UGA
Univ. Grenoble Alpes

POLYTECH
GRENOBLE

SERVICE MESH

avec Istio

BELGUENDOUZ SEKINA

INFO5

Définitions

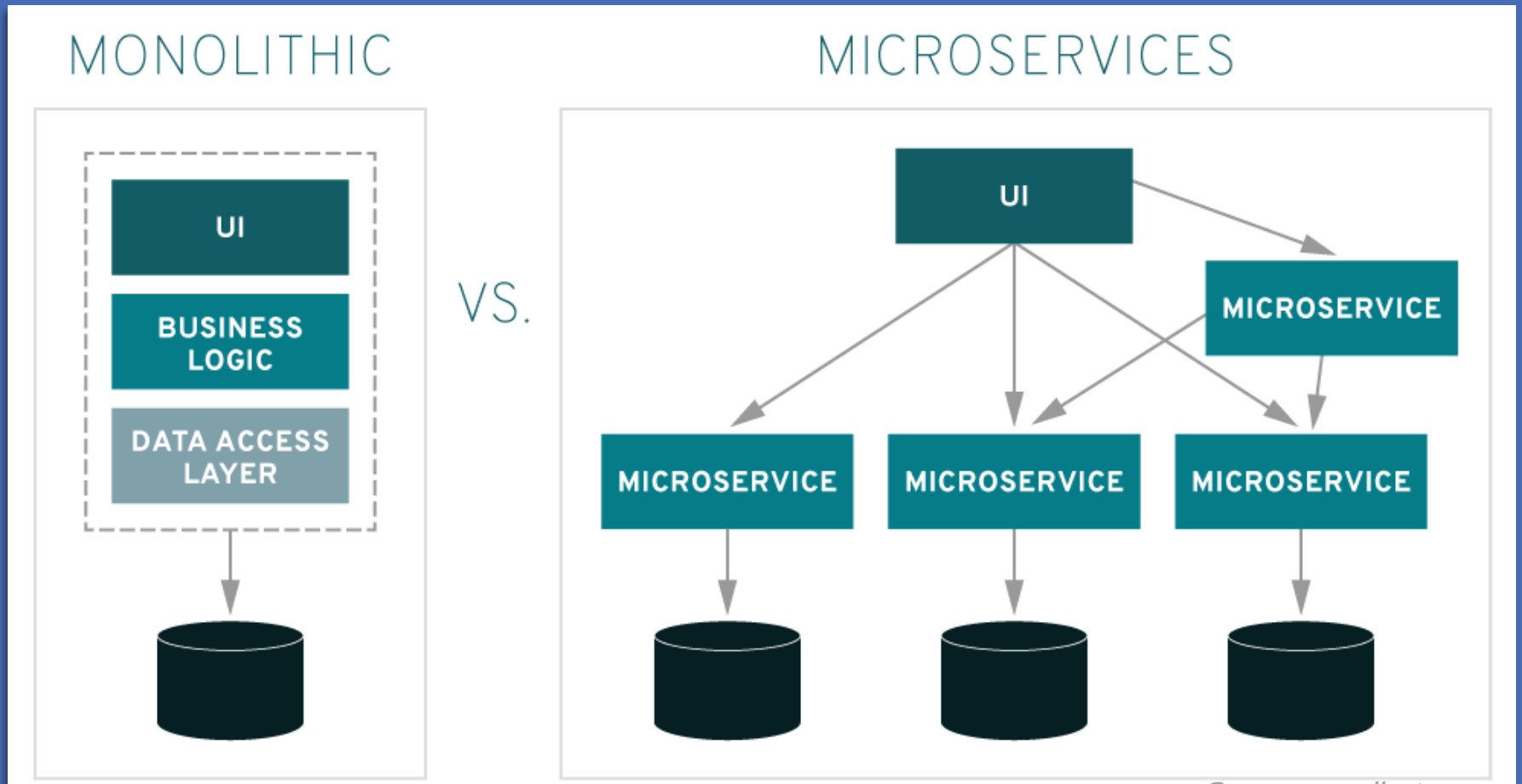
A *service mesh* is a configurable infrastructure layer for a microservices application.

- NGINX.com

Le service mesh désigne une plateforme chargée d'assurer la sécurité, le routage et la traçabilite des communicaiton entre applications microservices déployées de façon dynamique dans des conteneurs.

