

The background of the slide is a blurred photograph of a modern office workspace. Several people are visible, sitting at their desks and working on computers. The office has a high ceiling with exposed pipes and lighting fixtures. A large whiteboard or screen is visible in the background on the left. The overall atmosphere is professional and focused.

Pivotal

Publish, Secure, & Monitor APIs with Pivotal Cloud Foundry Route Services

Nav Sagoo

Platform Architect, Pivotal

Agenda

1. Pivotal Cloud Foundry
2. PCF Route Services
3. Apigee Edge with PCF
4. Demo
5. Conclusion

Modern Platforms

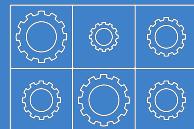
DevOps



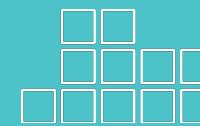
Continuous Delivery



Cloud Native

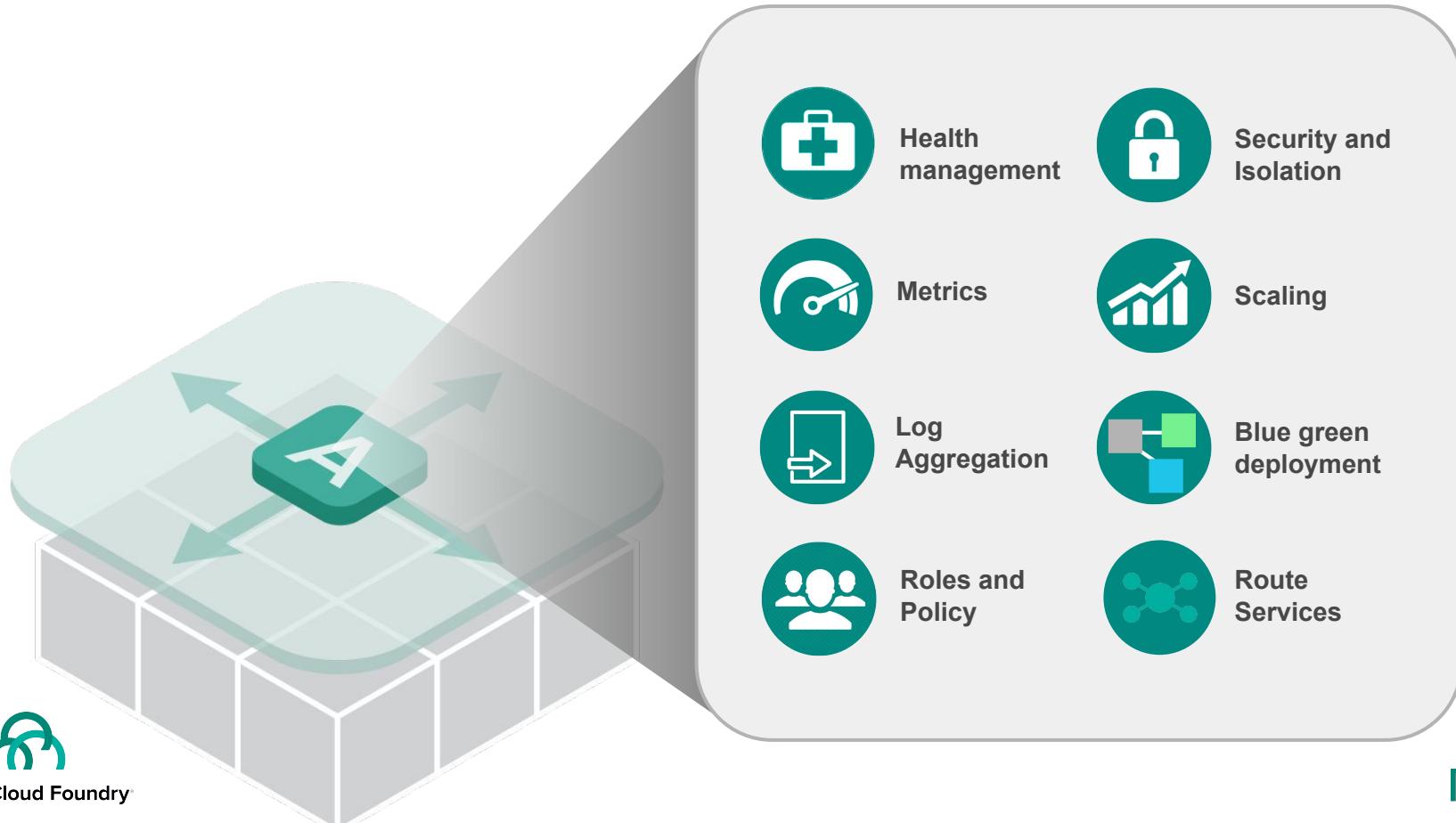


Microservices



Containers

Pivotal Cloud Foundry – an API Centric Platform



Implement APIs your way

Development Language Flexibility



>cf

Push App



http://



Push your app and it just works...no “snowflakes”, no waiting.

