

Meet Magento™ INDIA IN

Anton Kril

Service Isolation

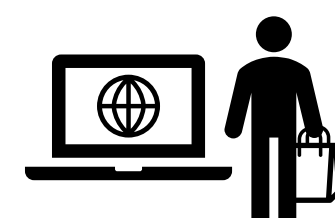
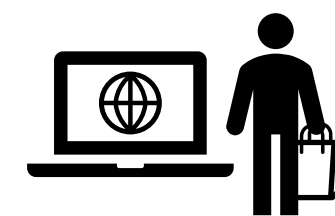
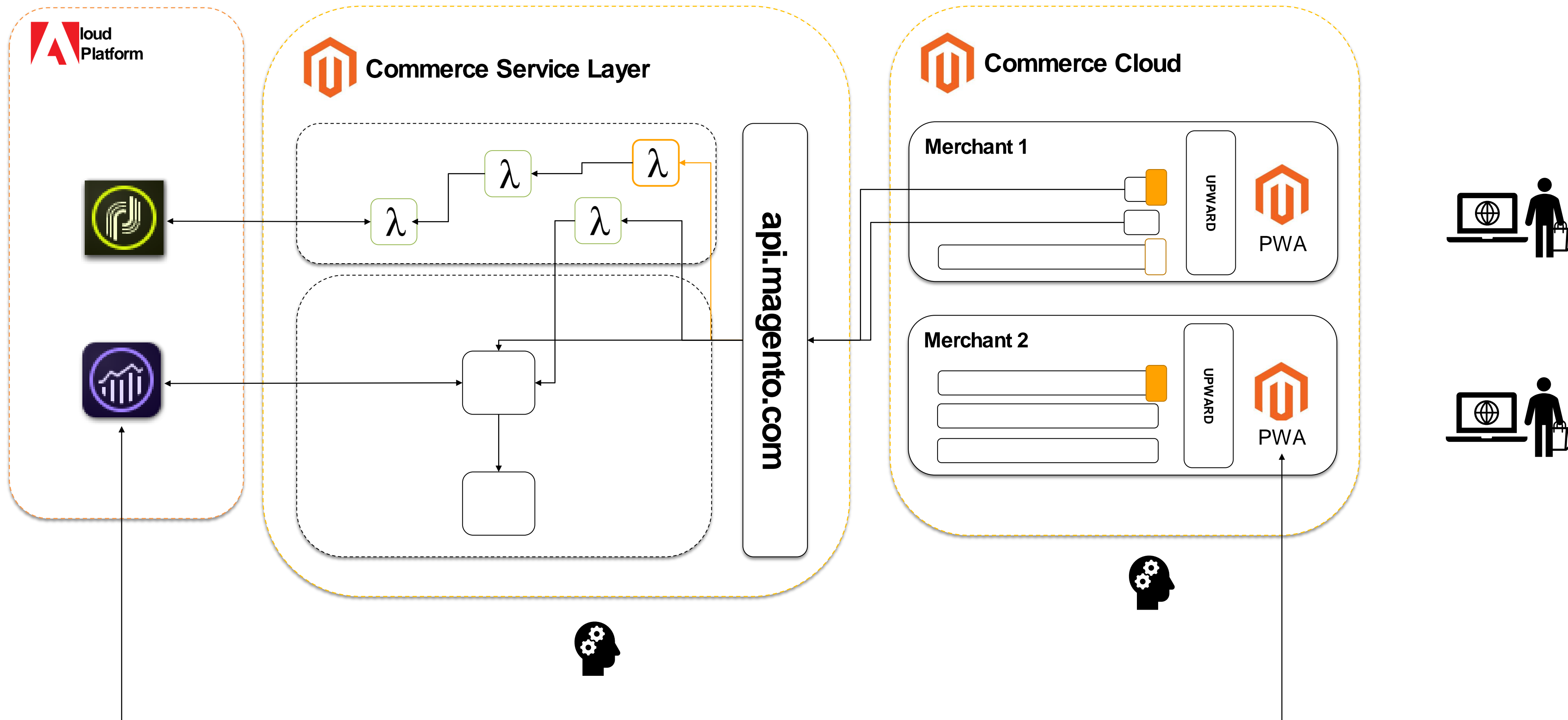
Problem

- » Applications grow in size, become harder to understand
- » Implementations grow in complexity
- » This pushes for longer release cycles
- » Harder for merchants to experiment and react to market quickly
- » Limits non-price competition capabilities

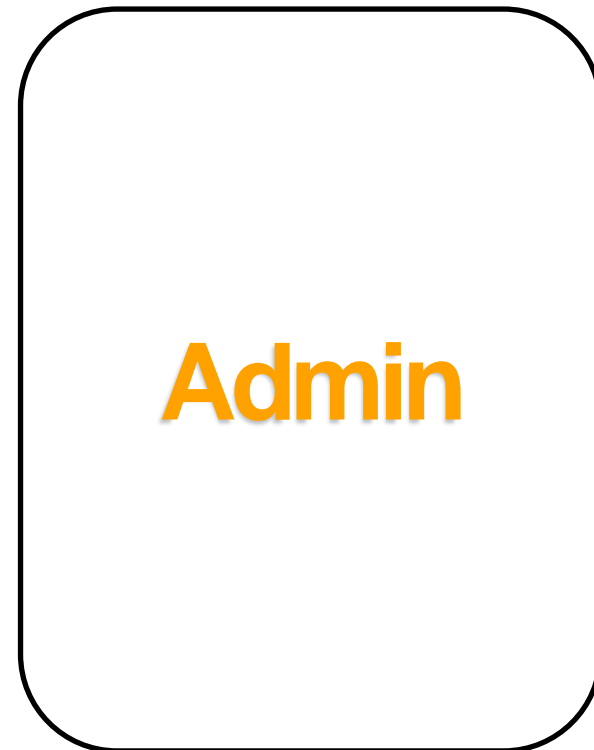
<http://bit.ly/magento-service-isolation>