- OCTO Tech.

Microservices



Source : redhat.com

Microservices

Microservices ≠ Service Oriented Approach

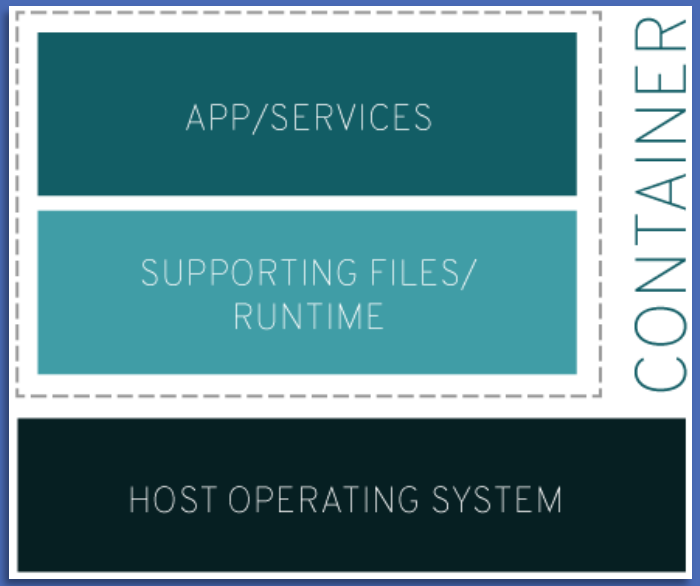
Offre sur le marché plus rapide

Plus adaptatif

Plus résistant

Conteneurs

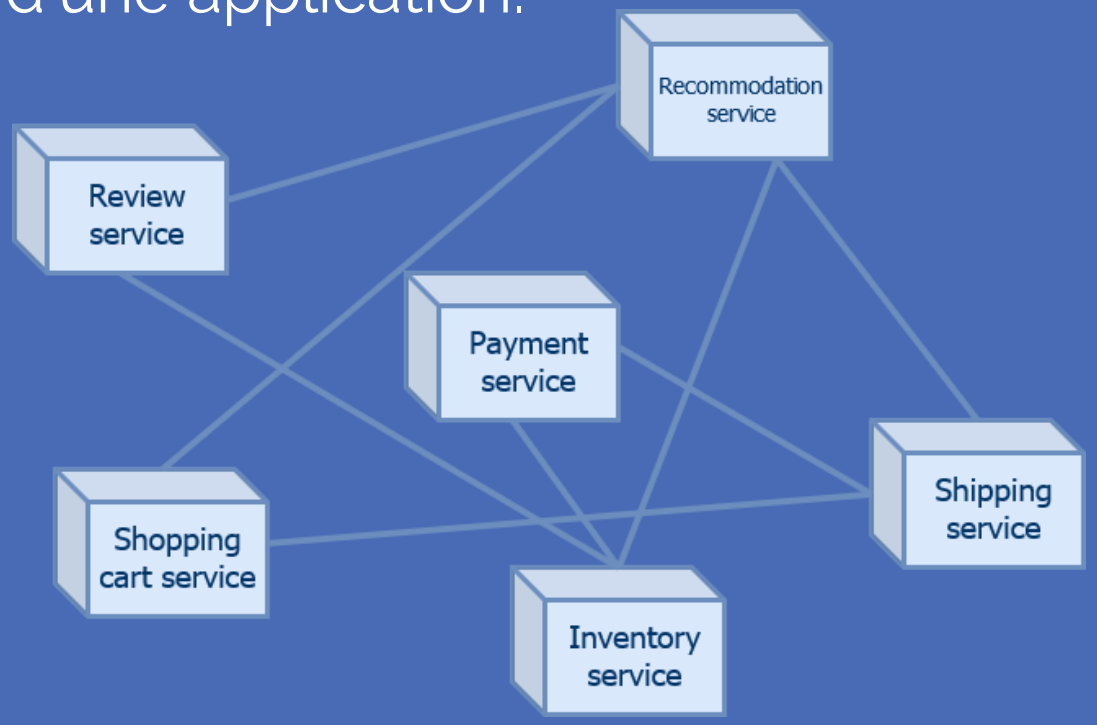
Un conteneur est un système de virtualisation, permettant d'isoler des environnements Linux afin d'y faire tourner différentes applications de manière totalement indépendantes.