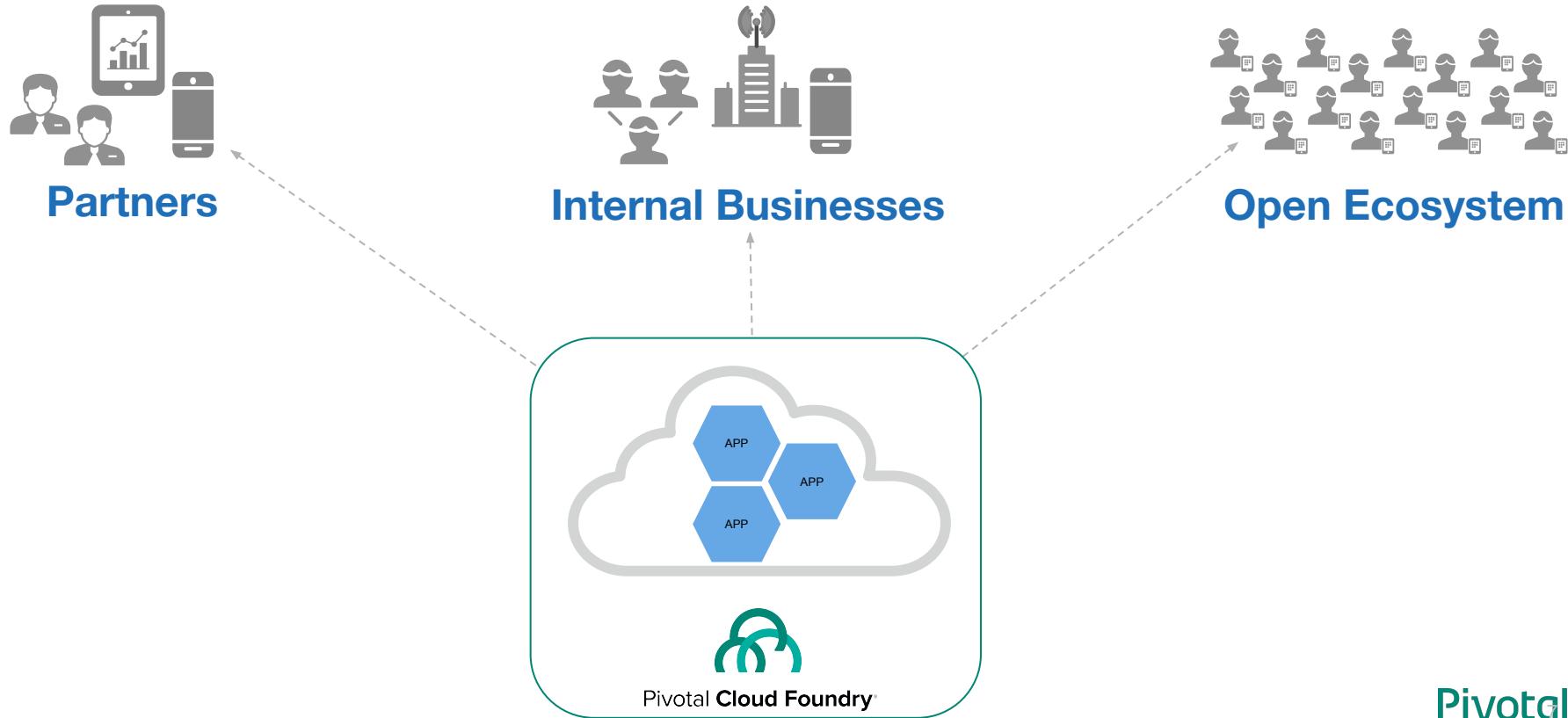
Why APIs?