Service Isolation

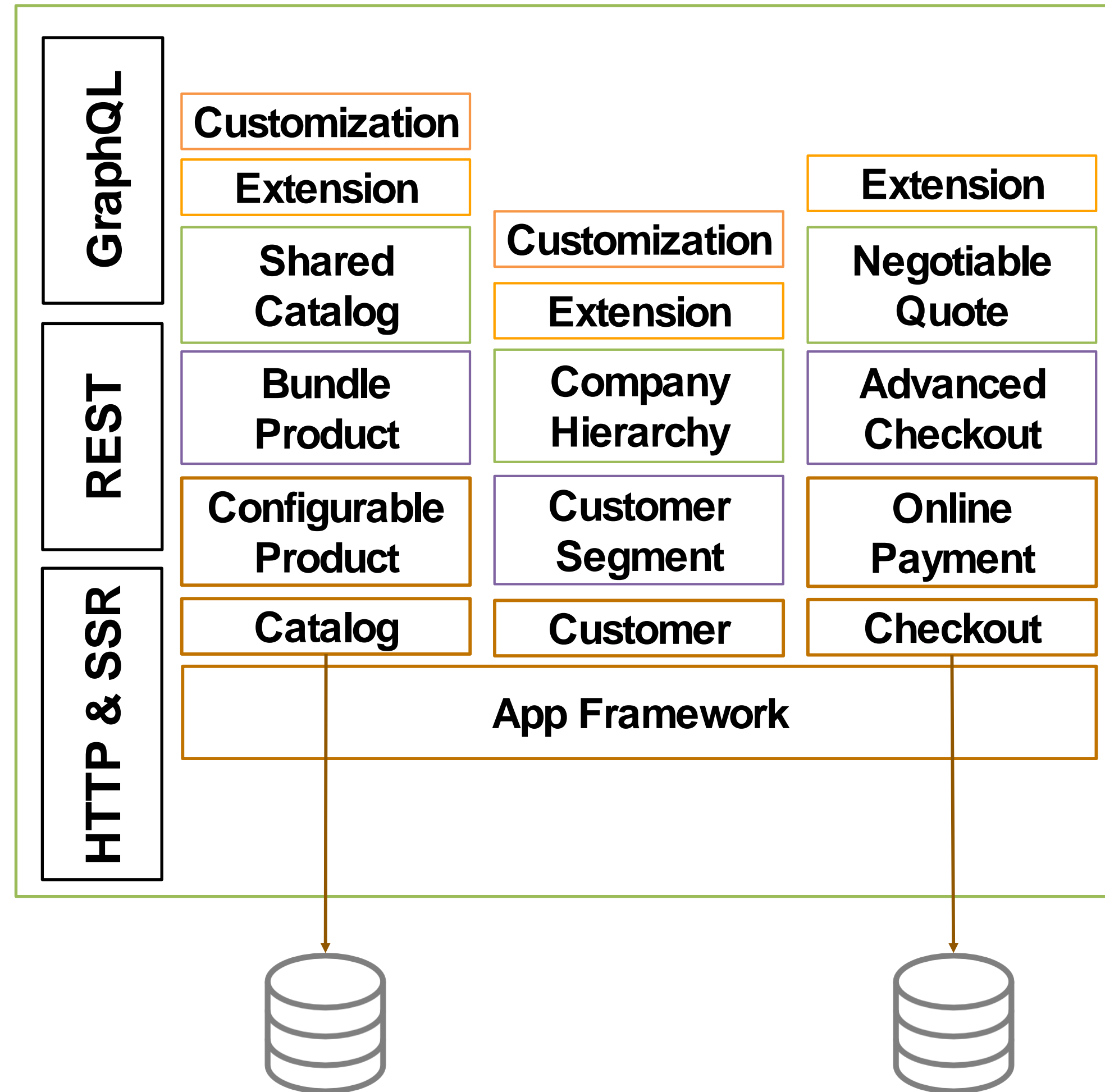




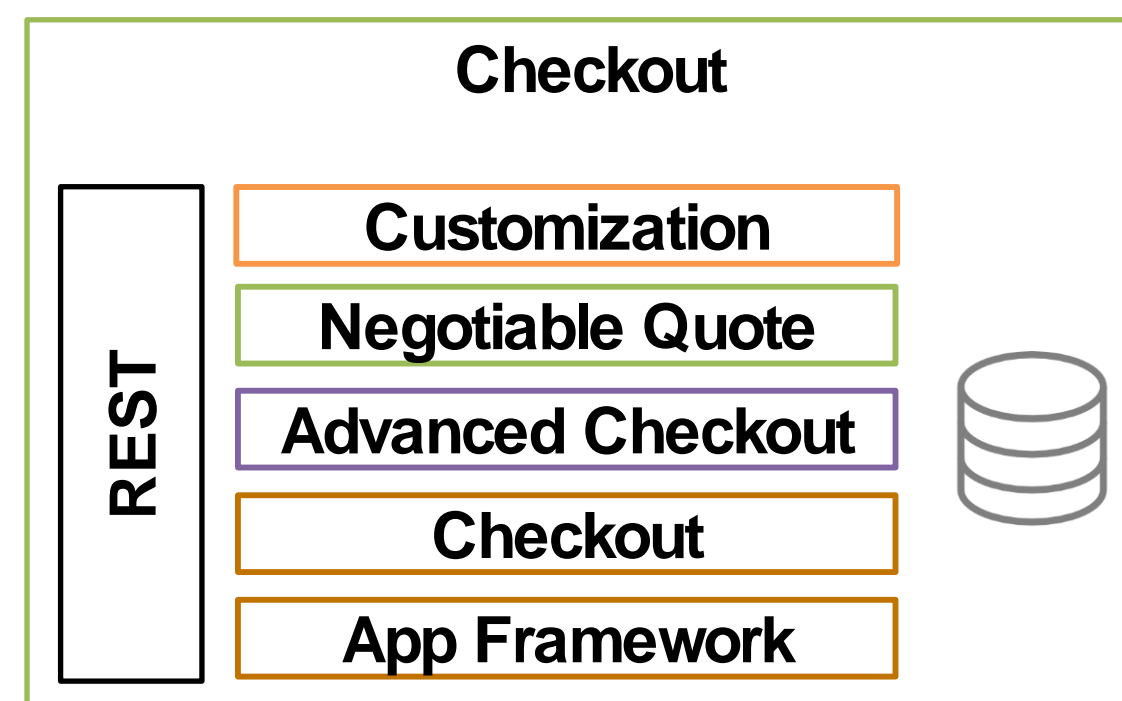
