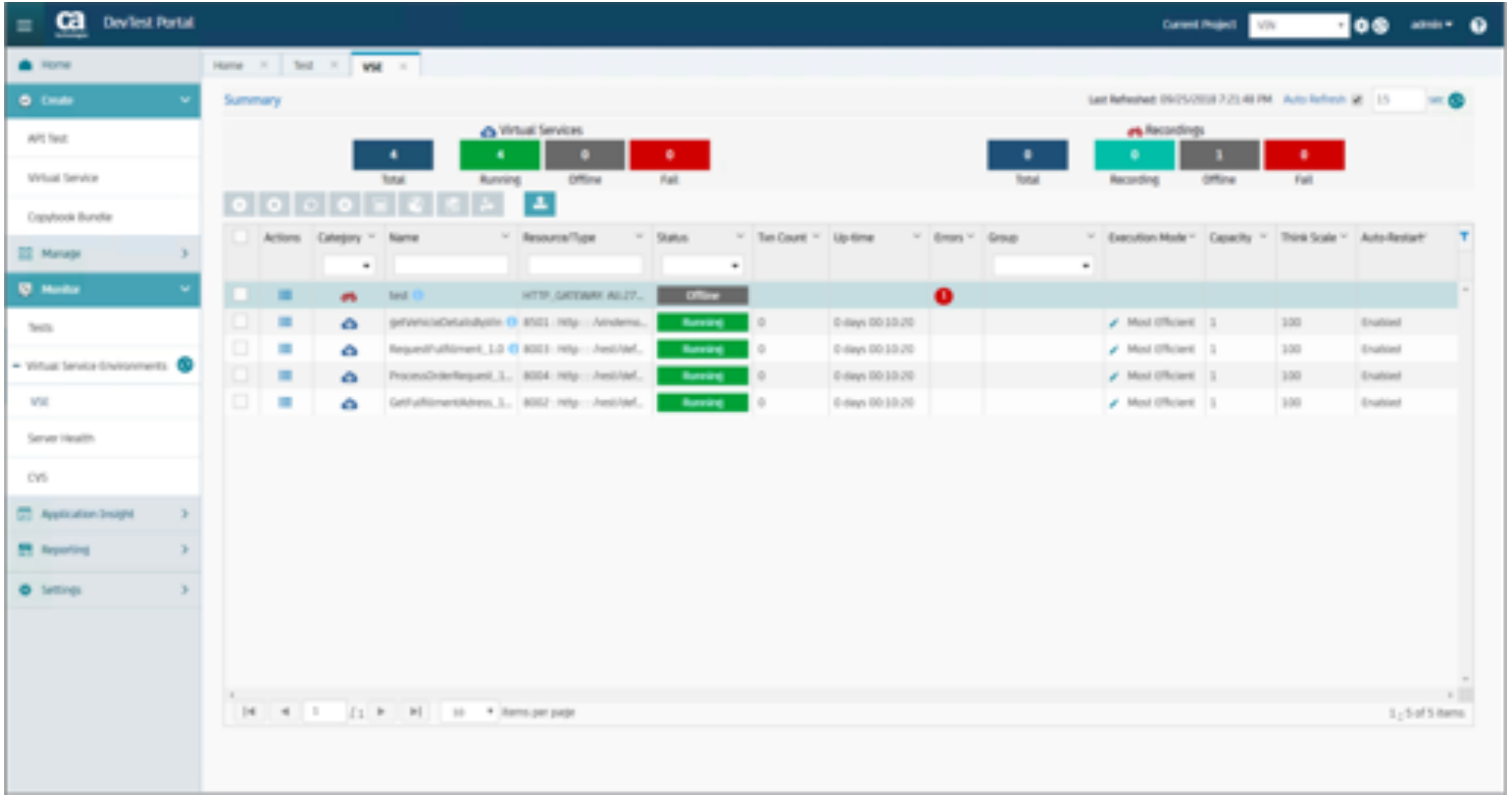
Service Virtualization

- Connection to gateway to listen on actual API calls
- Swagger / OpenAPI based import
- Gateway could provide virtual service as sandbox
- Updates in service will update virtual service on the fly
- Usage not hard linked to gateway (create internal test APIs)