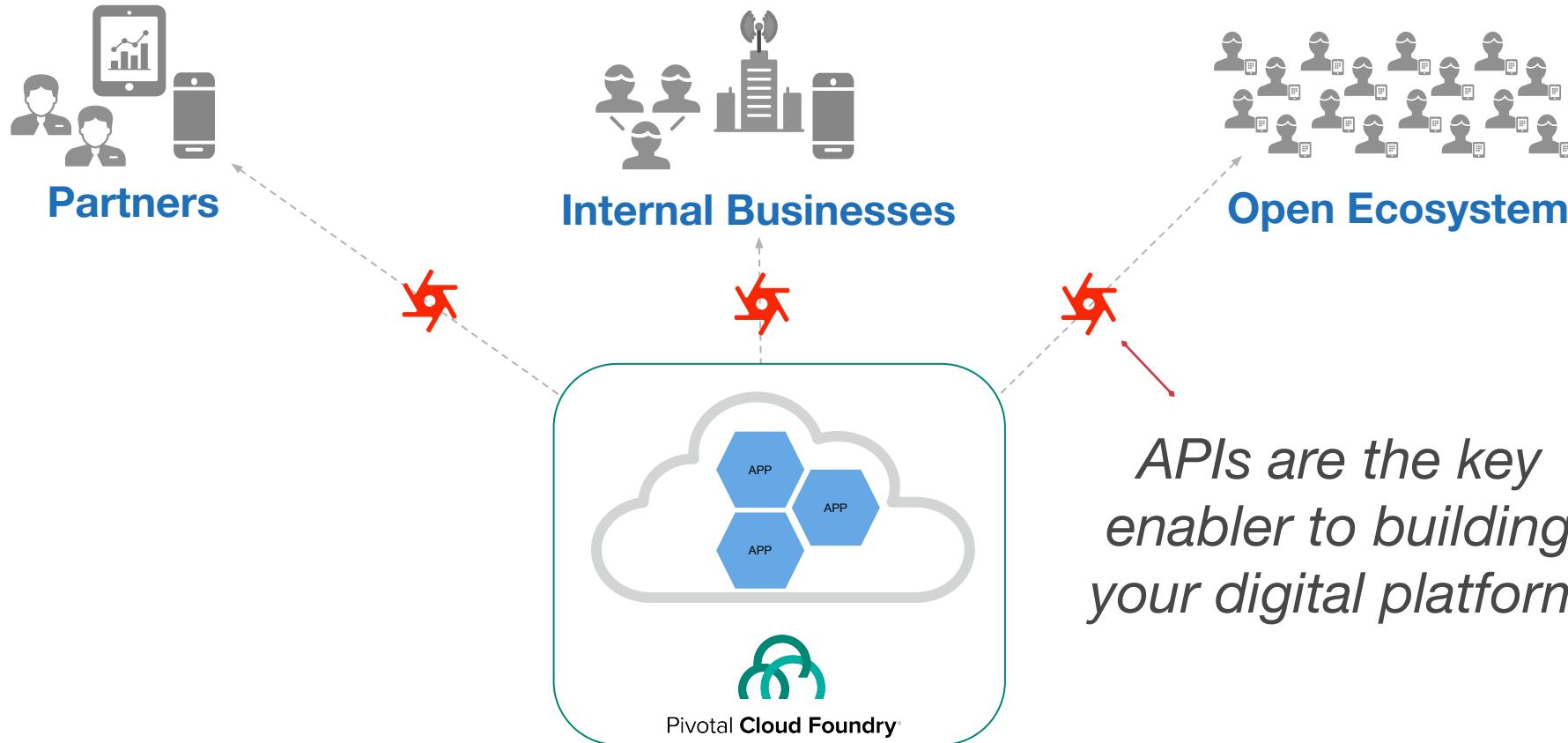
- Simple
- Universal
- Every developer understands them

The Gap : How to Scale Adoption of Software

Total Cost = (Cost of Onboarding + Cost of Management) * # of consumers of your software * Churn