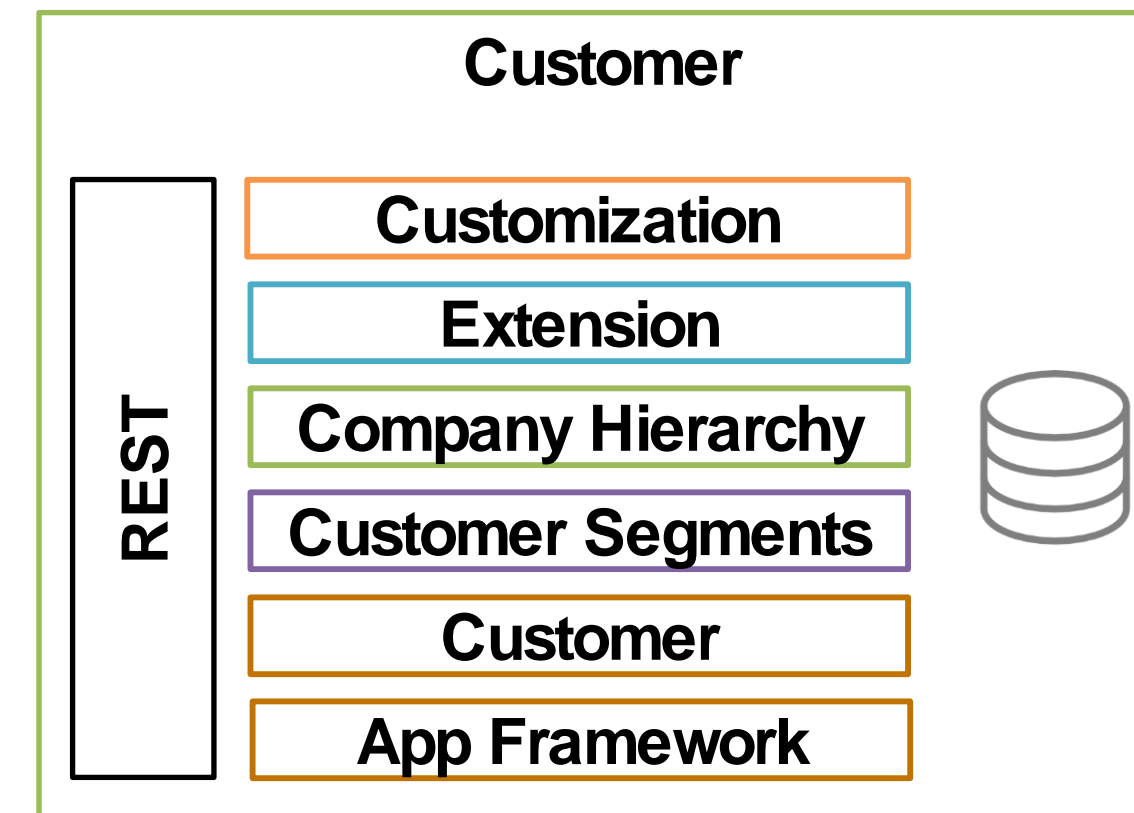
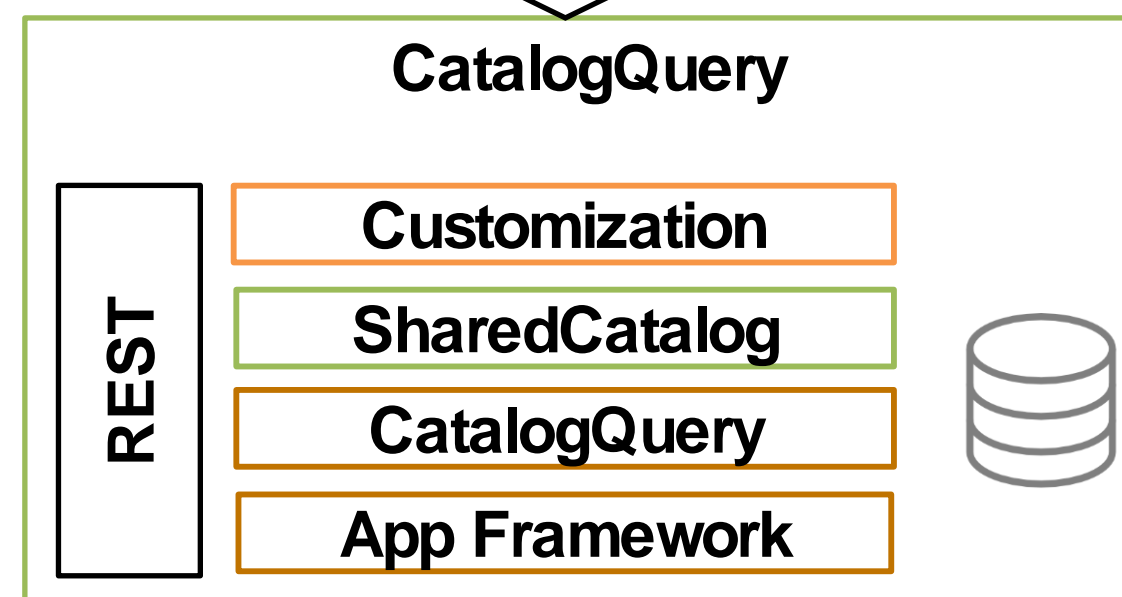
