

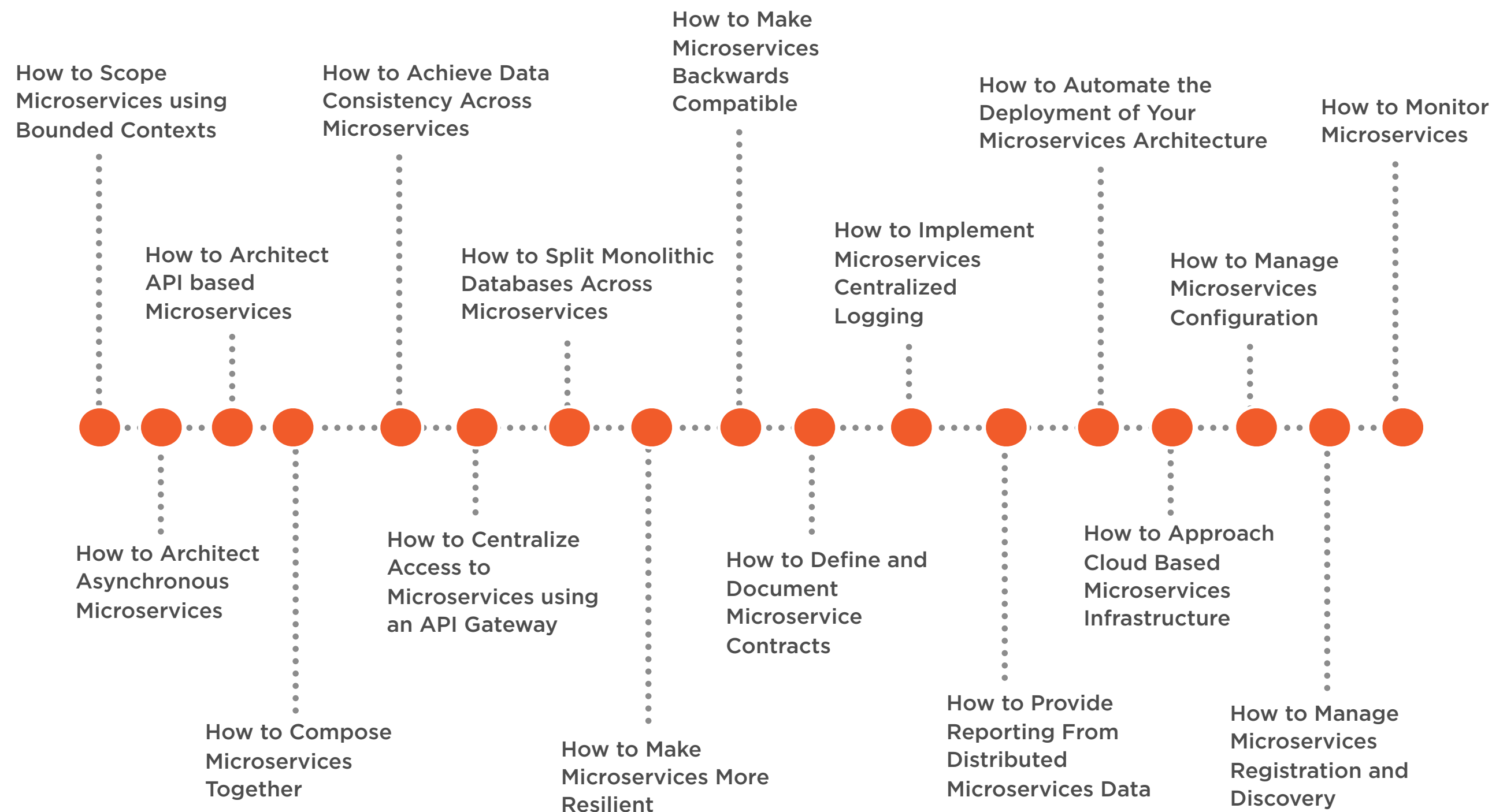
How to Manage Microservice Registration and Discovery



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Microservices Architectural Design Patterns Playbook