Virtual Services

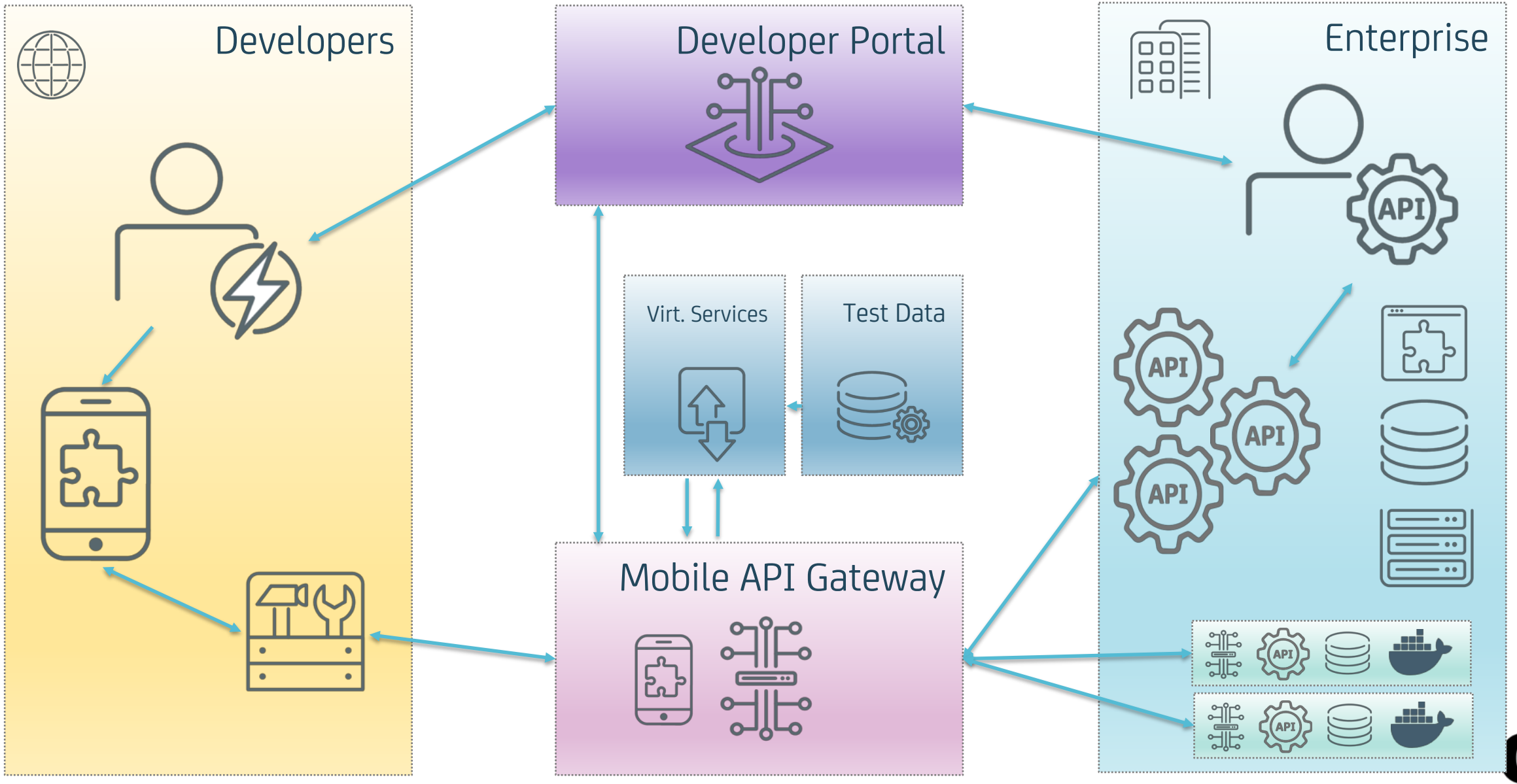


Virtual Services



Test Data

Test Data Management

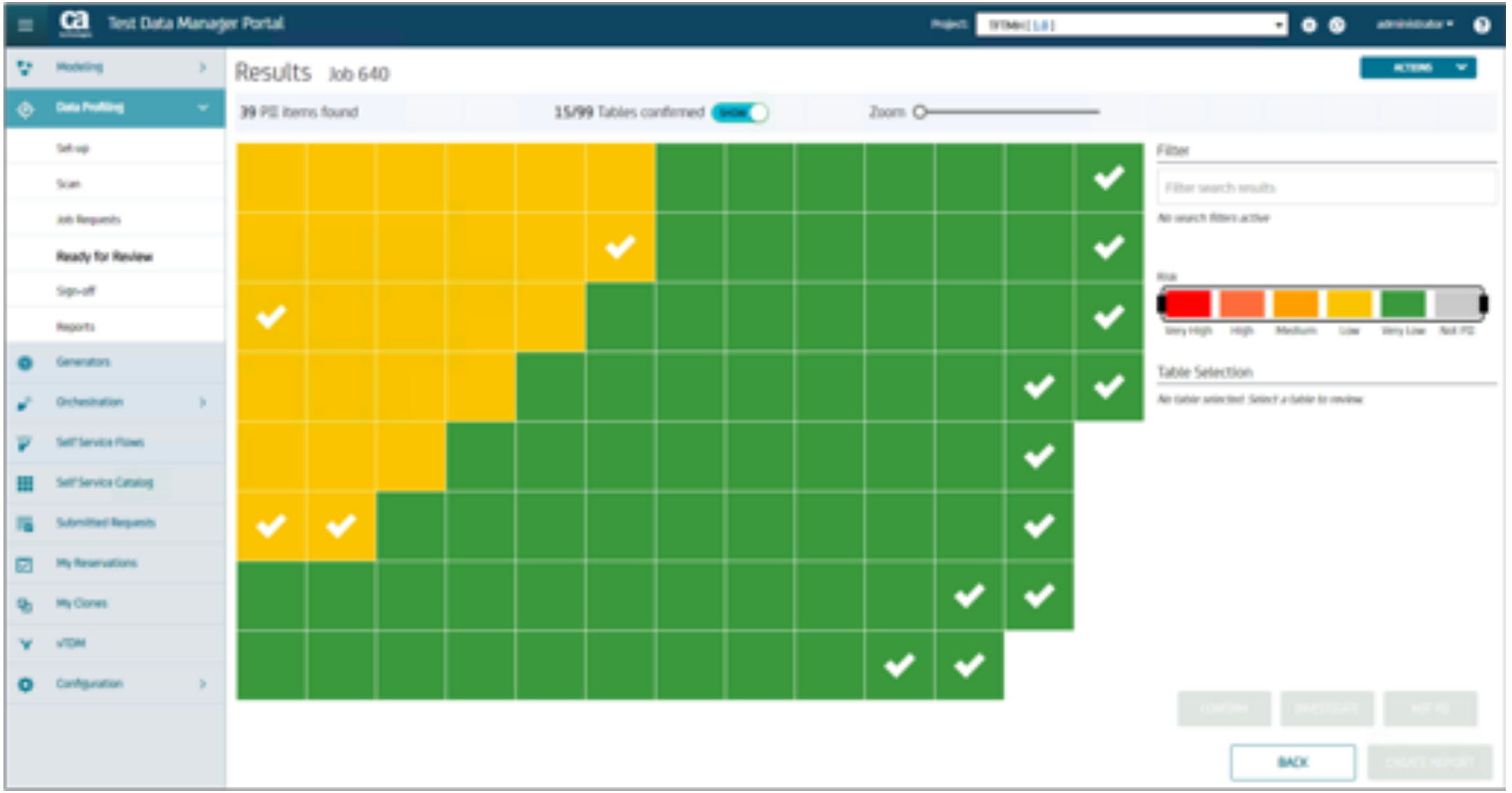


Test Data Management

- Services based on Service Virtualization and/or Swagger/OpenAPI
- Test data generation with rules, for example
  - Last name German
  - Street name Germany
  - ZIP code UK
- Test data pool reservation
  - Own tests not in conflict with other testes (e. g. PUT or POST requests changing the contents)