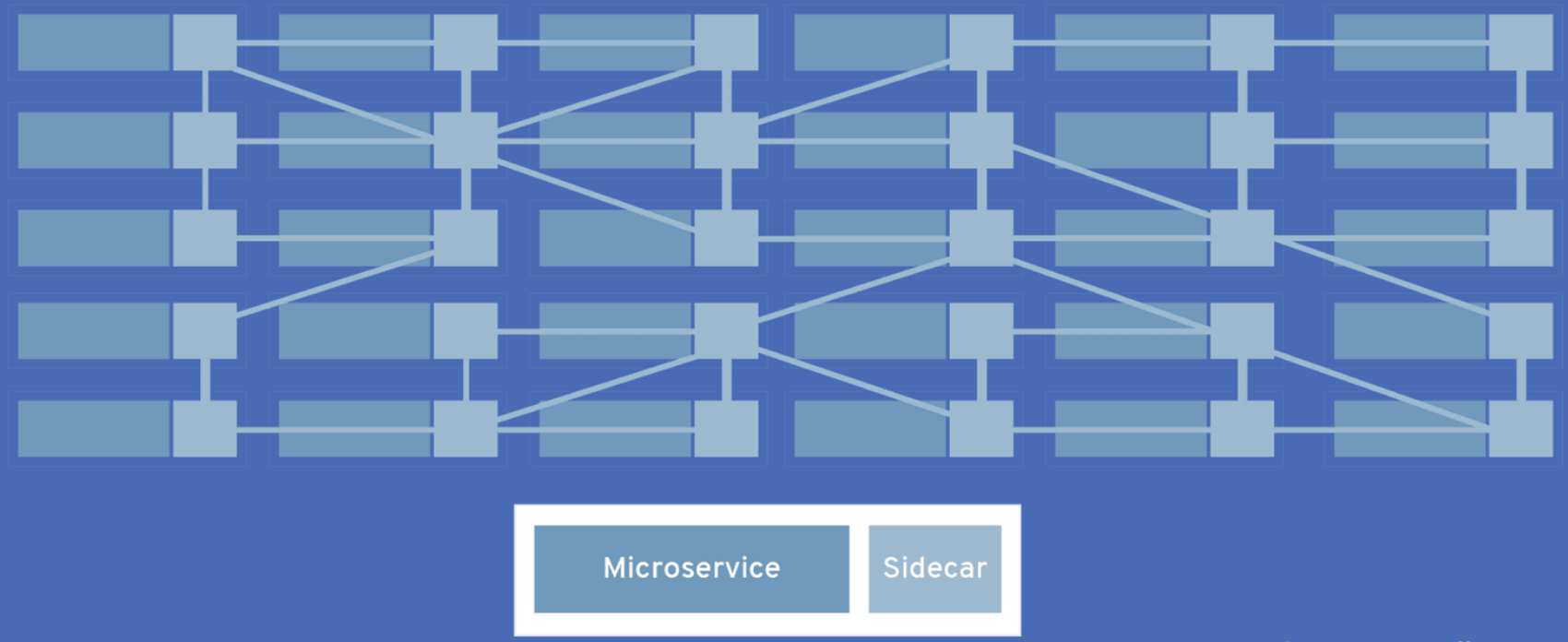
Source : redhat.com

Service Mesh

Un *service mesh est* une infrastructure de configuration qui assure la communication entre les microservices d'une application.