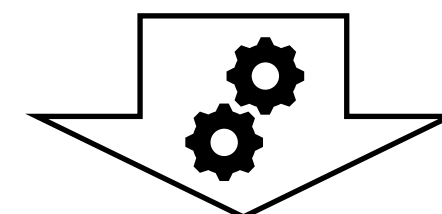
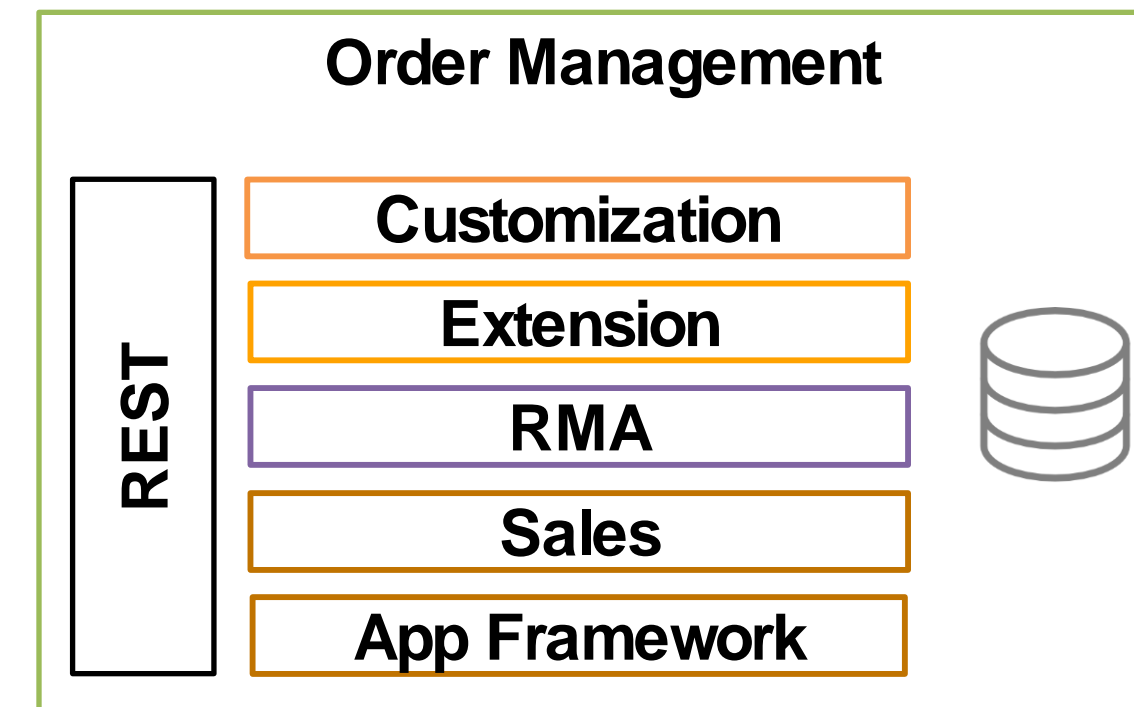
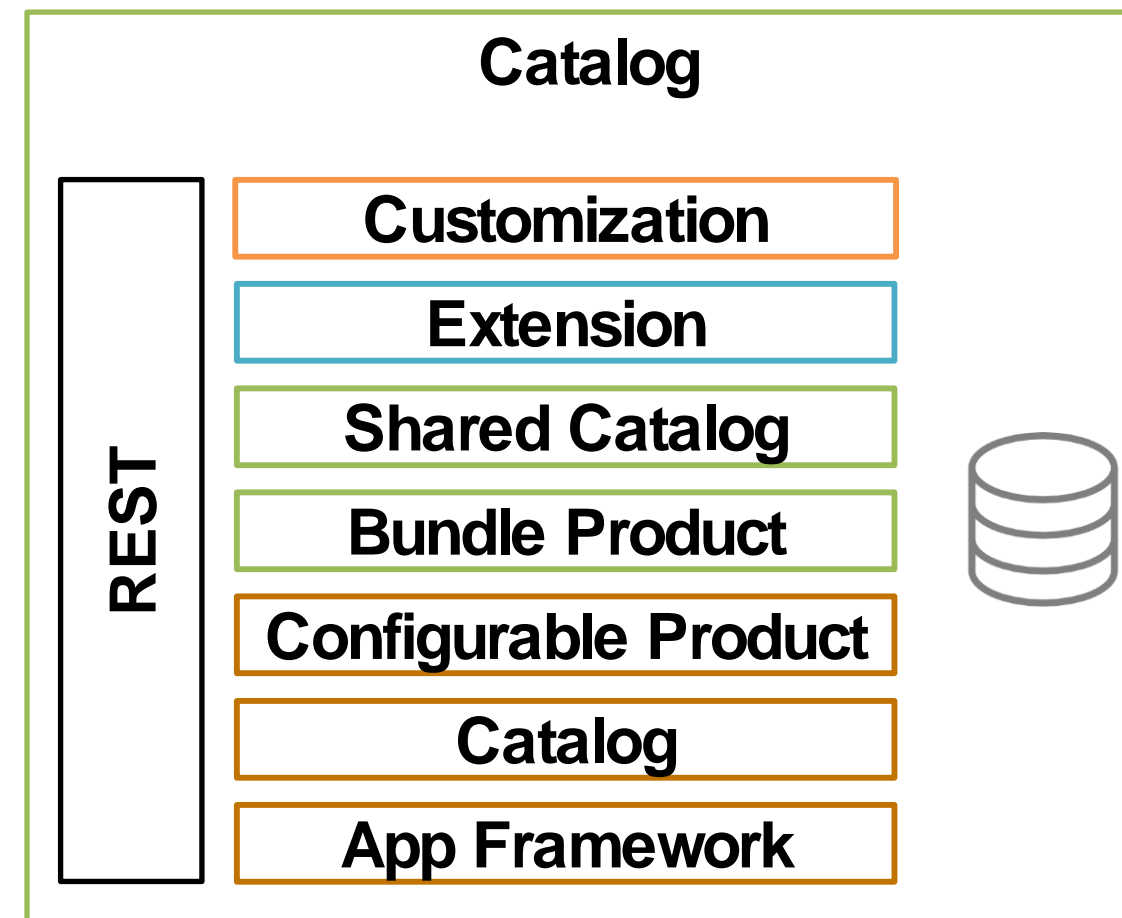