Scale Adoption Of Your Software with Modern APIs



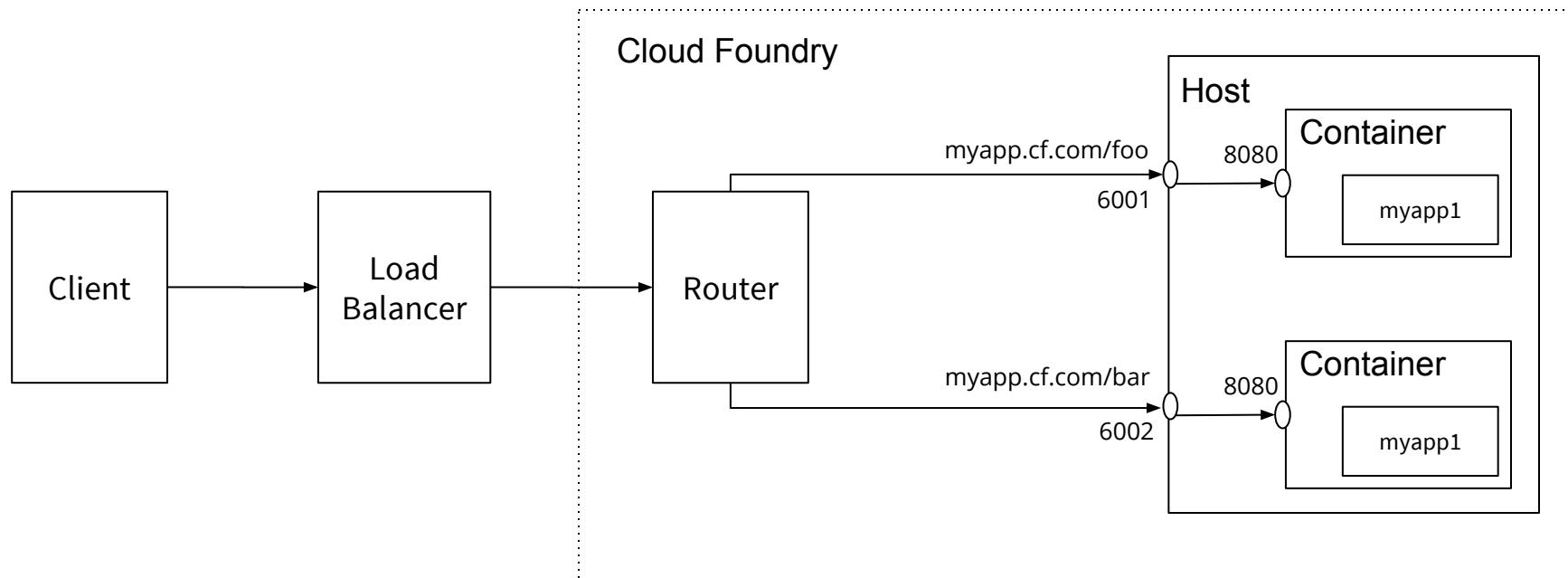
Agenda

1. Pivotal Cloud Foundry
2. PCF Route Services
3. Apigee Edge with PCF
4. Demo
5. Conclusion

Routing in PCF

- Routing in Cloud Foundry is the process by which requests to applications are forwarded to their intended destination
- A dynamic routing tier is necessary because Cloud Foundry may move application instances between hosts for high availability
- Developers manage the URLs their applications receive requests
- Requests to Cloud Foundry system components are managed this way

Application Request Path in PCF



What are PCF Route Services?

A new kind of marketplace service that can be injected in the application request path

How are PCF Route Services used?

Ensure
Performance,
Reliability



Real Time
Analytics,
Metering



Compliance,
Security,
Audit



Operators

Developers

Operators

- Given a compatible service, simply register the service broker

```
cf create-service-broker  
NAME USERNAME PASSWORD URL
```

- Grant or revoke access to service plans per CF organization

```
cf enable-service-access  
SERVICE -p PLAN -o ORG
```

- Log and audit use of services

```
cf curl  
/v2/events?q:type:audit.se  
rvice_instance.create
```

Developers

- 1.) Discover service in marketplace

```
cf marketplace
```

- 2.) Create a CUPS or a Marketplace service

```
cf create-user-provided-service  
SERVICE_INSTANCE -r  
ROUTE_SERVICE_URL
```

or

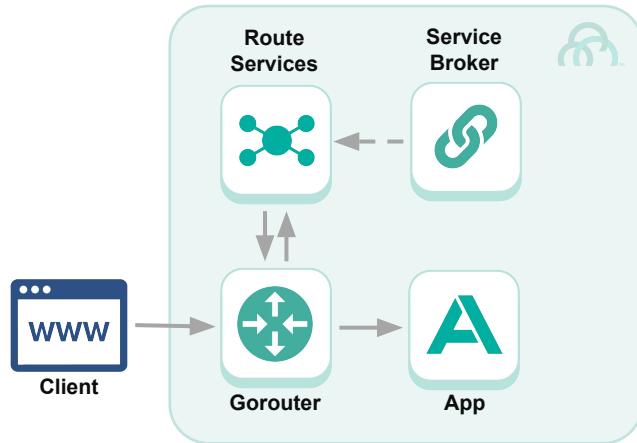
```
cf create-service SERVICE PLAN  
SERVICE_INSTANCE
```

