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OCI Service Broker

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Oracle Cloud Infrastructure

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Objectives

After completing this lesson, you should be able to;

- Use Oracle Service Broker for your Kubernetes applications
- Use Service Brokers to enable DevOps as a single toolset

What is a Service Broker?

- Software that implements the Open Service Broker API

- Enables cloud service lifecycle through DevOps tools

  - Provision

  - Bind

  - Unbind

  - Deprovision

- Specific to cloud vendor or software vendor
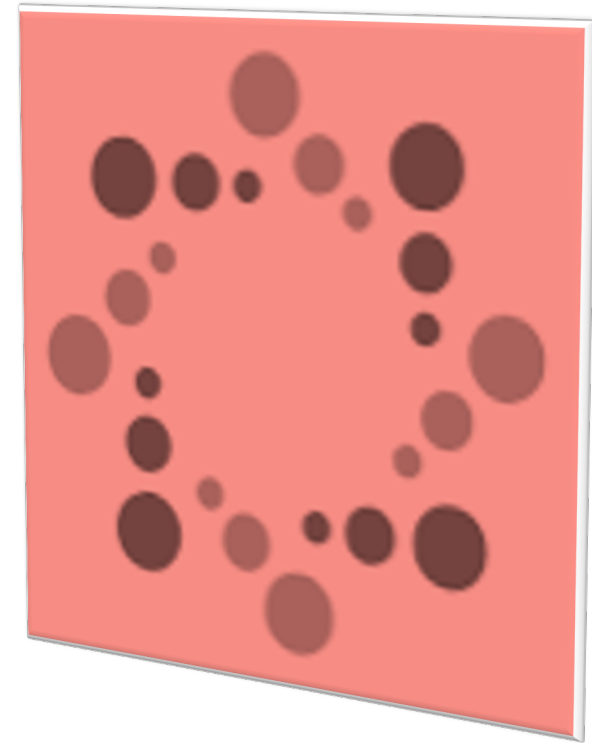
Why are Service Brokers Important?

- Tying dependent cloud service lifecycle to app lifecycle
- DevOps: use one set of tools to deploy the required services and the app
- Application portability

What is OCI Service Broker for Kubernetes?