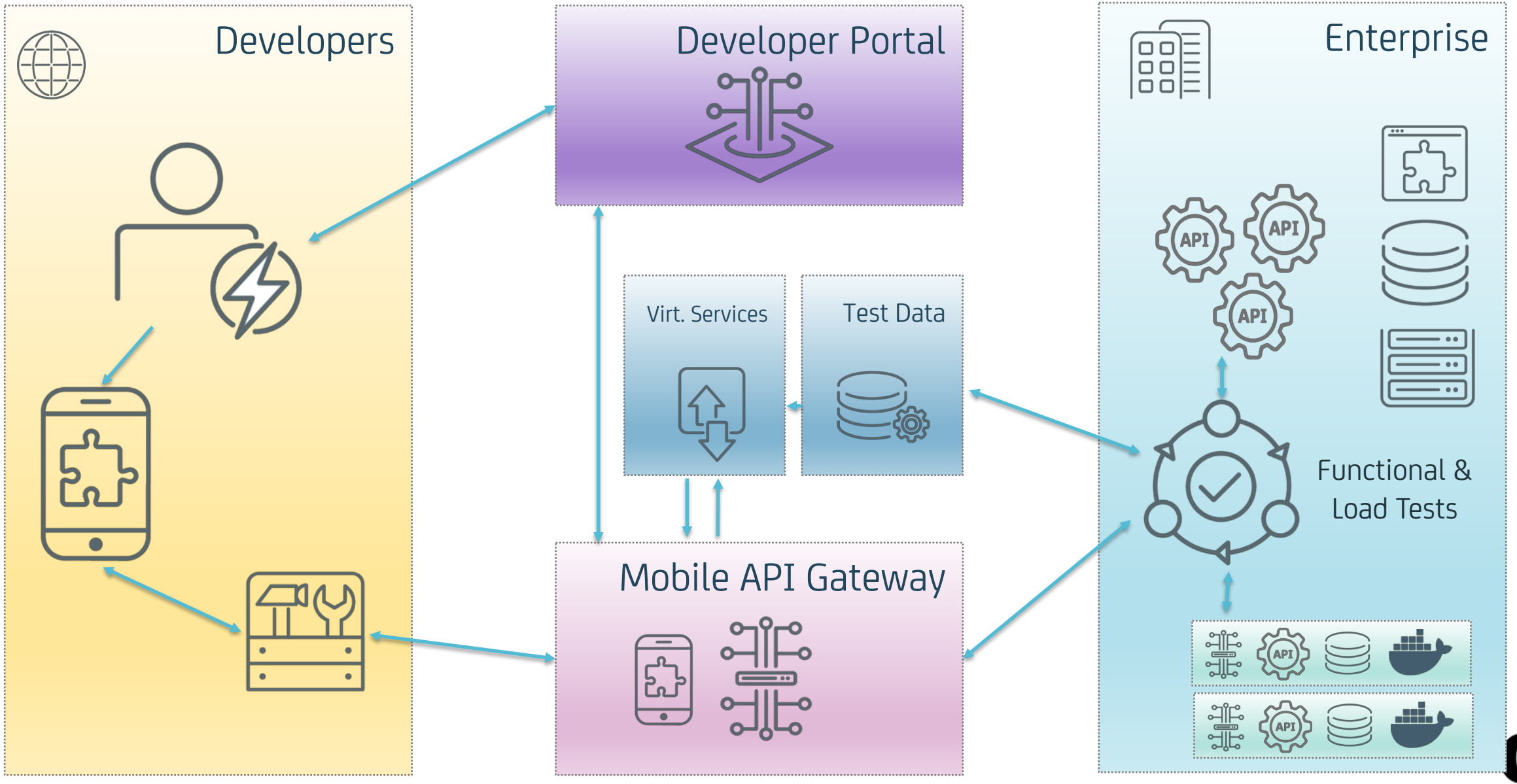
Test Data

Test Data



Automated Testing

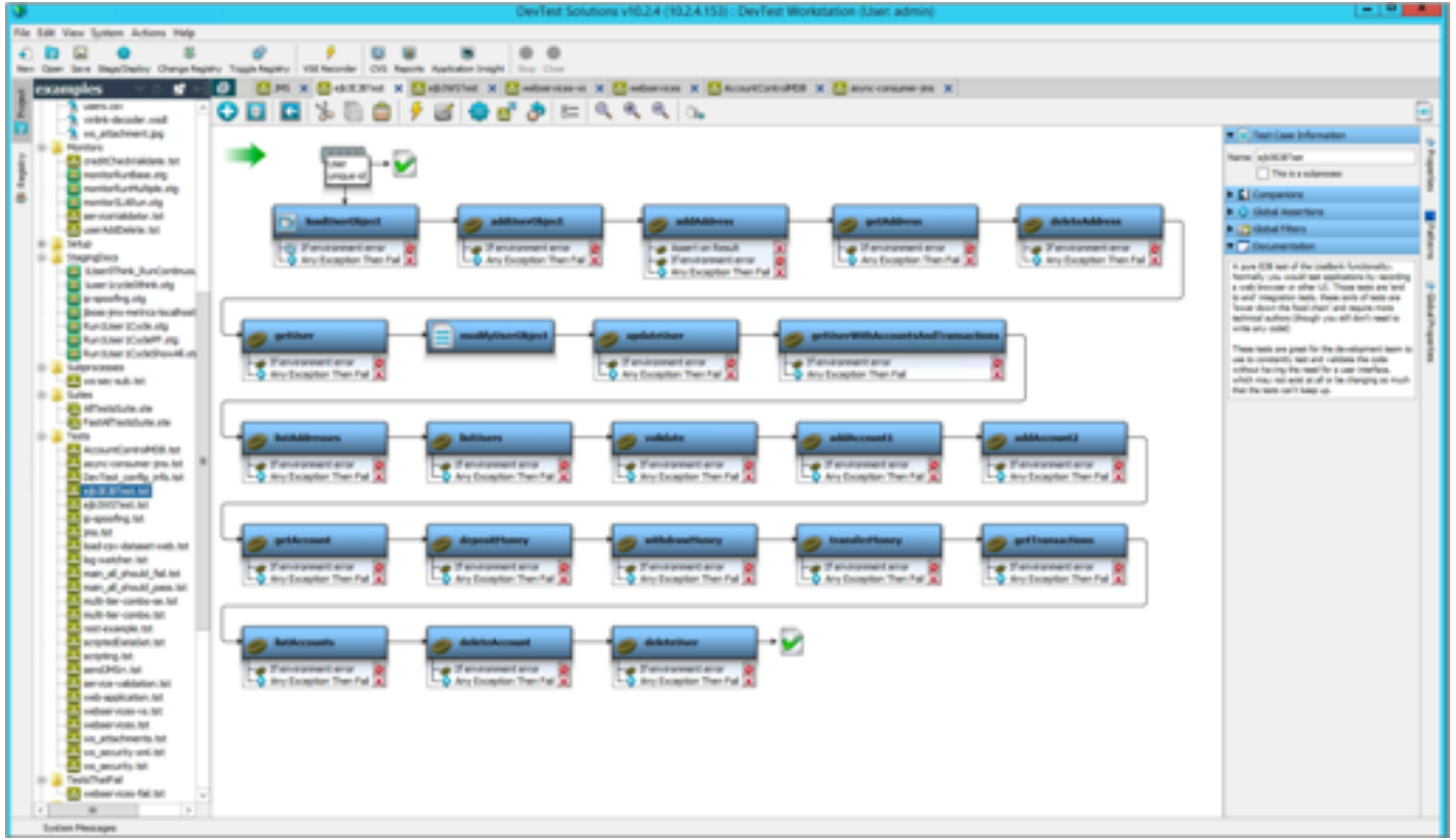
Test Data Management



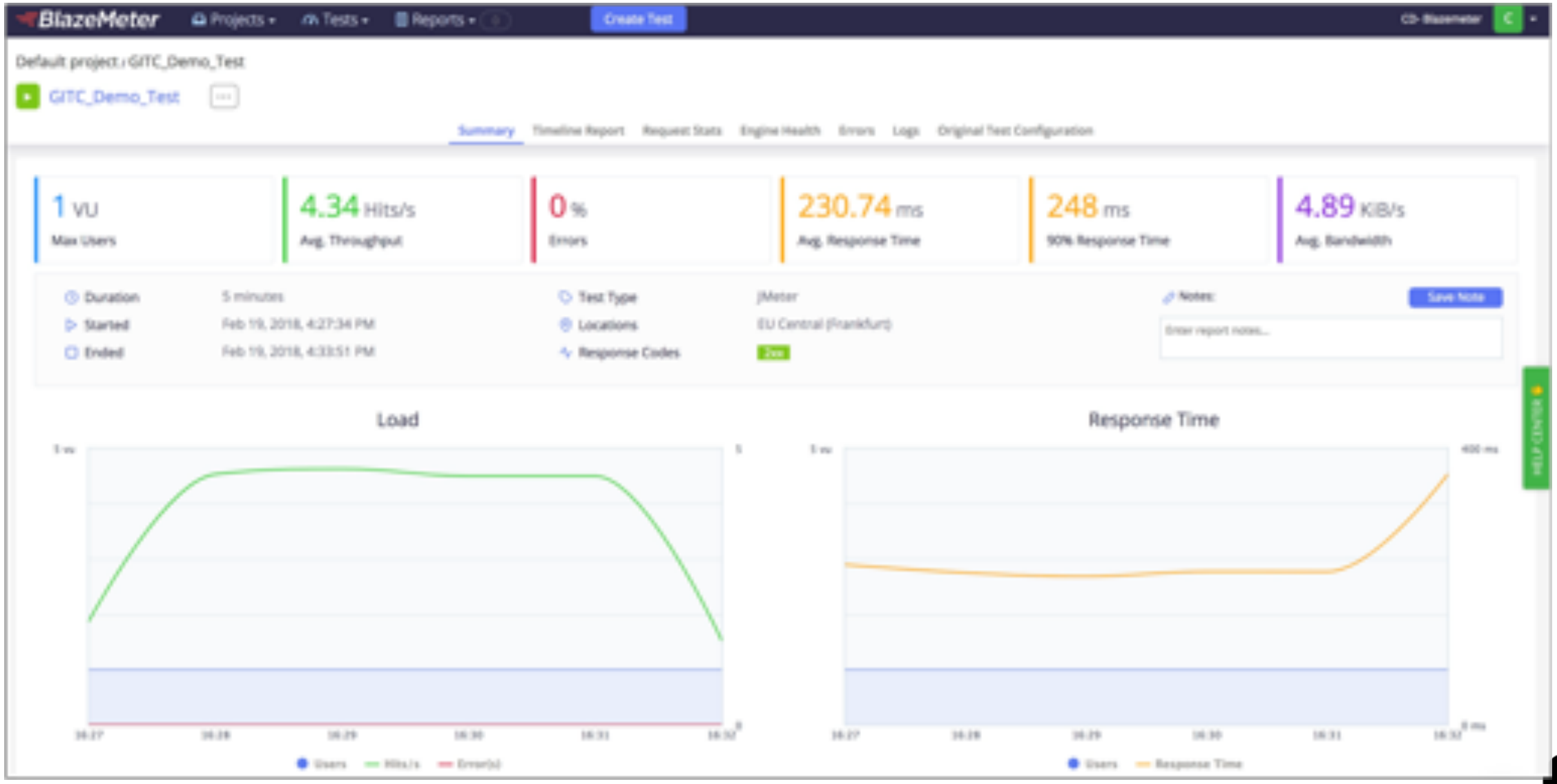
Testing

- Load tests
  - Distributed with automated created cloud instances as clients
  - JMeter compatible tests
  - Easy to use web interface
- Functional tests
  - Define expected respones
  - Define expected errors