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Microservices Architecture



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Overview

Introduction

Client Side Discovery

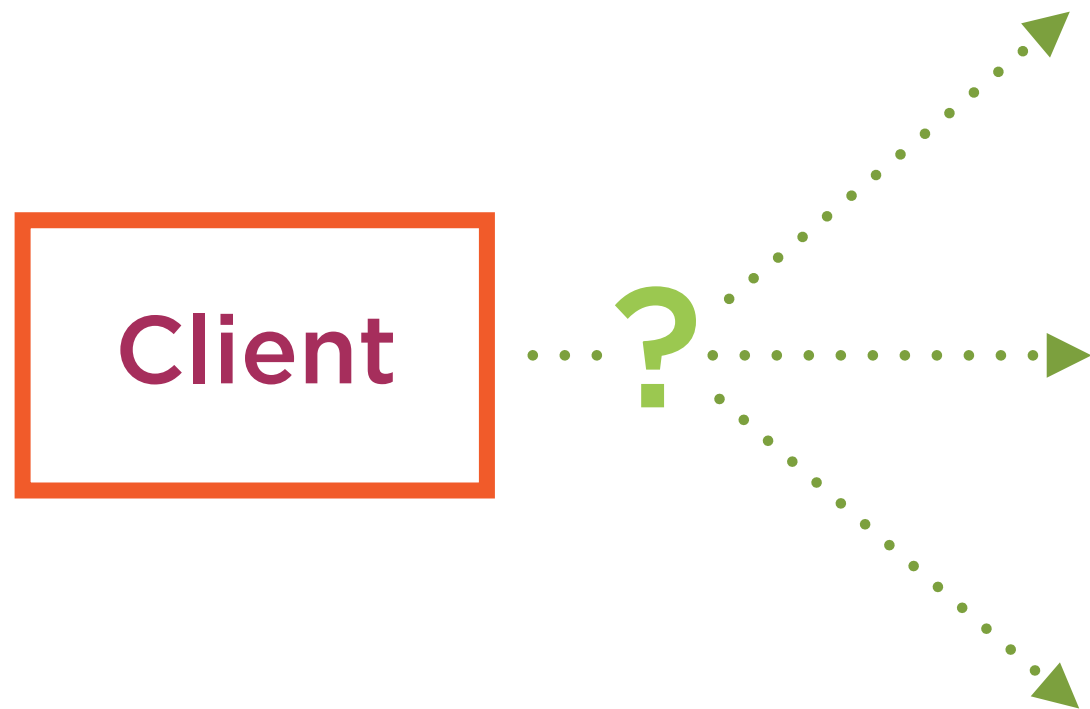
Sever Side Discovery

Service Registration

Tools

Introduction

Introduction



Calling an API

- IP address and port number
- Traditionally static
- Traditionally stored as configuration