- 3.) Bind Routing Service to the Route

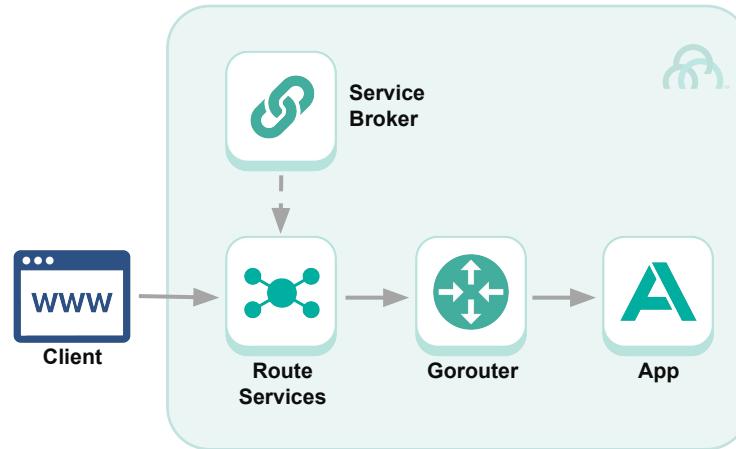
```
cf bind-route-service DOMAIN  
--hostname HOST  
SERVICE_INSTANCE
```

How Route Services work

Simple



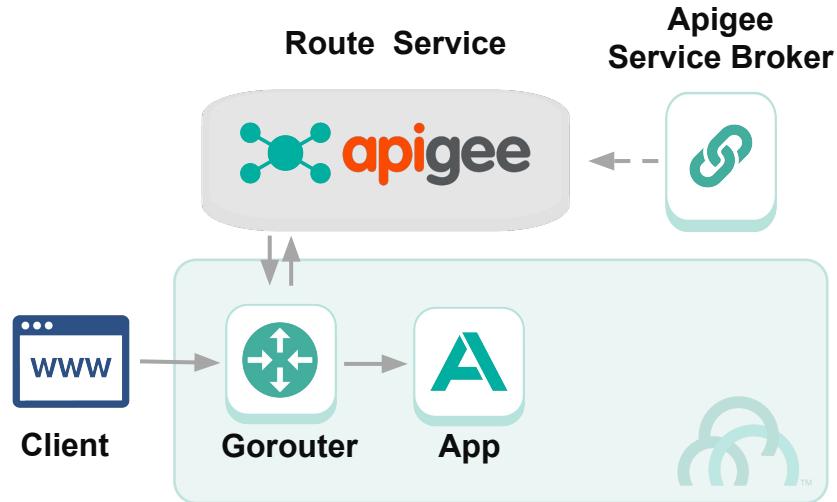
Dynamic



How can I obtain Route Services?

- DIY
- Vendors

Apigee Edge as a PCF Route Service



Agenda

1. Pivotal Cloud Foundry
2. PCF Route Services
3. Apigee Edge with PCF
4. Demo
5. Conclusion

What is API Management?



Scalable Adoption Needs API Management

Security



Visibility / Analytics



MapQuest • Developer
Products | Pricing & Plans | Documentation | Forums
Products
Building blocks to map your vision

Your Geospatial Toolkit

A comprehensive suite of tools that work together to help you build great experiences, connect your business, and delight customers.

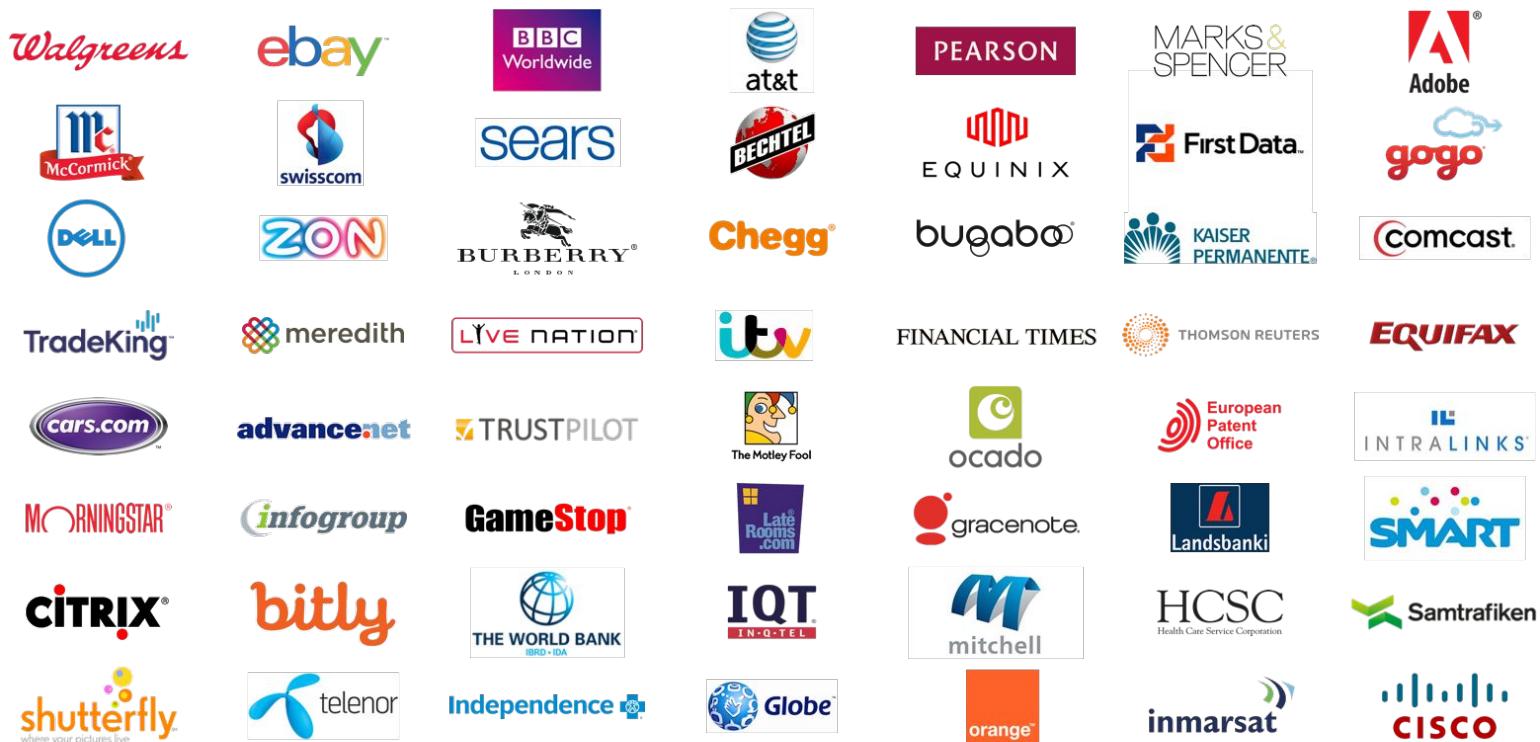
Geocoding API	Mapping API	Directions API	Traffic API
Accurate geocoding results are an essential part of many geospatial	Our street maps, satellite imagery, and hybrid mapping	From optimized, multi-point and route matrices to control	Our standalone traffic service offers easy access to traffic flow