Test worflows



Performance Testing



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Performance Testing

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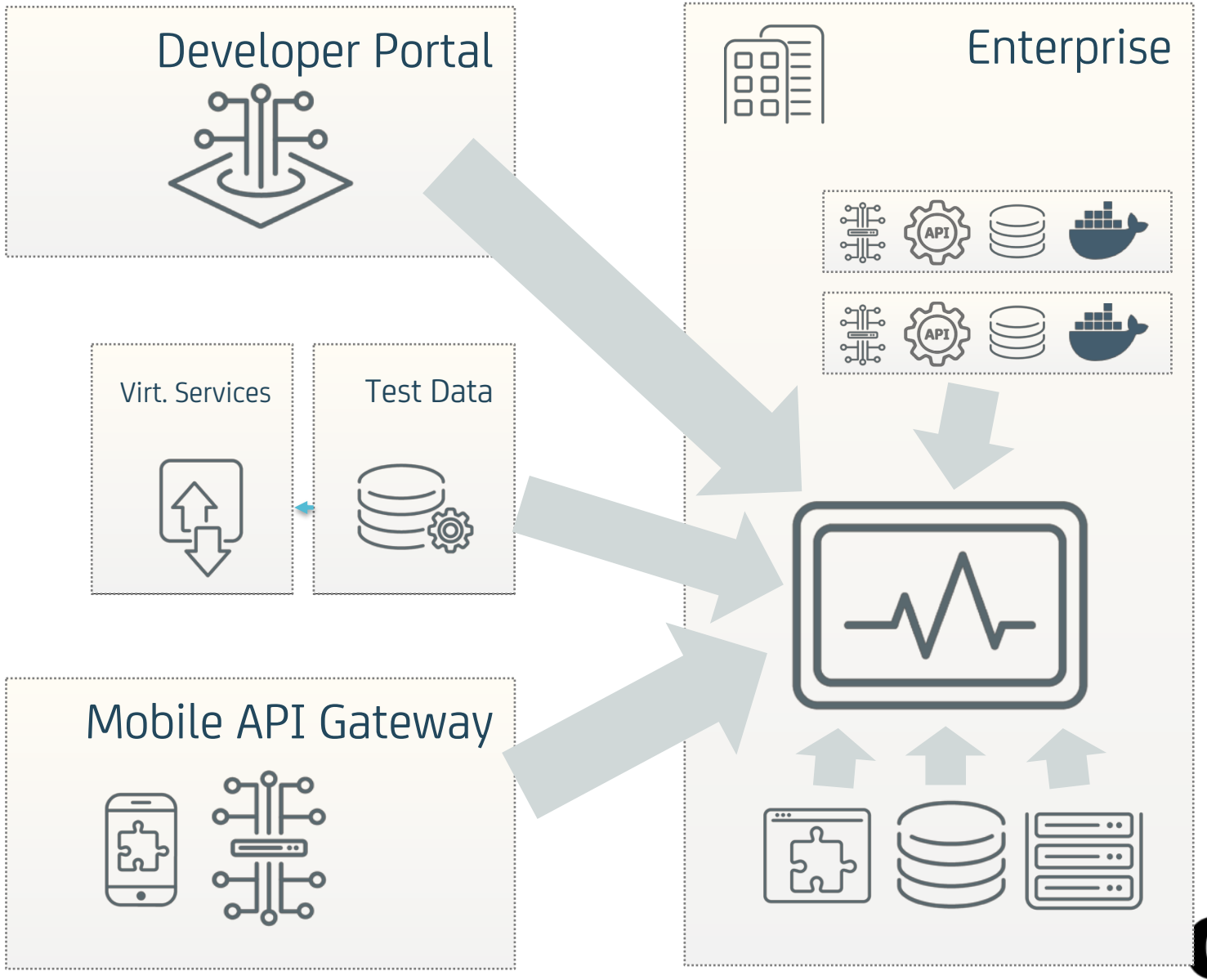
Enterprise Monitoring