Calling a microservice

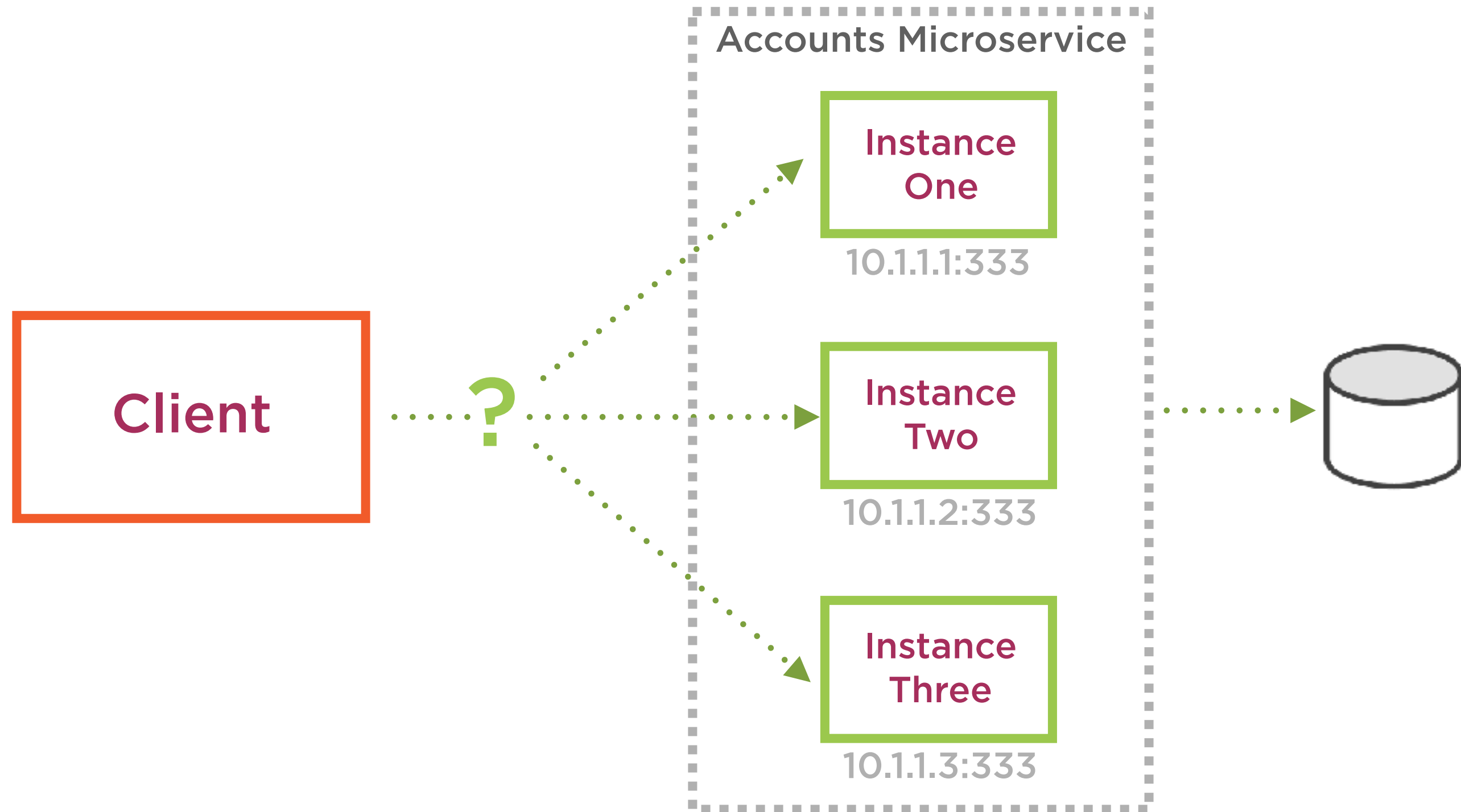
- Traditional approach doesn't work

Microservices have multiple instances

- Multiple locations
- Scaling out and load balancing
- Redundancy
- Upgrades

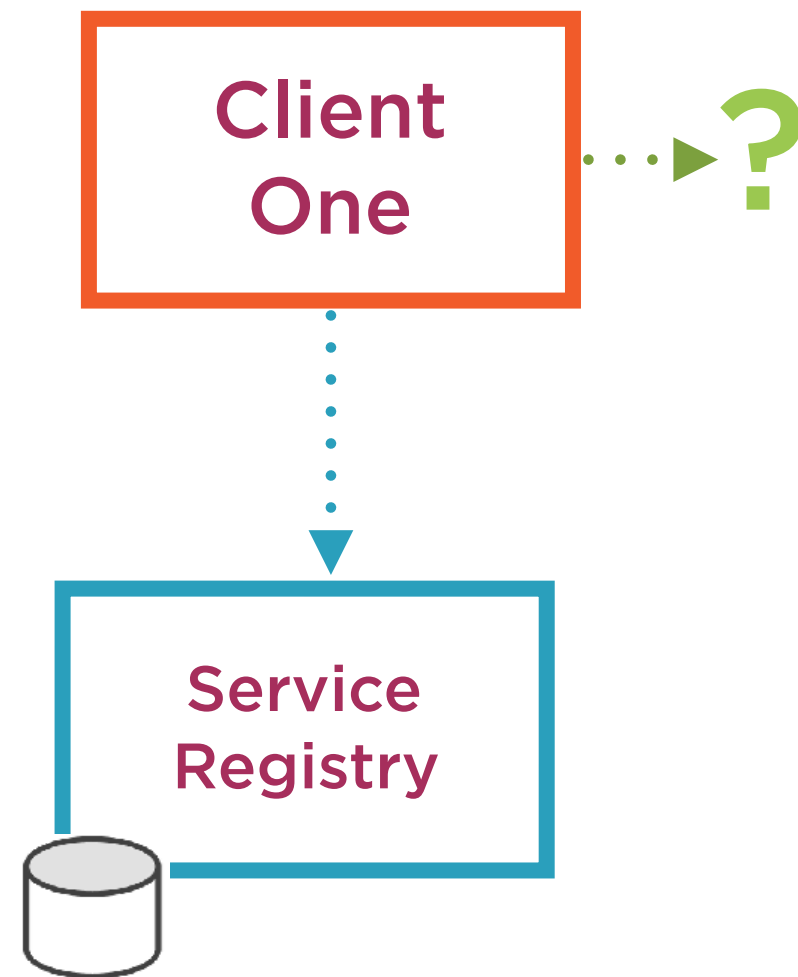
Service registration and discovery

Microservices Architecture



Client Side Discovery

Client Side Discovery



Calling client application responsible

- Discovery: Finding service instance location
- Load balancing requests across instances