Service Mesh



Source : redhat.com

Service Mesh

Suivi dynamique

Authentification

Contrôle du trafic

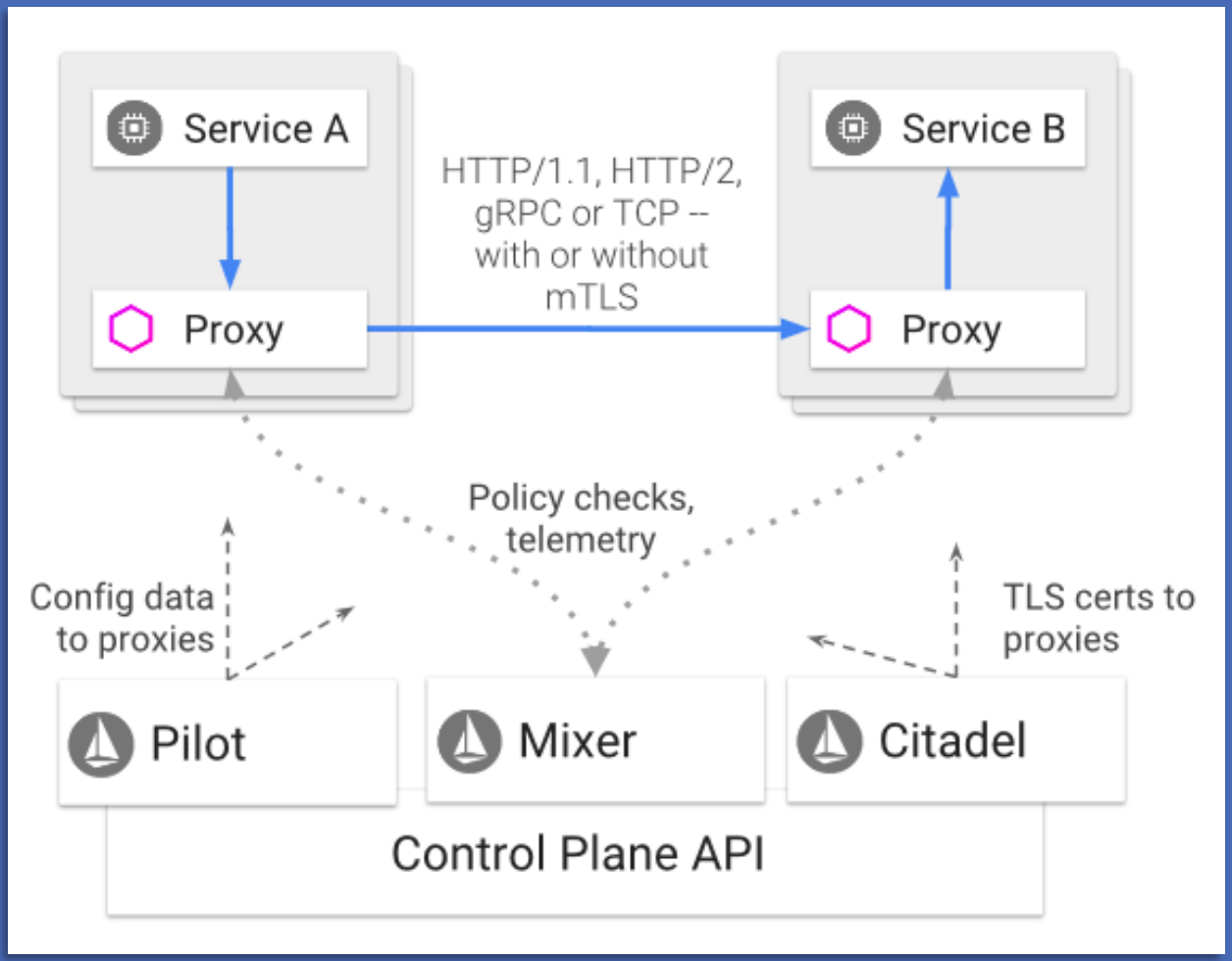
Encryption

DÉMONSTRATION

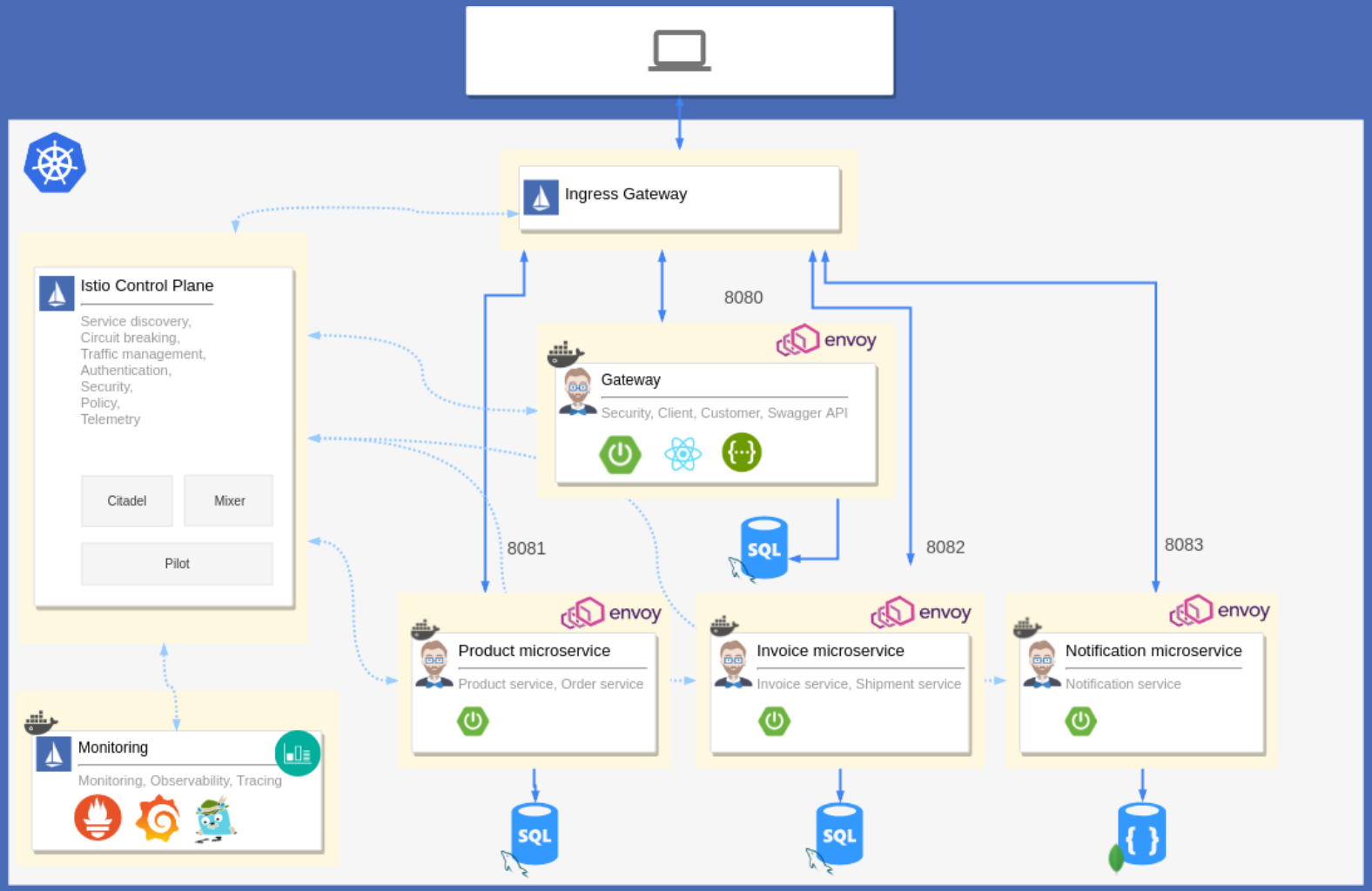
… avec Jhispter : lien

Istio

Istio


Service A
Service B
HTTP/1.1, HTTP/2,
gRPC or TCP --
with or without
mTLS
Proxy
Proxy
Policy checks,
telemetry
Config data
to proxies
TLS certs to
proxies
Pilot
Mixer
Citadel
Control Plane API

Démonstration



Démonstration

store - Google Chrome

store

Not secure | store.35.205.83.85.nip.io/#/

Store 0.0.1-SNAPSHOT

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You are logged in as user "admin".

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- **JHipster on Stack Overflow**
- **JHipster bug tracker**
- **JHipster public chat room**
- **follow @java_hipster on Twitter**