Downloadable open source tool to deploy in a
Kubernetes cluster
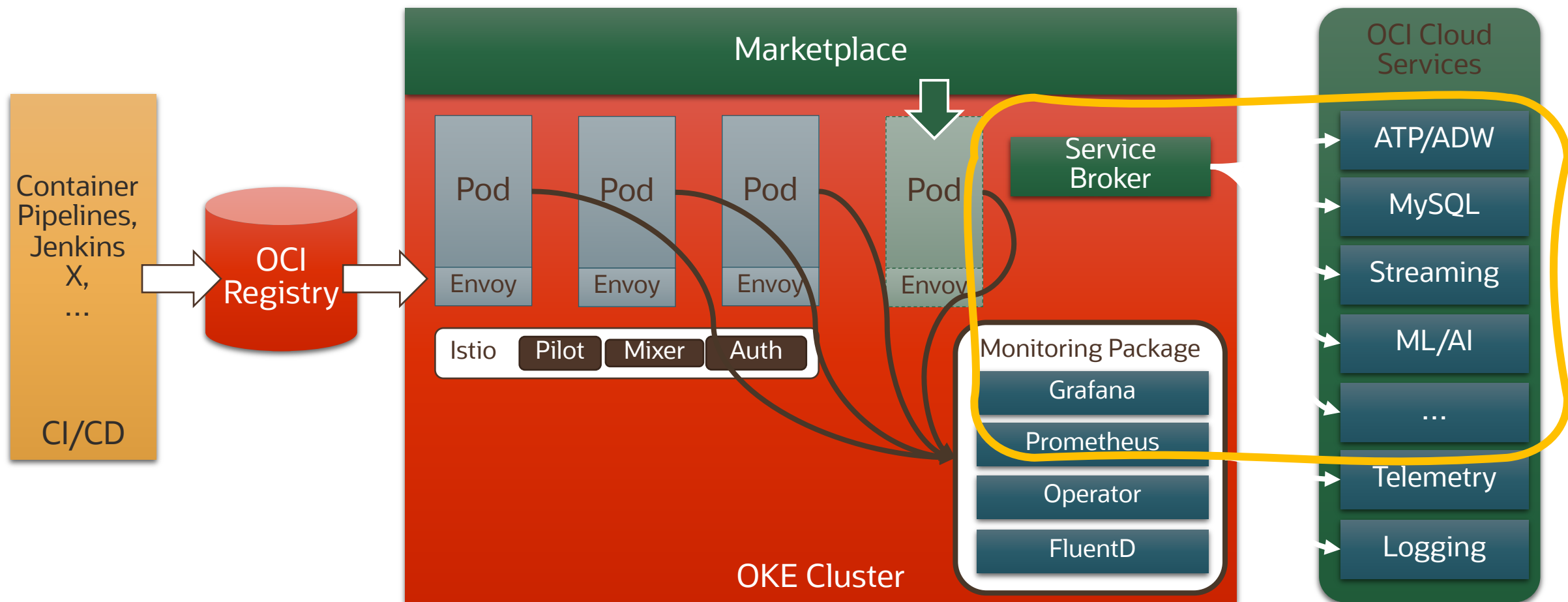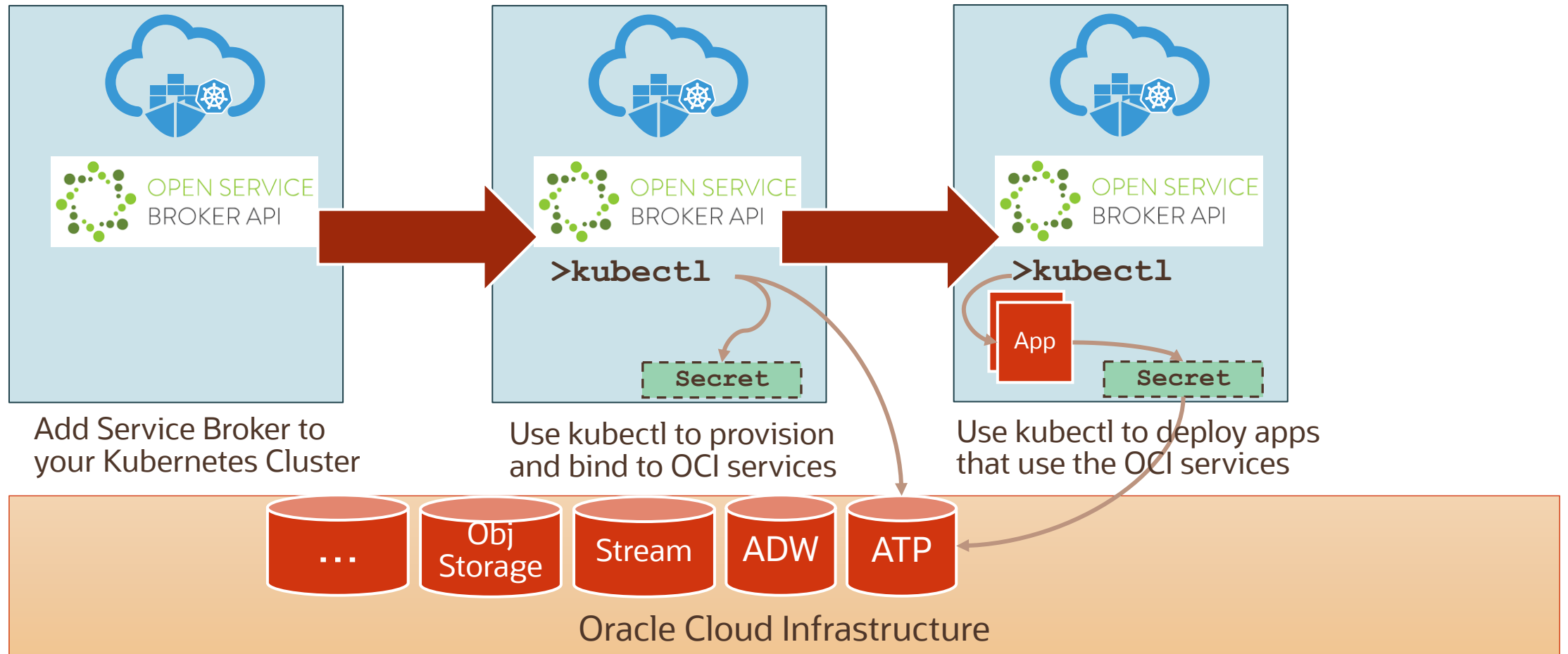https://github.com/oracle/oci-service-broker