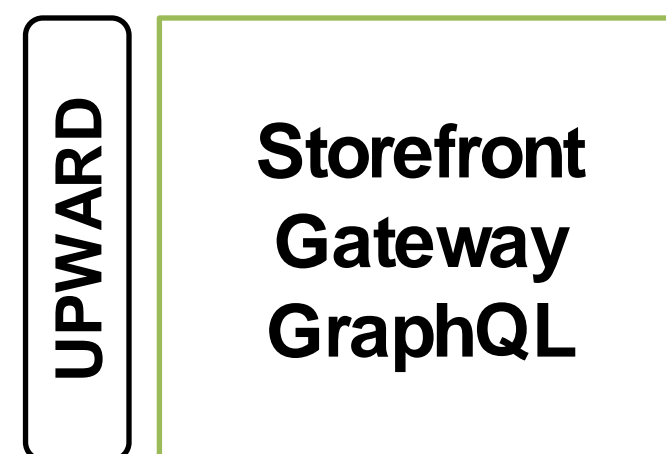
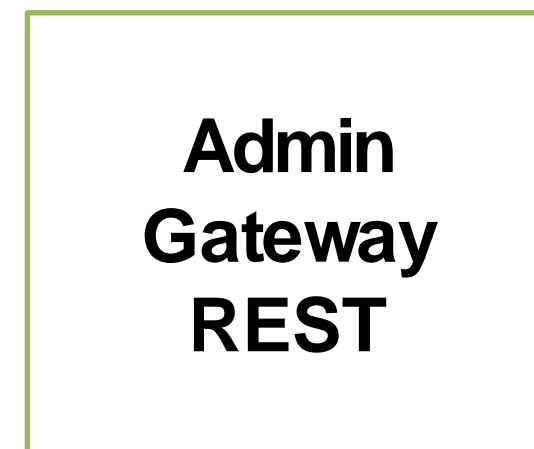
Browser