Developer Portal



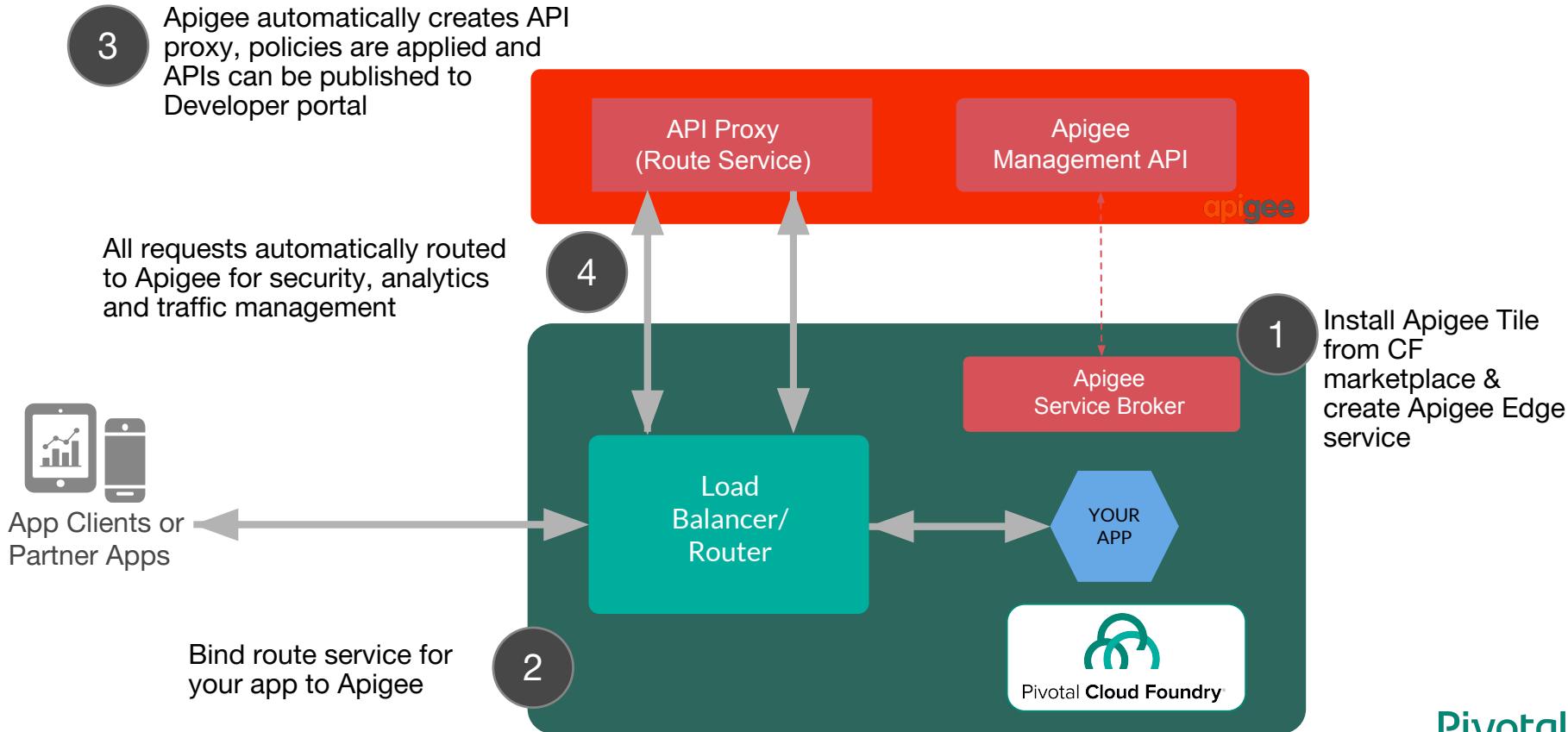
Pivotal

Apigee Enables Hundreds of Enterprises



Updated 1/26/15