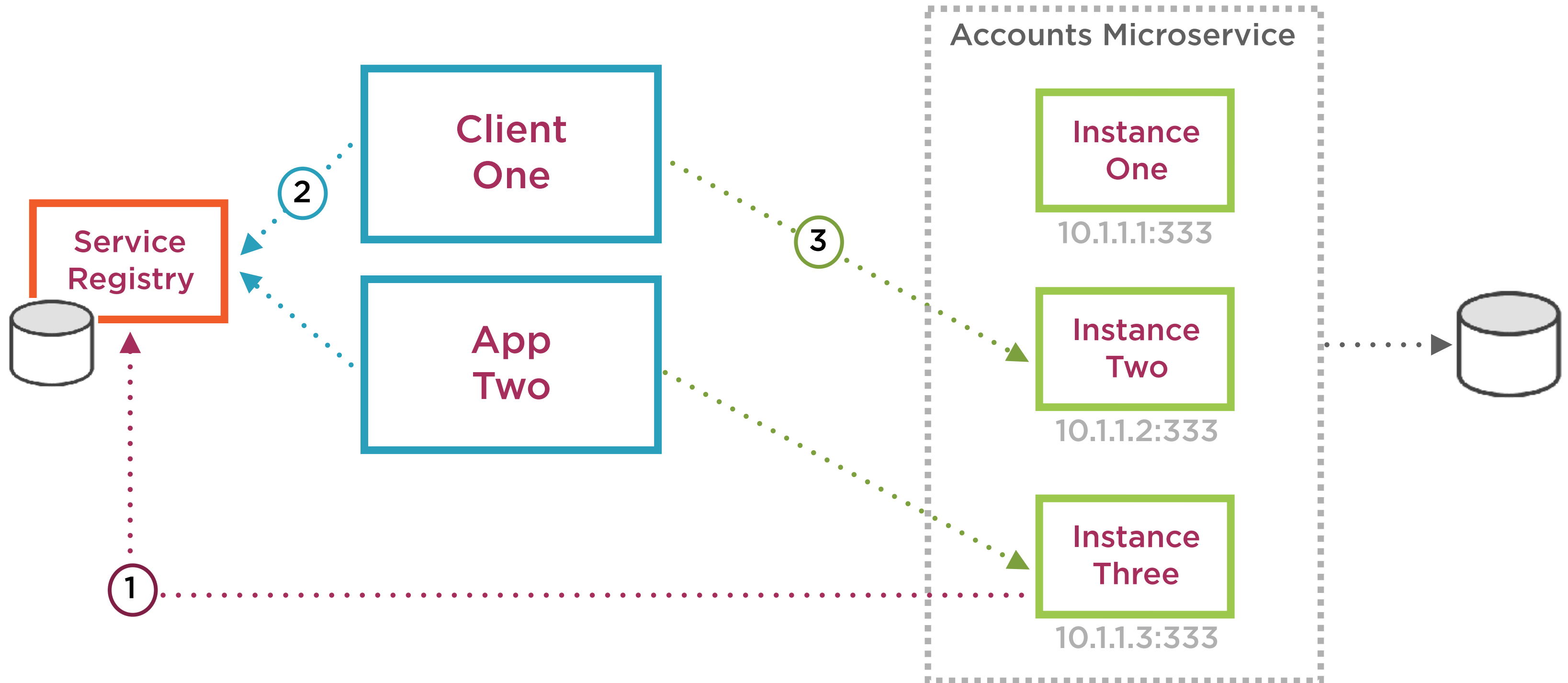
Client application uses service registry database

- Use to retrieve a location of an instance
- Location is registered on instance startup
- Location is deregistered if an instance is removed
- Periodically check instance existence

Drawbacks

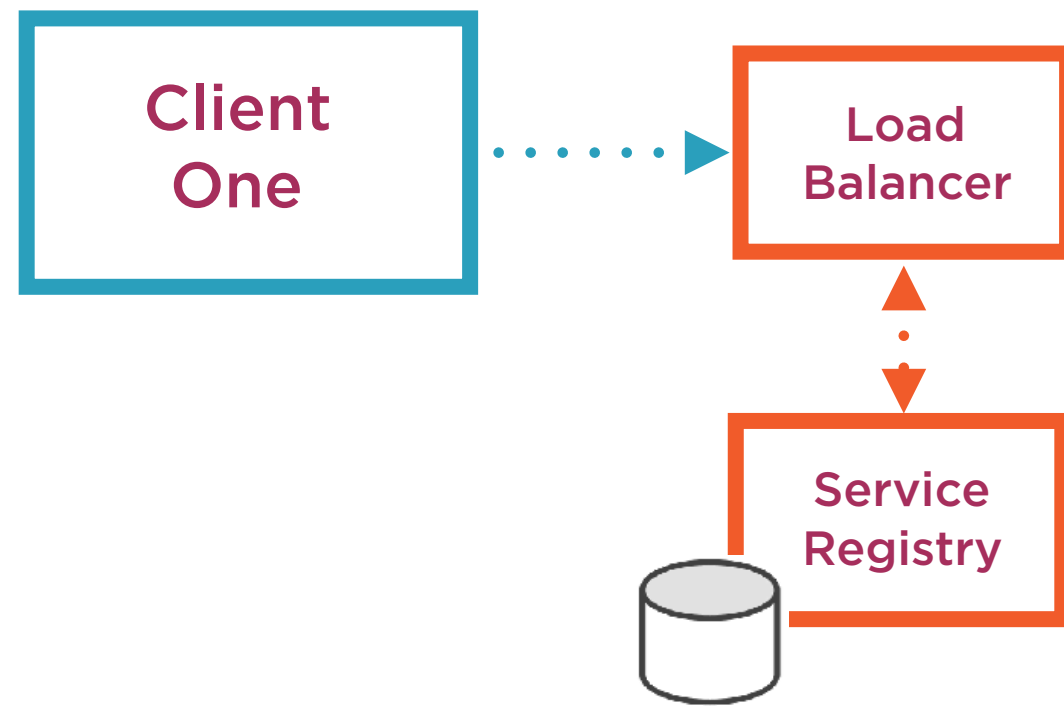
- Client applications are reliant of service registry
- Client application must implement client side discovery logic