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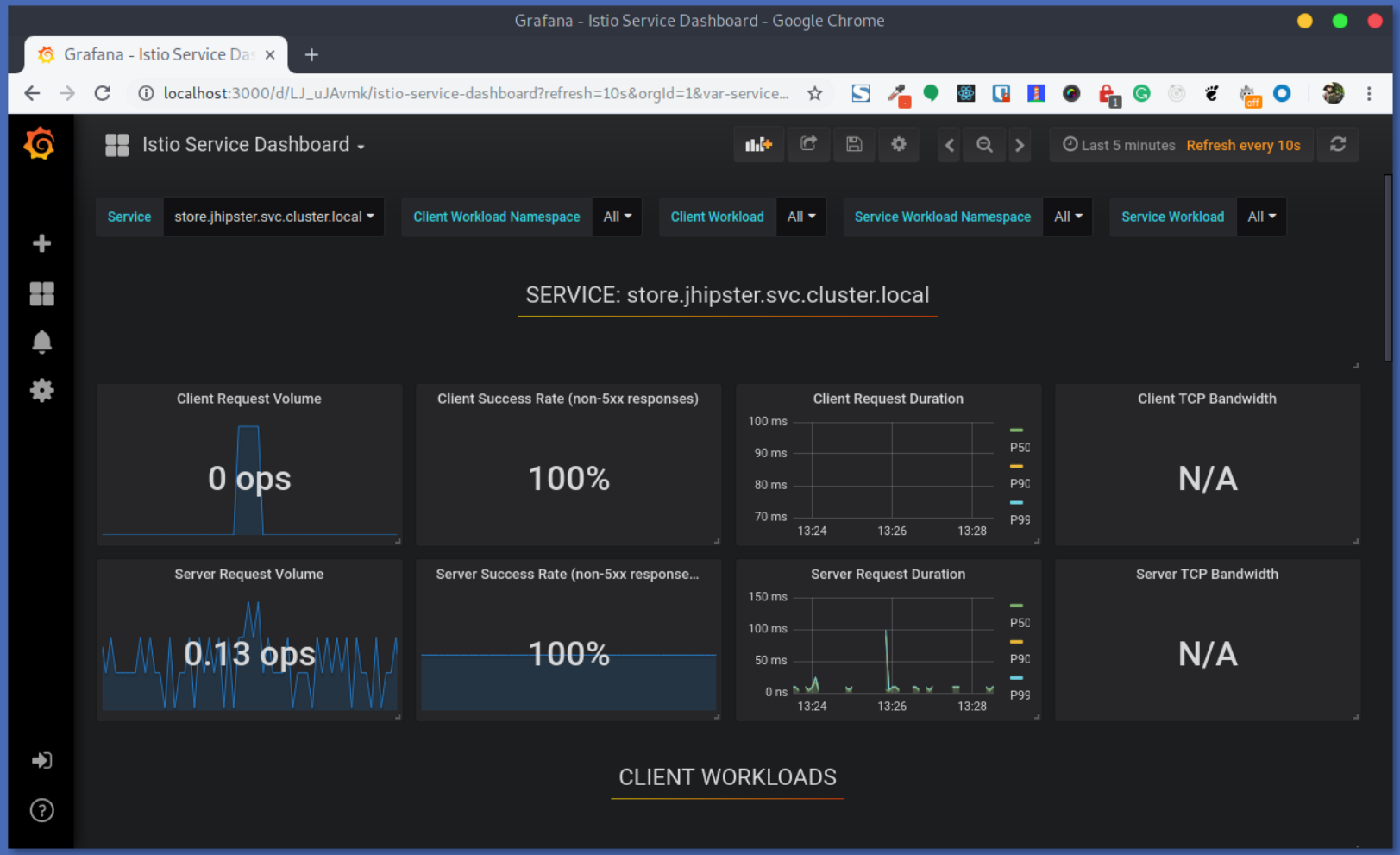