Seamless API Management with Apigee



DEMO

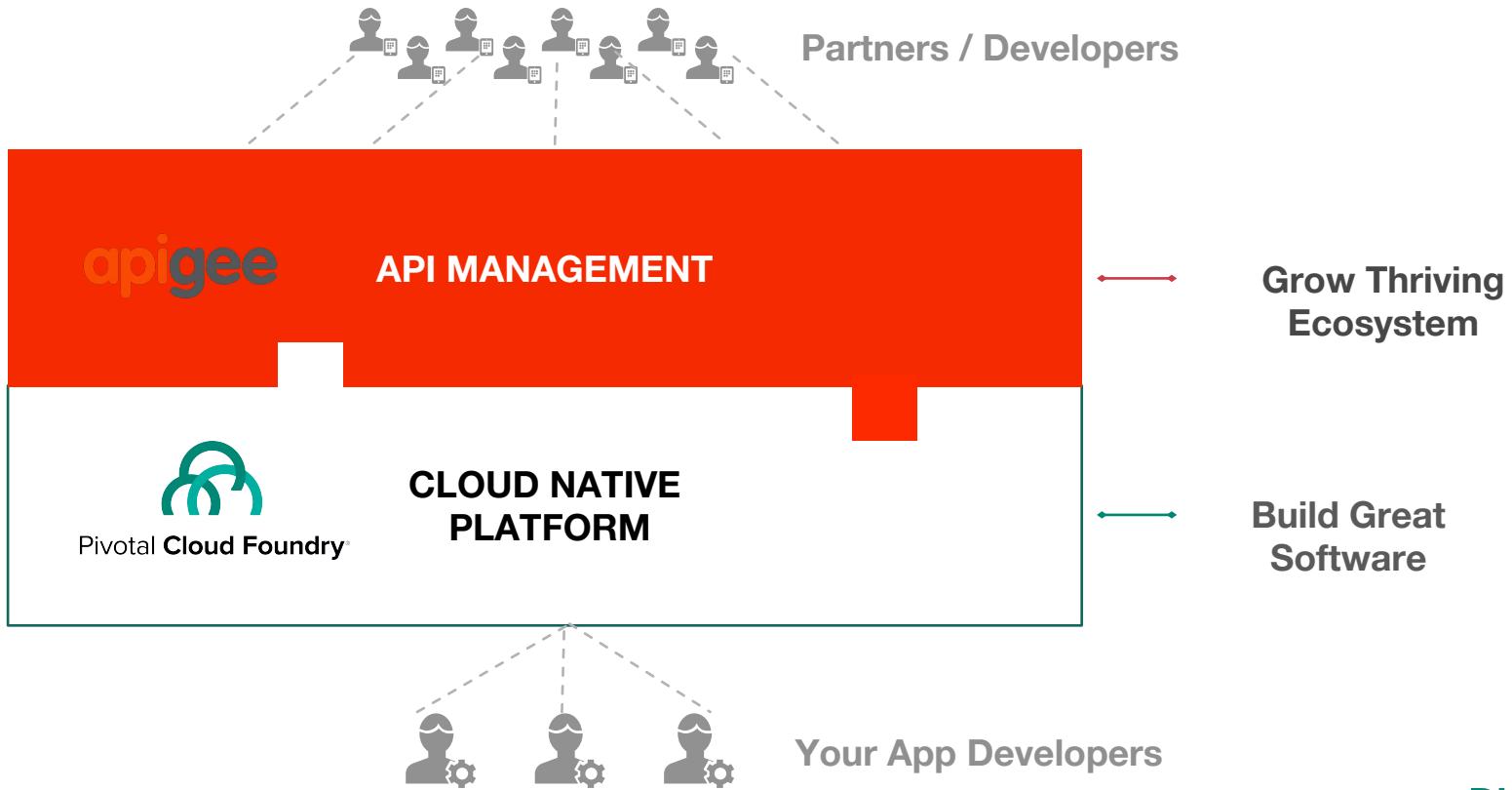


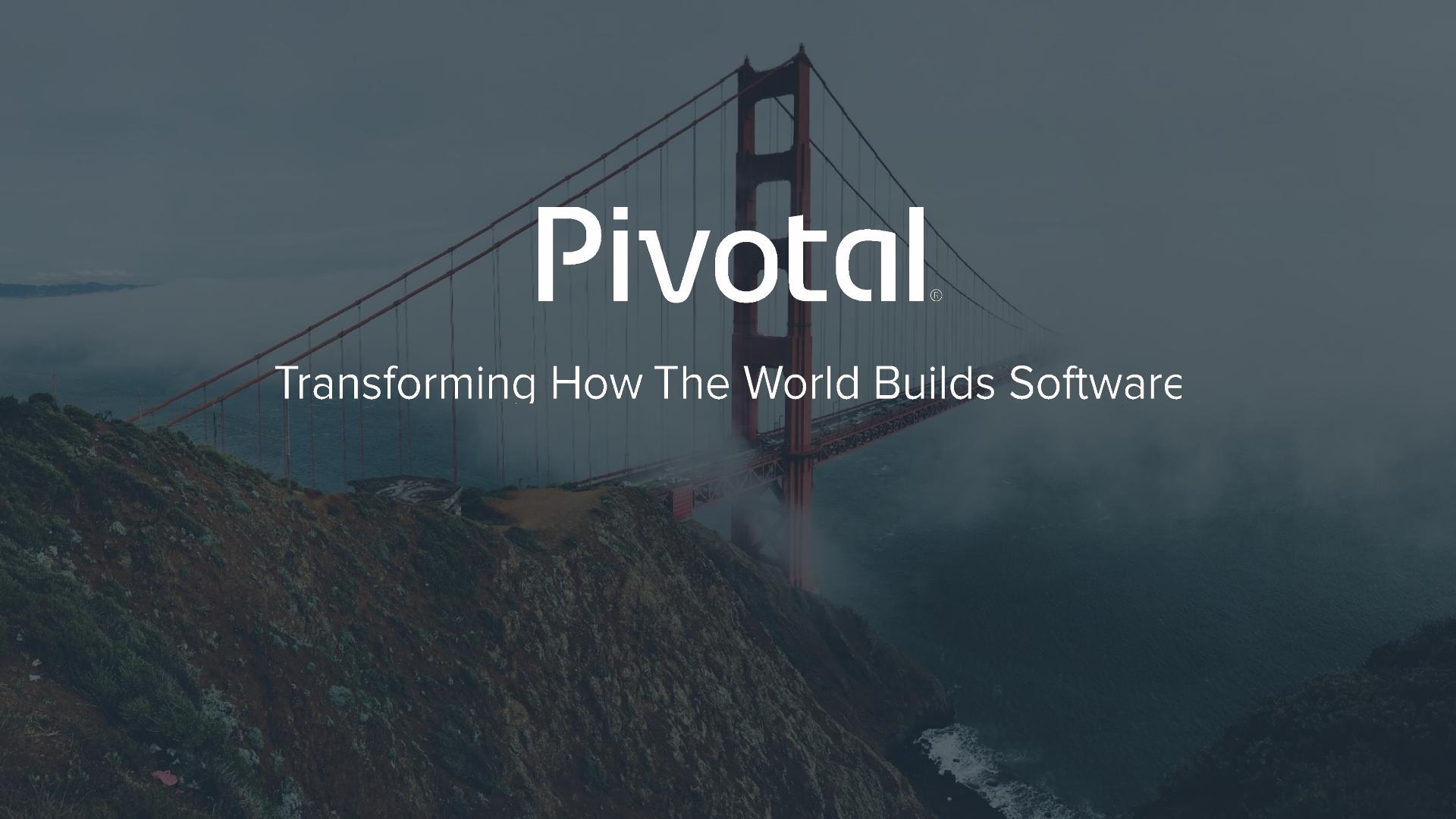
Pivotal **Cloud Foundry**[®]

+ **apigee**

Pivotal

APIs: Building Blocks for Modern Apps





Pivotal

Transforming How The World Builds Software