Server



Browser

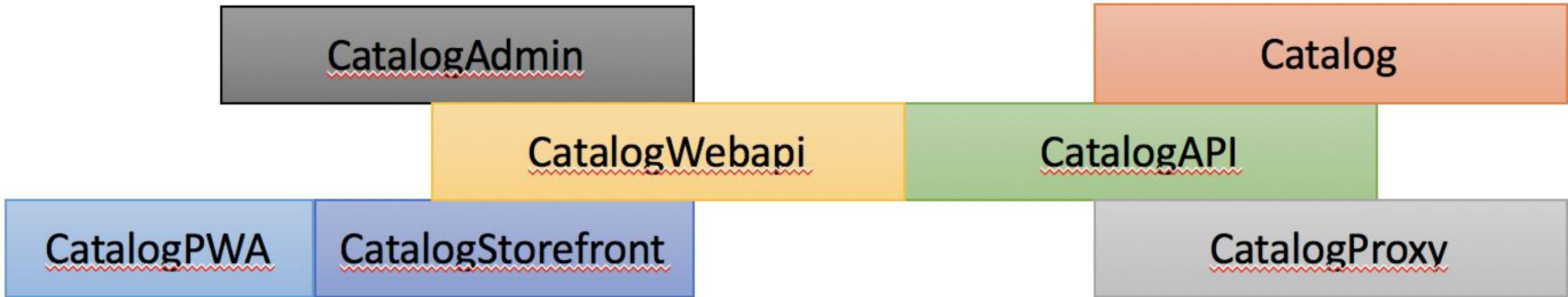


Static decomposition

Before



After



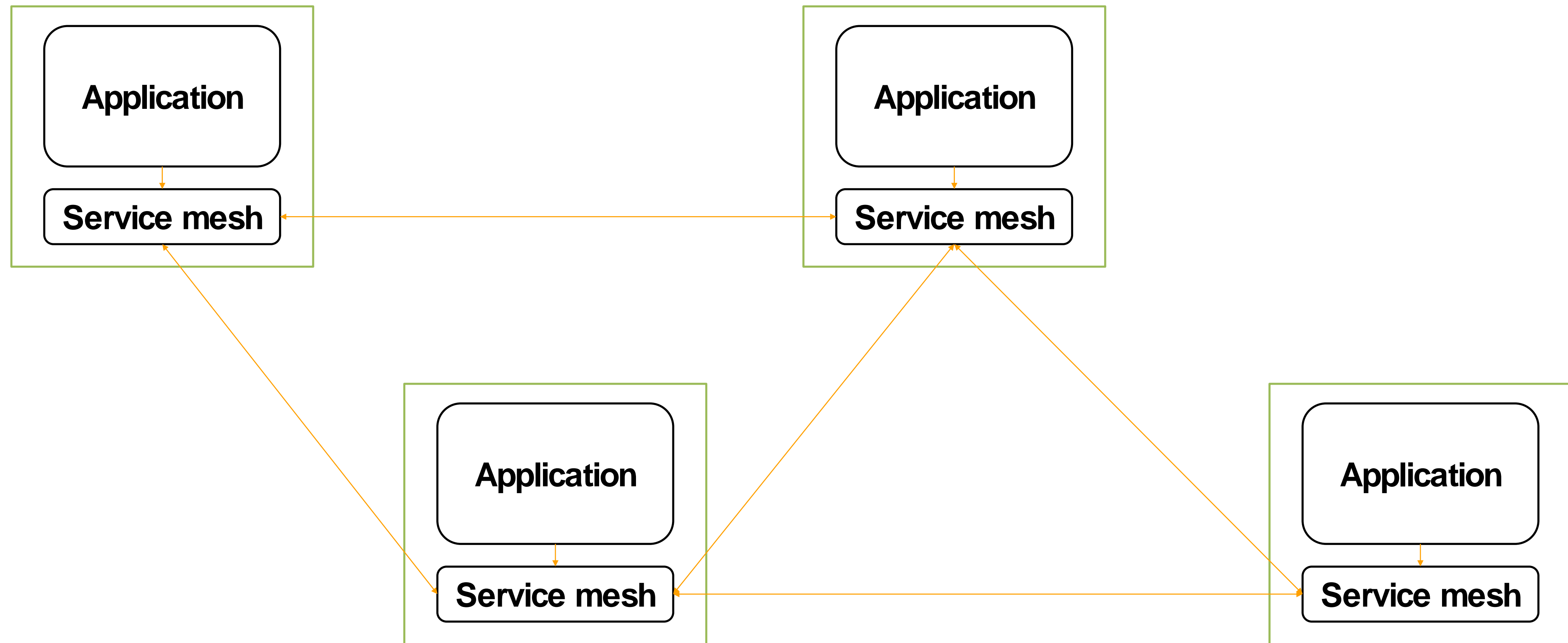
Network is a scary place
It is hard to design distributed systems