Eases adoption of OCI Cloud Services

- Provision/binding to OCI cloud services

- Consolidate DevOps tooling

- App and cloud resource lifecycle alignment

- Application portability

OPEN SERVICE
BROKER API

OCI Container Native Platform

Using OCI Service Broker for Kubernetes

Add Service Broker to your Kubernetes Cluster

Use kubectl to provision and bind to OCI services

Use kubectl to deploy apps that use the OCI services

Oracle Cloud Infrastructure

Architecture
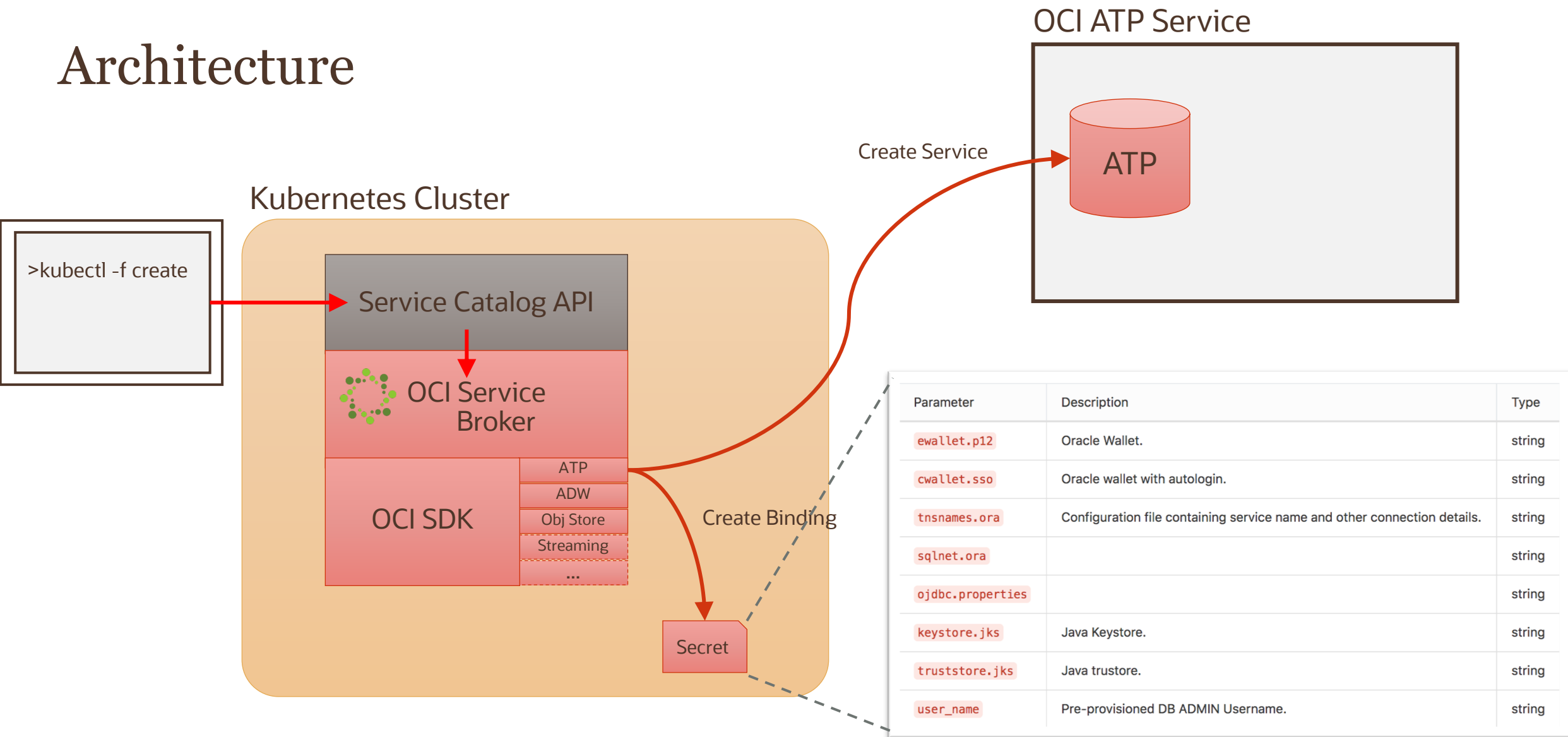
Secret contents vary depending on the OCI service type