Client Side Discovery



Server Side Discovery

Server Side Discovery



Client makes service requests via load balancer

- Load balancer routes requests to a service
- Load balancer uses a service registry database

Load balancer uses service registry database

- Use to retrieve a location of an instance
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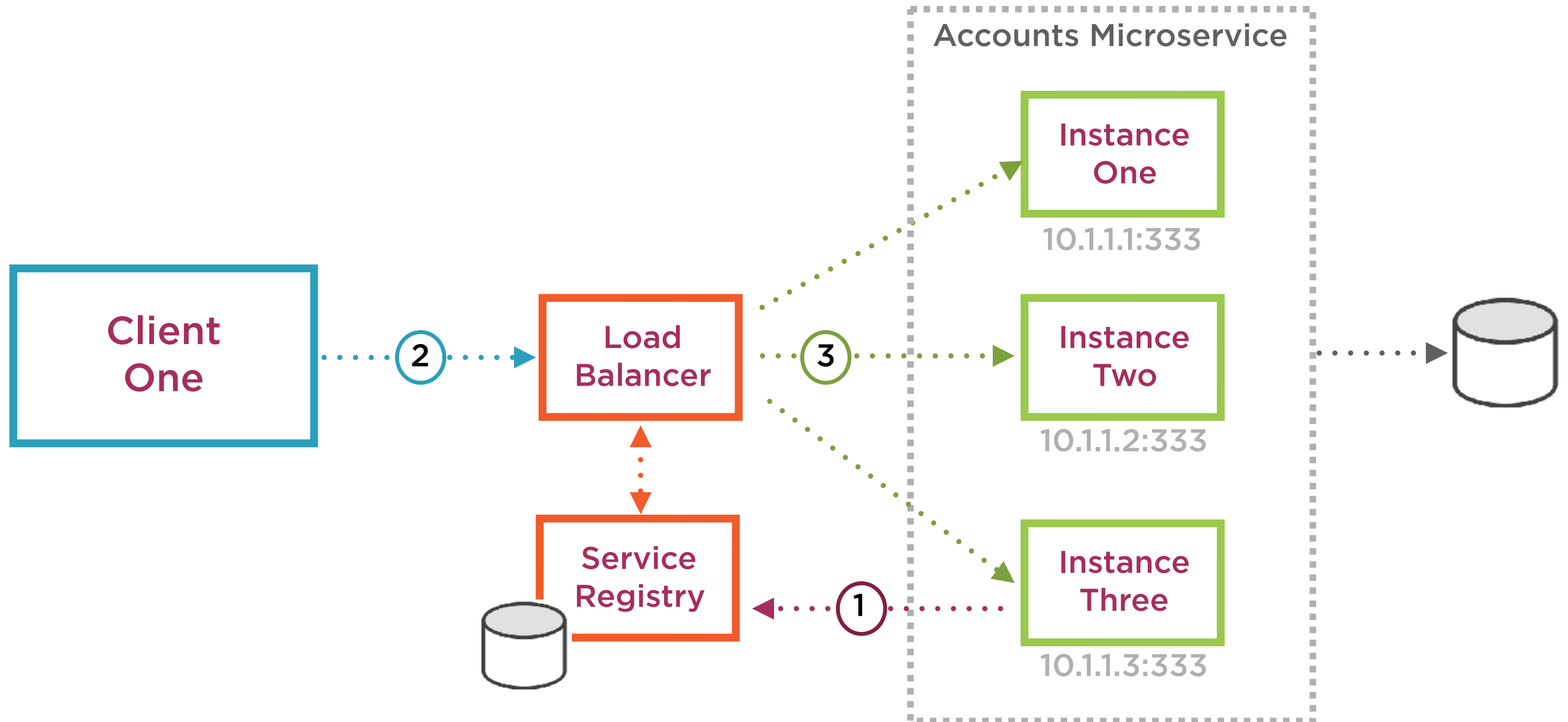
Advantage

