

The Magic of Backing Service Provisioning and Consumption

With Crossplane and ServiceBindings

Timo Salm

Principal Solutions Engineer, Broadcom

July 2025

About me

Timo Salm

Principal Solutions Engineer



- X (Twitter): [@salmto](https://twitter.com/salmto)
- LinkedIn: <https://linkedin.com/in/timosalm>
- GitHub: <https://github.com/timosalm>



Cloud Native Applications

Ship faster, reduce risk, and grow your business

“Cloud native is structuring **teams, culture, and technology** to utilize automation and architectures to manage complexity and **unlock velocity.**”

Joe Beda, Co-Founder Kubernetes

How do you build cloud native applications?

- Agile
- DevSecOps
- Continuous Delivery
- Microservices/Modulith
- Containers

Navigating the Complexity of Cloud Native Applications and Infrastructure

Many applications, teams, processes, a fragmented ecosystem of tools, ...





Kelsey Hightower ✓

@kelseyhightower



Replying to @kelseyhightower @polotek and 4 others

In the future we focus on writing only the product code, a little configuration to express policies, dependencies, and resource requirements, and the platform does the rest.

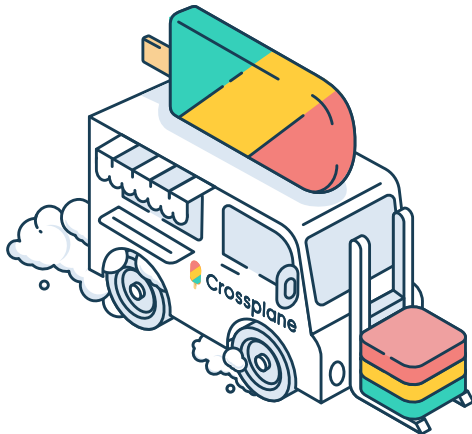
9:11 PM · Mar 19, 2023

Provisioning of Backing Services

With Crossplane

The ability to efficiently provision and manage backing services is critical for cloud native applications!

Crossplane enables developers and operators to define, provision, and manage these services with ease.

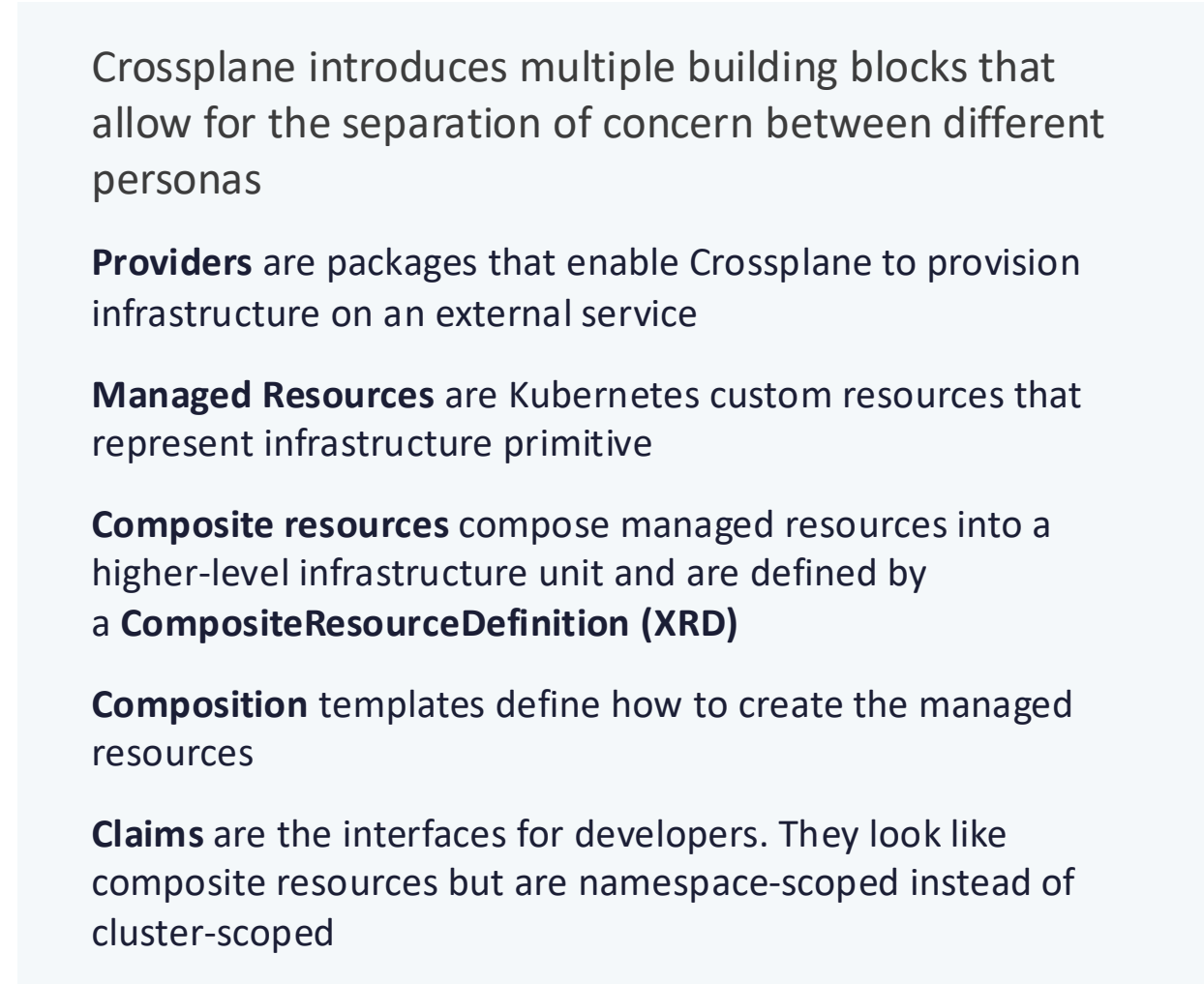


Crossplane is an open-source, CNCF project built on the foundation of Kubernetes to orchestrate anything

Initial focus on the provisioning and management of external, non-Kubernetes resources like AWS, Azure or GCP services

Allows platform teams to build abstractions with custom Kubernetes APIs for the consumption of resources with separation of concerns

Crossplane Concepts



Consumption of Backing Services

The **Service Binding Specification for Kubernetes** and its reference implementation make it as easy as possible to consume those dynamically provisioned backing services.

It automatically injects credentials that are required for the connection to the backing service into the containers of the running application.

The Spring Cloud Bindings library exposes a rich Java language binding for the Kubernetes Service Binding Specification.

It configures Spring Boot application configuration properties appropriate for the type of binding encountered.



The Paketo Spring Boot Cloud Native Buildpack adds Spring Cloud Bindings to the application classpath by default.

A More Useful, Intuitive, And Less Opinionated Crossplane

Crossplane v2 preview

Three major changes:

Composite resources are now namespaced

Managed resources are now namespaced

Composition supports any Kubernetes resource

Focus on backward compatibility with minimal breaking changes



<https://github.com/timosalm/crossplane-and-servicebindings>

Thank You

- X (Twitter): [@salmto](https://twitter.com/salmto)
- LinkedIn: <https://linkedin.com/in/timosalm>
- GitHub: <https://github.com/timosalm>