Monitoring



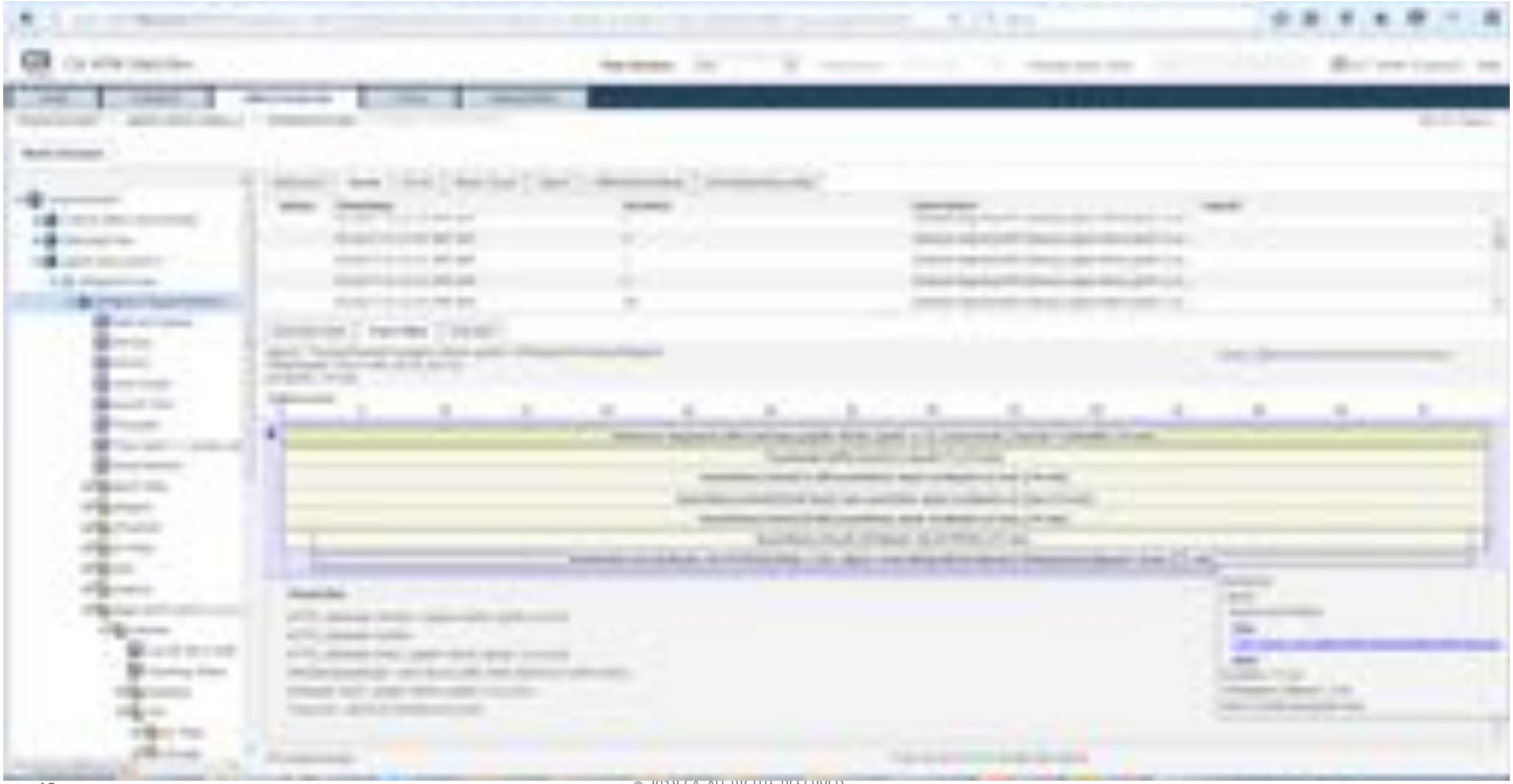
Enterprise Monitoring

- Application Performance Management, e. g.
  - Disk space
  - CPU usage
  - Database availability
  - …
- Direct integration with gateway
  - Not only black box (“request took 1.598msec“) but instead
  - Deep inspection of policies (which assertion created the delay)
  - Directly send by gateway asynchronous

API Service Metrics

Service Metrics:
Front End Latency, Back-end Latency
Success Counts, Routing Failures, Policy Violations

Transaction Traces – “Upside Down Wedding Cake”