More Detail...

Use kubectl to provision services and create service bindings

Example yaml files:

```yaml
apiVersion: servicecatalog.k8s.io/v1beta1
kind: ServiceInstance
metadata:
 name: "InstanceName"
 namespace: "Namespace"
spec:
 clusterServiceClassExternalName: "object-store-service"
 clusterServicePlanExternalName: "standard"
 parameters:
   name: "BucketName"
   compartmentId: "CompartmentOCID"
   namespace: "OCINamespace"
   freeformTags:
     tag: "tag-value"
```

```yaml
apiVersion: servicecatalog.k8s.io/v1beta1
kind: ServiceBinding
metadata:
 name: "BindingName"
 namespace: "Namespace"
spec:
 instanceRef:
   name: "InstanceName"
 parameters:
   generatePreAuth: true
```

DevOps Use Cases for Service Broker and ATP

1. Each service has its own ATP instance
2. Each service owns its own schema
3. Some services share schemas
4. Fully defined database prepared by DBA
5. Moving from Dev to Test to Prod

How does OCI Service Broker enable these cases?

Enabling Use Cases: Bind to Existing

Register…


```
atp-existing-instance.yaml — ~/oci-service-broker-1.2.1/samples/atp

  atp-existing-instance.yaml

1    #
2    # Copyright (c) 2019, Oracle and/or its affiliates. All rights
•    reserved.
3    # Licensed under the Universal Permissive License v 1.0 as shown
•    at http://oss.oracle.com/licenses/upl.
4    #
5    apiVersion: servicecatalog.k8s.io/v1beta1
6    kind: ServiceInstance
7    metadata:
8      name: osb-atp-existing-instance
9    spec:
10     clusterServiceClassExternalName: atp-service
11     clusterServicePlanExternalName: standard
12     parameters:
13       name: osb-atp-existing-instance
14       ocid: "CHANGE_EXISTING_SERVICEINSTANCE_OCID_HERE"
15       compartmentId: "CHANGE_COMPARTMENT_OCID_HERE"
16       provisioning: false
17

~/oci-service-broker-1.2.1/samples/atp/atp-existing-ir   LF   UTF-8   YAML    GitHub    Git (0)
```

Create Service Binding as usual

```
atp-binding.yaml — ~/oci-service-broker-1.2.1/samples/atp

  atp-existing-instance.yaml        atp-binding.yaml        •

1    #
2    # Copyright (c) 2019, Oracle and/or its affiliates. All rights
•    reserved.
3    # Licensed under the Universal Permissive License v 1.0 as shown
•    at http://oss.oracle.com/licenses/upl.
4    #
5    apiVersion: servicecatalog.k8s.io/v1beta1
6    kind: ServiceBinding
7    metadata:
8      name: atp-demo-binding
9    spec:
10     instanceRef:
11       name: osb-atp-existing-instance
12     parametersFrom:
13       - secretKeyRef:
14           name: atp-secret
15           key: walletPassword
16

~/oci-service-broker-1.2.1/samples/atp/atp-bind   LF   UTF-8   YAML    GitHub    Git (0)
```

Additional Information

For additional information on OCI Service Broker, please refer to:

https://github.com/oracle/oci-service-broker

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Oracle Cloud always free tier:
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