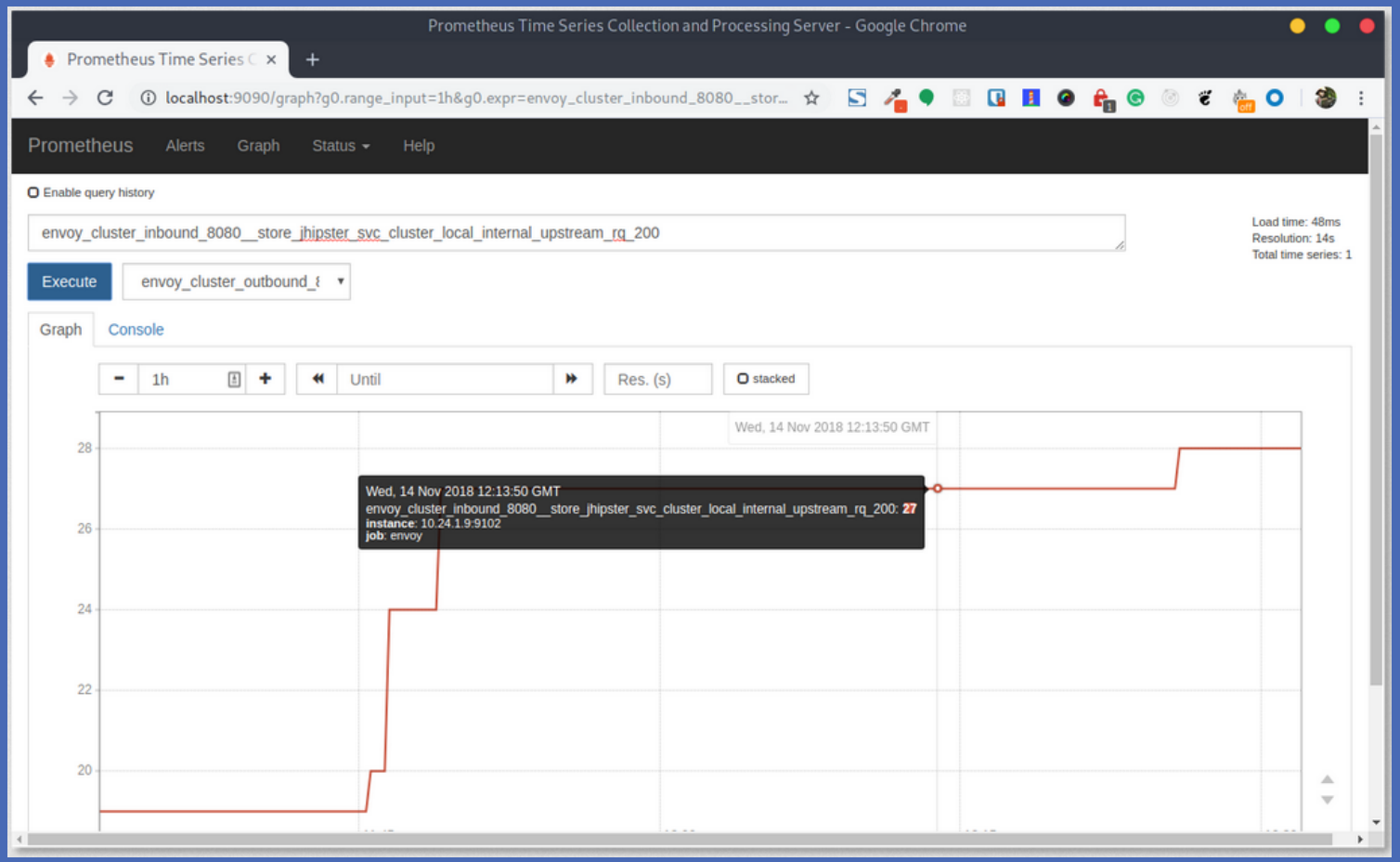
This is your footer