- Removes services discovery logic from client

Drawbacks

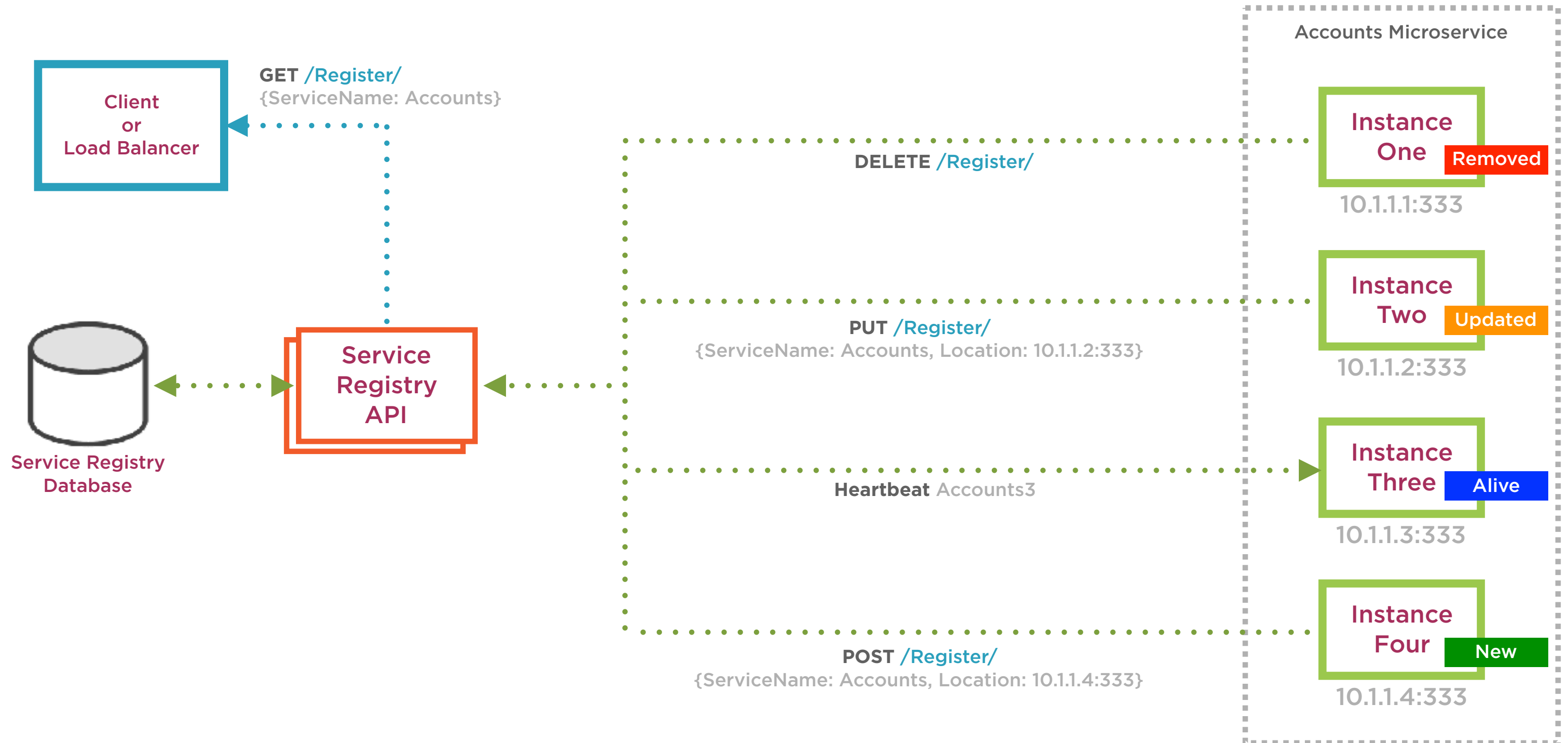
- Load balancer another component to manage

