

CatalogAPI

9th October 2025

OVERVIEW

As we move more toward a **product** versus a **project**, there is a desire to unify how services are exposed using a specific purpose API. This unification would allow one to easily build a list of service offerings.

In real-world scenarios, service definitions will often consist of multiple **CustomResourceDefinitions (CRDs)** and related objects. Currently, kube-bind operates at the CRD level for defining services."

GOALS

1. **Service Catalog API:** Build an API to act as a central catalog for possible services exposed by the kube-bind backend cluster.
2. **UI Representation:** Update the User Interface (UI) to represent these catalog entries as "bindable objects."

NON-GOAL:

1. Refactoring the existing UI for a better overall User Experience (UX). This is planned as a separate, follow-up effort to ensure a smoother experience.

SPECIFICATIONS

New API Group

The proposal is to introduce a new API group, `catalog.kube-bind.io`, to serve as the core mechanism for defining service contracts.

API Objects

The new Catalog API will contain two primary objects:

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1. **ServiceDefinition**
 2. **ServiceGroup**

Implementation Strategy

All new APIs are built around the fundamental API object that already exists within the system. The introduction of **ServiceDefinition** and **ServiceGroup** is purely a method of grouping and organizing these existing components for better product visibility and management.

ServiceDefinition

Allows grouping multiple CRDs with related resources (permissionClaims) as a Service definition.

Proposed API:

apiVersion: catalog.kube-bind.io

kind: ServiceDefinition

metadata:

name: mangodb

spec:

resources:

- group: mangodb.com

version: v1

kind: Cluster

- group: mangodb.com

version: v1

kind: User

- group: mangodb.com

version: v1

kind: Database

permissionClaims:

- group: ""

resource: secrets

selector:

namedResources:

- name: credentials

- name: connection-details

labelSelector:

matchLabels:

env: prod

- group: ""

resource: configmaps

selector:

namedResources:

- name: config

labelSelector:

matchLabels:

env: prod

ServiceGroup

Allows grouping multiple ServiceDefinitions into a group. This will function as a folder in the UI, allowing users to group numerous definitions into logical groups.

```
---
apiVersion: catalog.kube-bind.io
kind: ServiceGroup
metadata:
  name: databases
spec:
  description: "A group of database service definitions"
  serviceDefinitions:
    - name: mangodb
    - name: postgresql
    - name: mysql
```