Fallacies of distributed computing

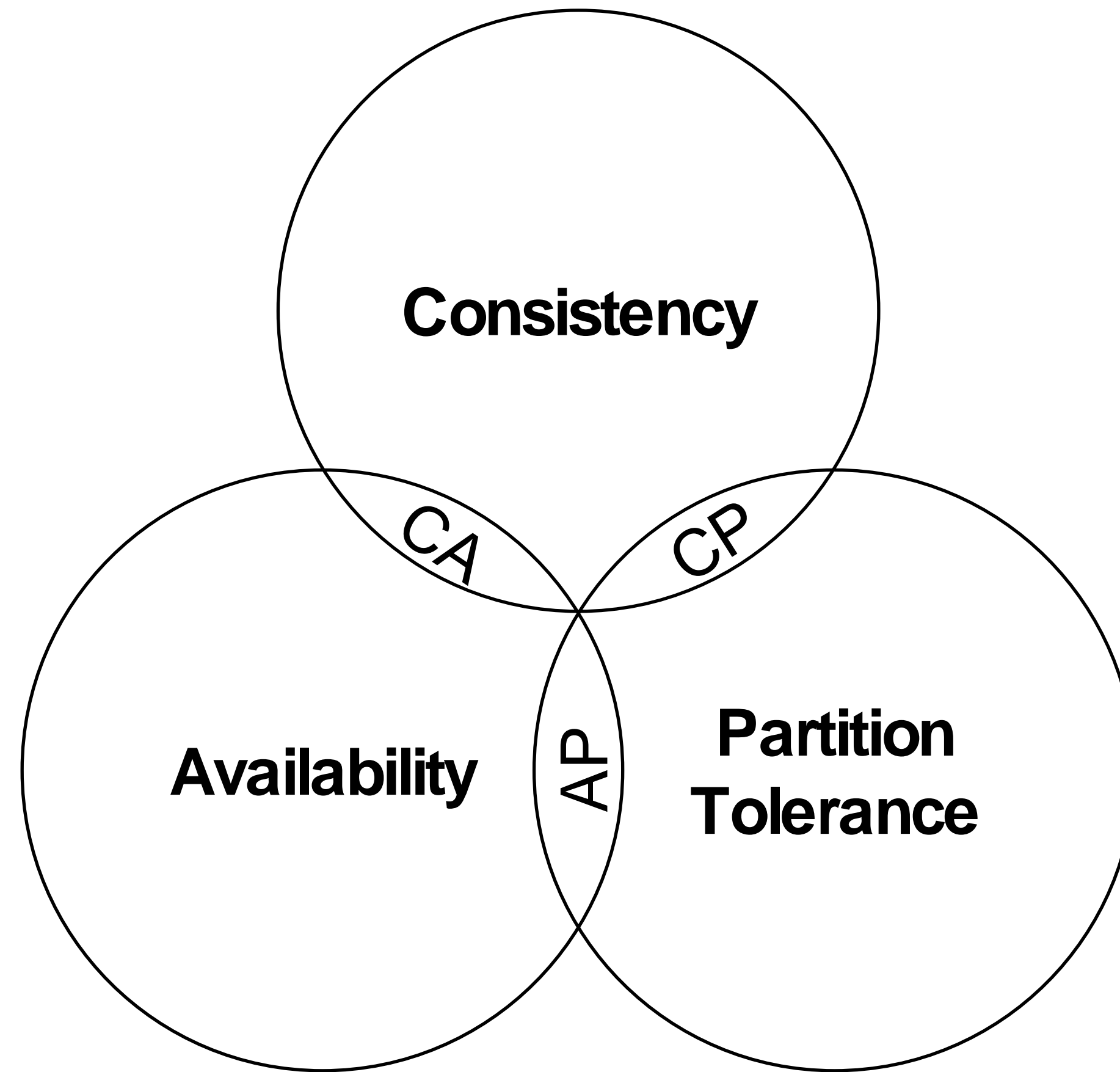
- » The network is reliable.
- » Latency is zero.
- » Bandwidth is infinite.
- » The network is secure.
- » Topology doesn't change.
- » There is one administrator.
- » Transport cost is zero.
- » The network is homogeneous.

https://en.wikipedia.org/wiki/Fallacies_of_distributed_computing

Service Mesh



CAP Theorem



Service design principles

- » All operations MUST BE idempotent.
- » Sagas and confirmation timeouts SHOULD BE used for consistency of distributed operations
- » All new service contracts SHOULD expose asynchronous APIs
- » All new state modifying operations SHOULD expose bulk APIs
- » There MUST BE NO data dependencies between services.
- » Command & query responsibility segregation – storefront APIs for data immutable in storefront (catalog, pricing, promotions) should be optimized for data retrieval
- » Compare and Swap (CAS) tokens SHOULD be used to avoid race conditions

Lightweight framework

- » Area is loaded immediately. No intermediate “global” step
- » No “isInstalled” checks
- » No store resolving
- » No application classes
- » Lightweight Request/Response class
- » No Layout loading
- » No UrlRewrite, default store redirect plugins
- » Simplified webapi routing
- » No “registration.php” loaded per module on every request
- »