Sever Side Discovery

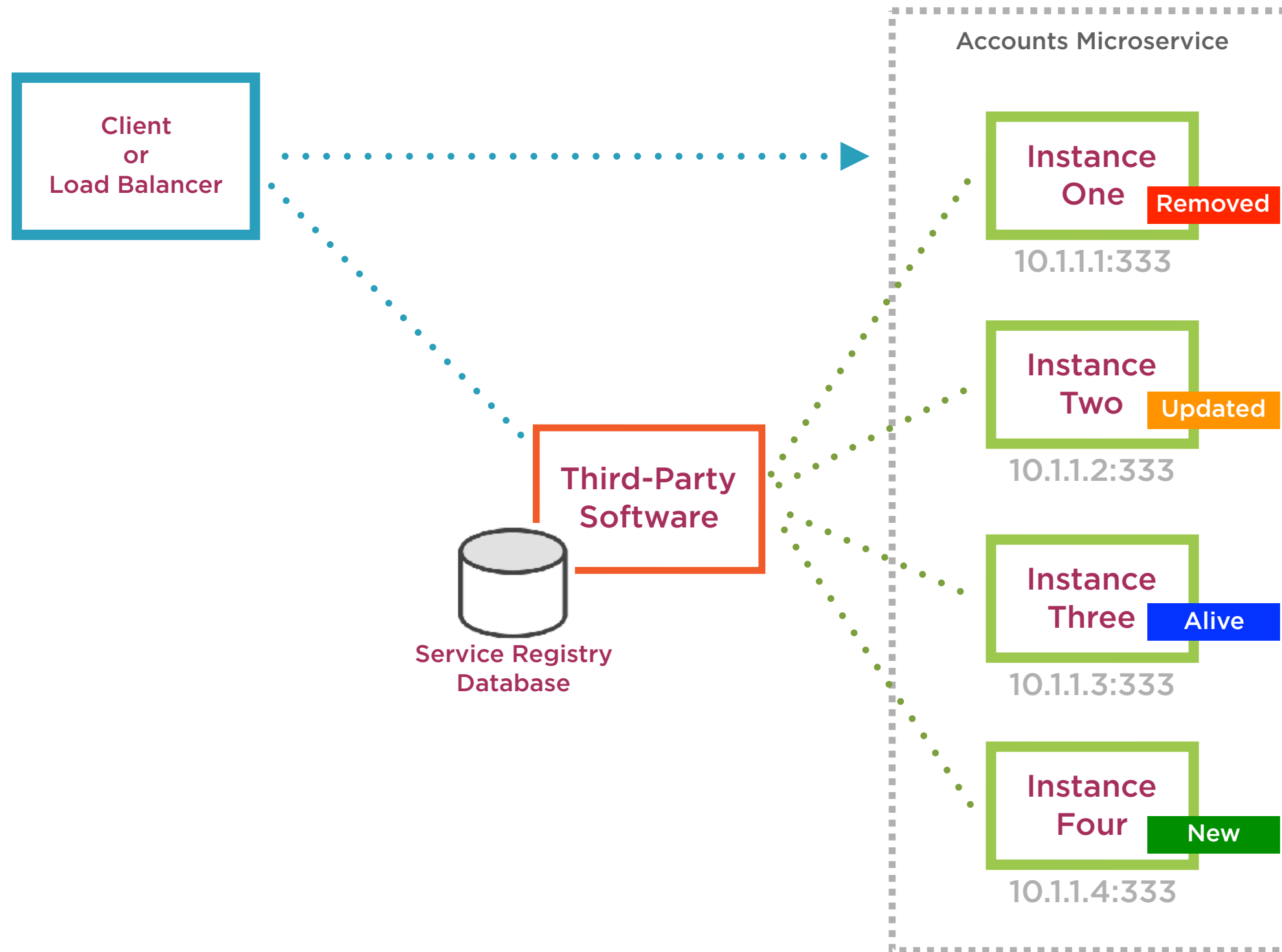


Service Registration

Self Registration Pattern



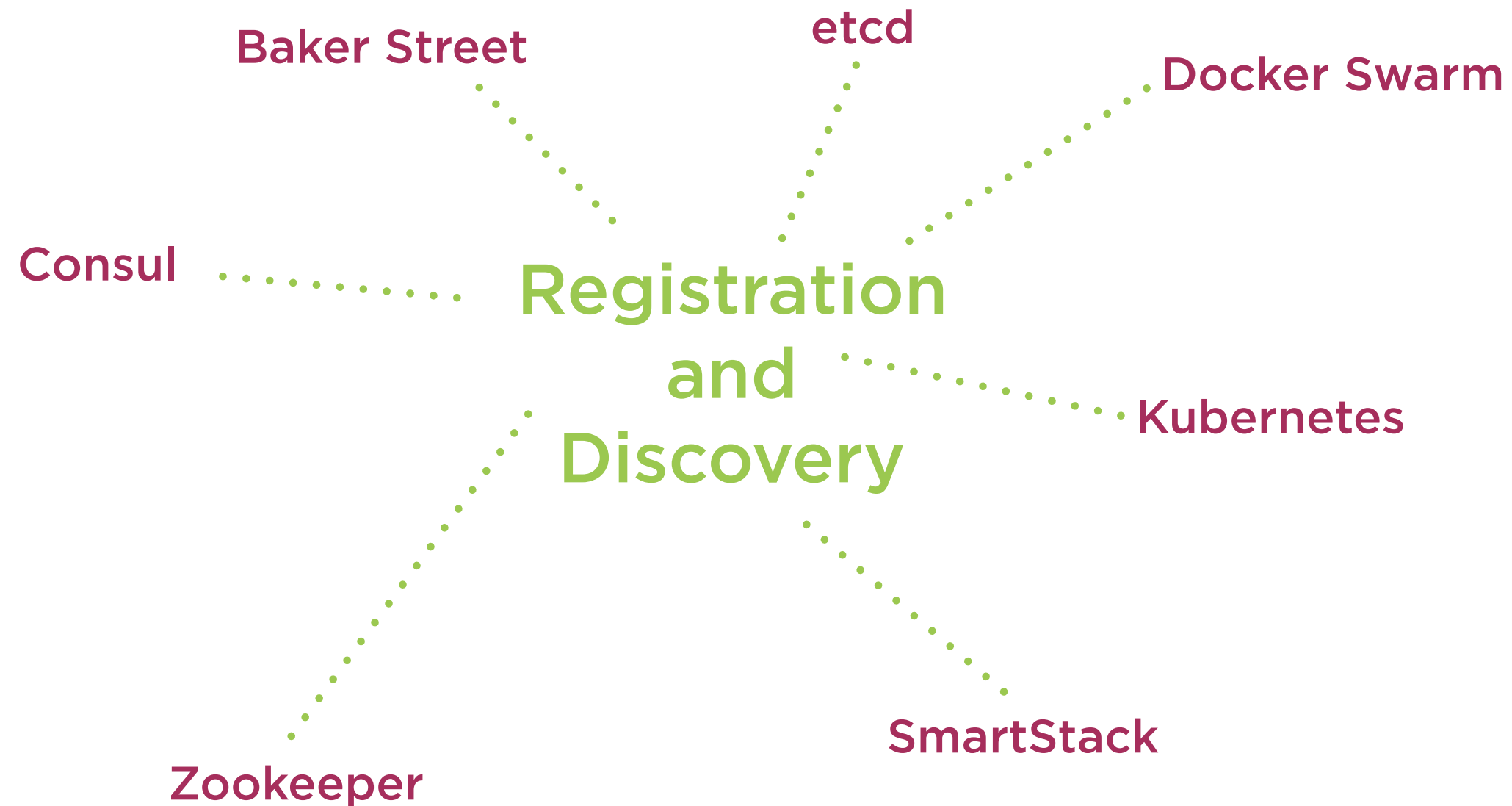
Third-party Registration Pattern



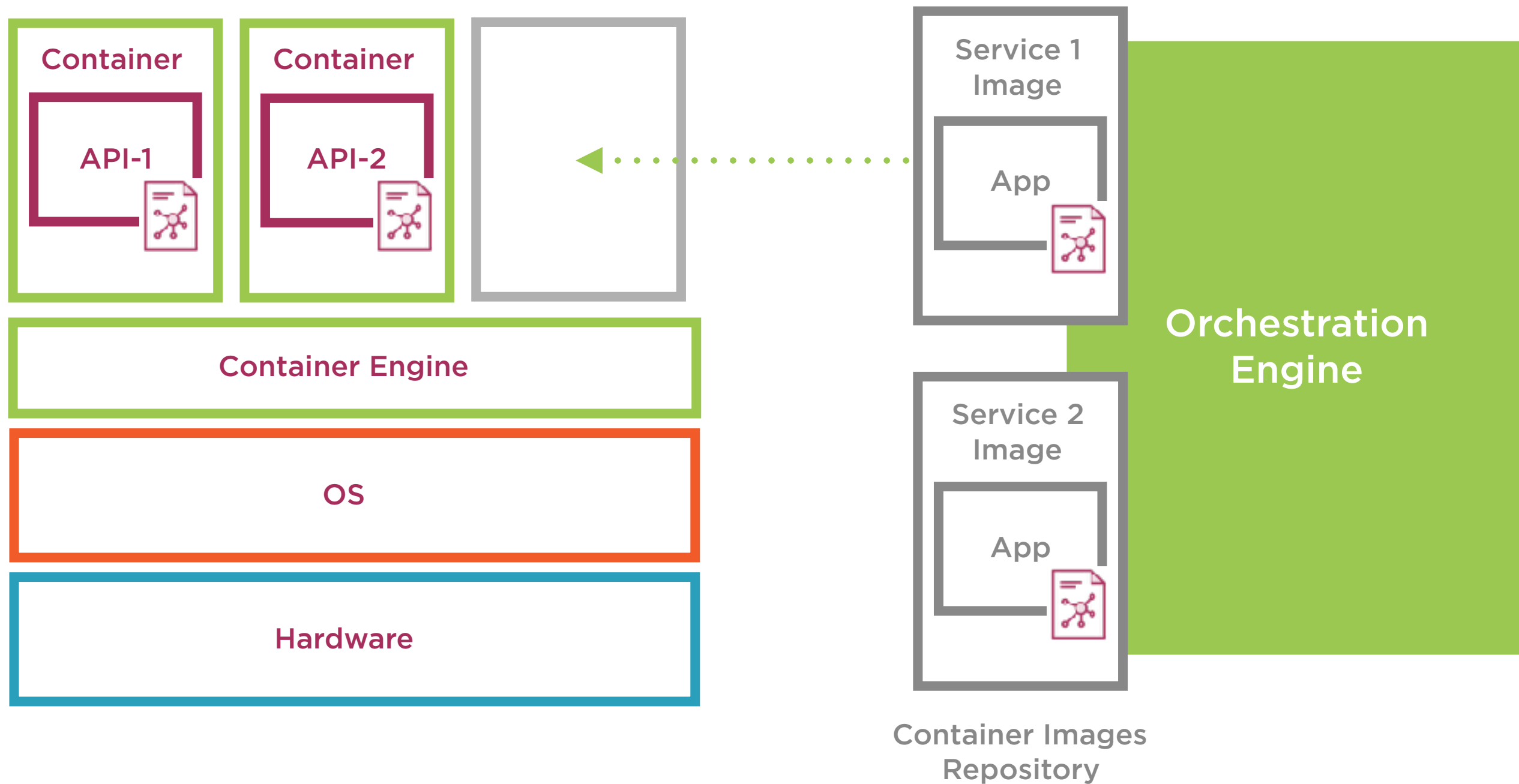
Tools



Registration and Discovery Tools



Orchestration Engine and Containers



Summary

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Client Side Discovery

Server Side Discovery

Service Registration

Tools

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