Deployment

Deploy everywhere

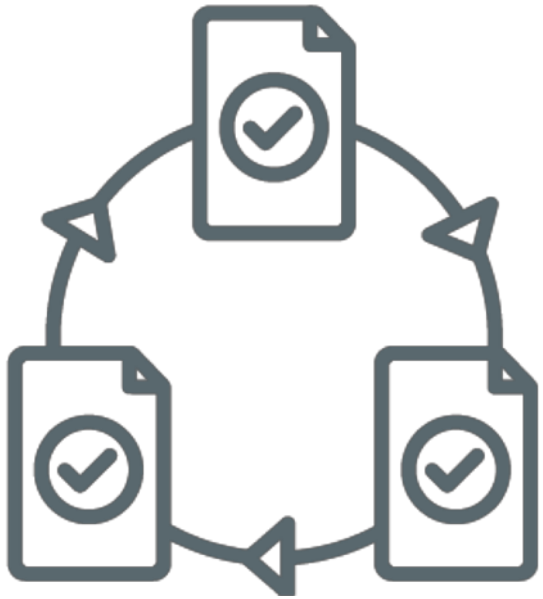
OPENSHIFT

Docker

docker

kubernetes

OVA appliance



Software

SAP Cloud Platform

Cloud

amazon web services

Microsoft Azure

Google Cloud

Hardware

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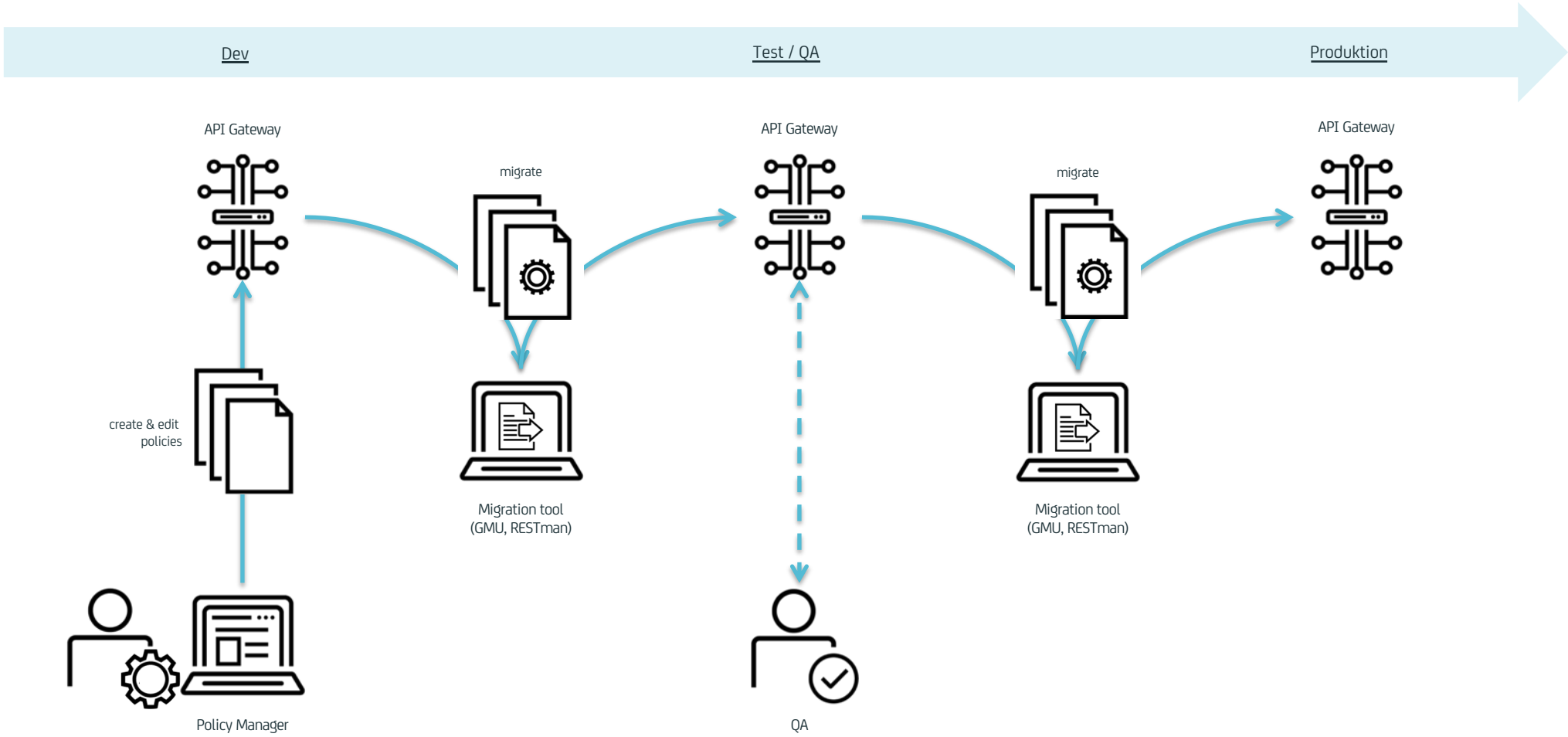
Deployment Workflow



Questions and Answers

Thank You.

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