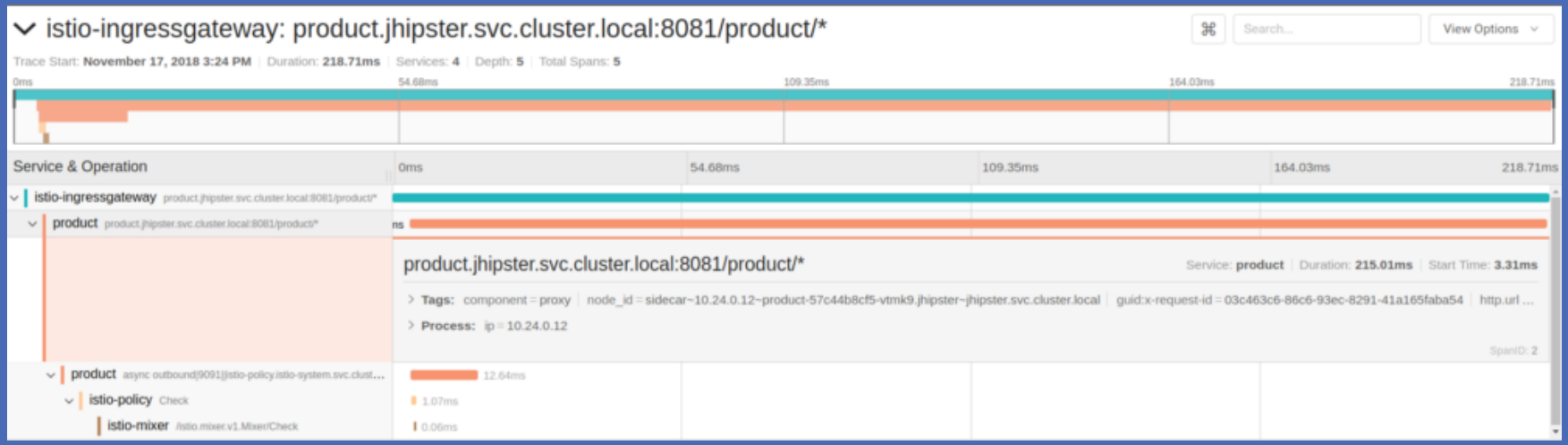
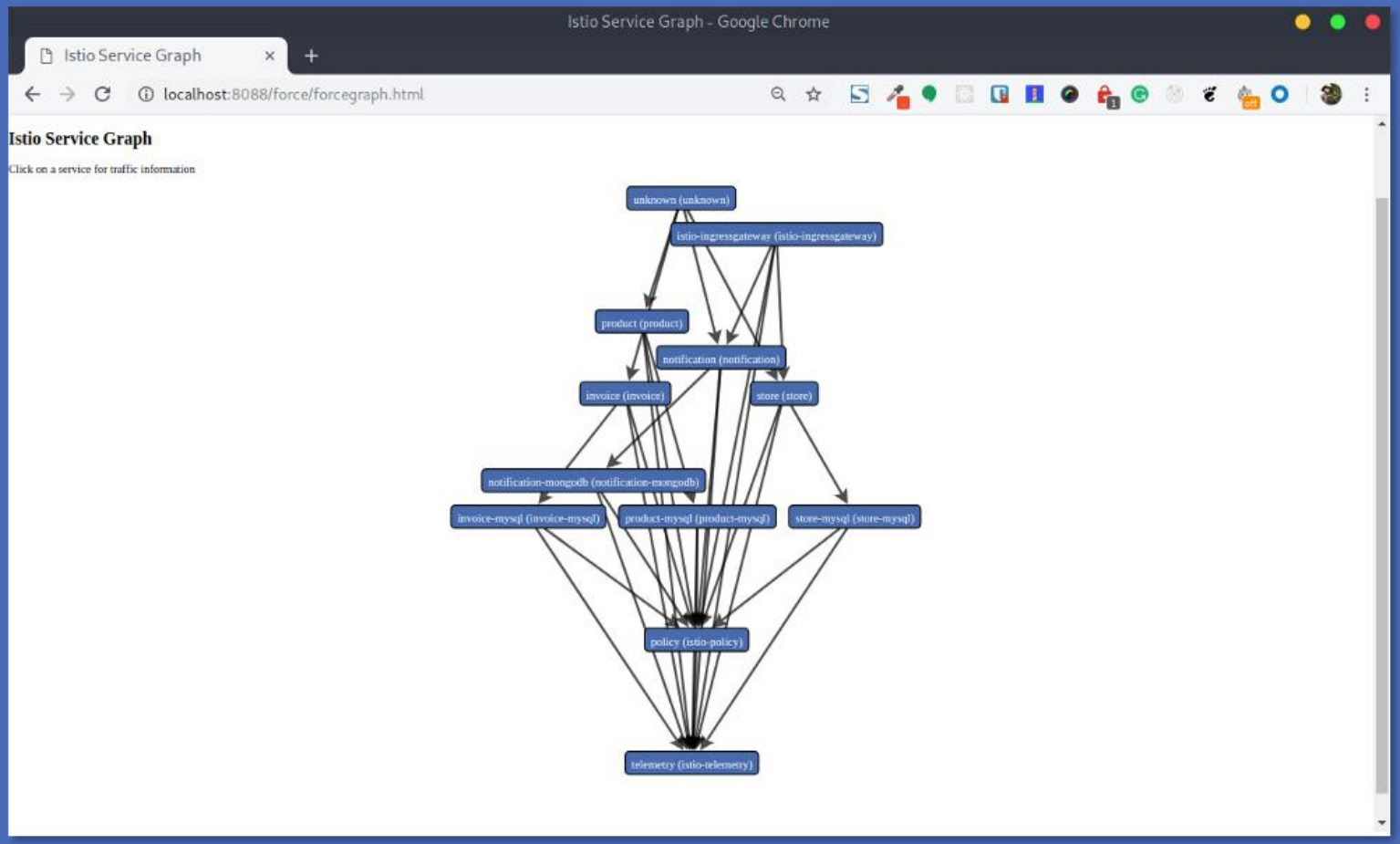
Démonstration



Démonstration



Démonstration



Démonstration