Unified environment

Dev



docker



kubernetes



minikube

Staging & Prod



docker

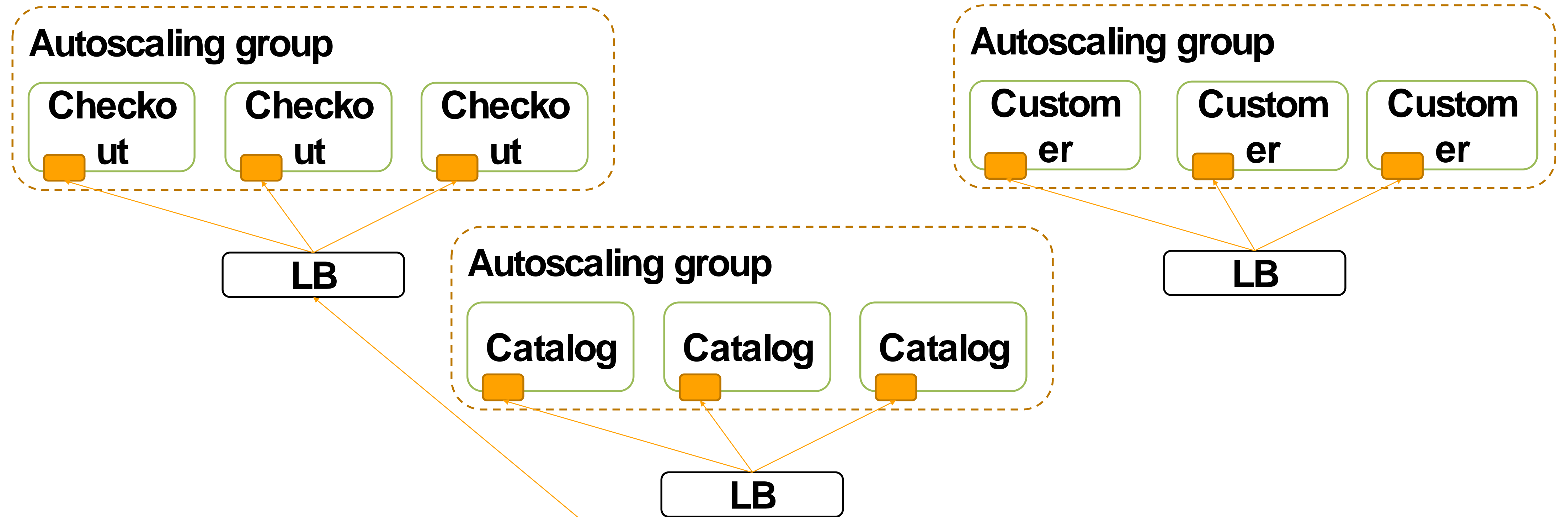


kubernetes



Commerce Cloud





Admin machine

- > magento context:add checkout administrative_endpoint_address
- > magento context:set checkout
- > Magento info:dependencies:show-modules

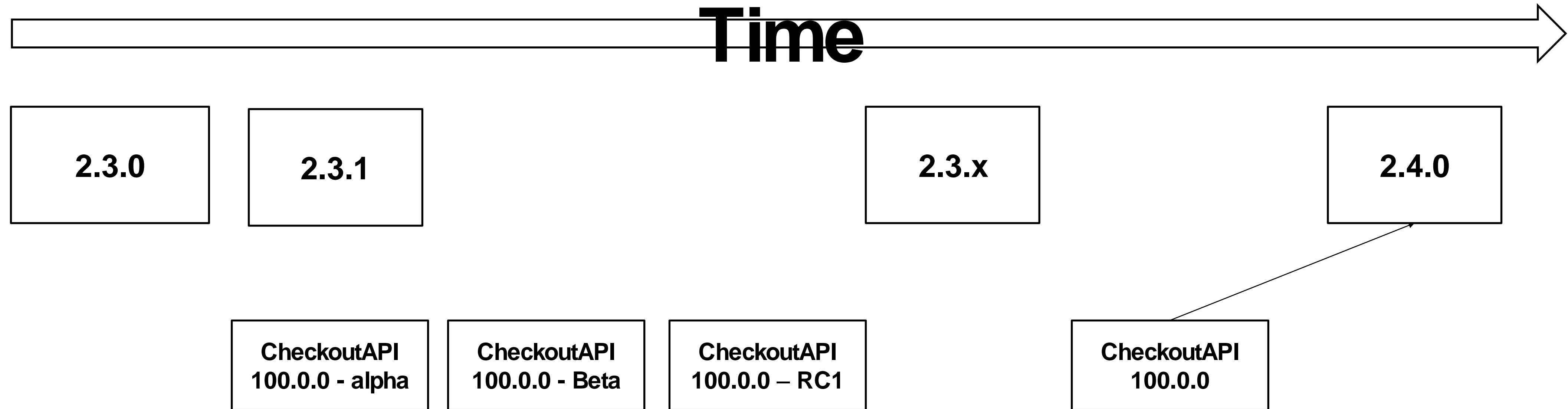


<https://github.com/magento-architects/magento-tool>

Manual testing is not an option

- » MFTF – modular functional testing framework
- » Run MFTF on marketplace to validate extensions & upgrades
- » Run MFTF on cloud to validate changes & upgrades
- » Add capacity testing capabilities

Reduce WIP



Provide merchants with continuously evolving agile platform to allow them to out-experiment their competition.

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