Updating an App in Kubernetes (K8s)

Users expect applications to be available all the time, and developers are expected to deploy new versions of them several times a day. In Kubernetes this is done with rolling updates. A rolling update allows a Deployment update to take place with zero downtime. It does this by incrementally replacing the current Pods with new ones. The new Pods are scheduled on Nodes with available resources, and Kubernetes waits for those new Pods to start before removing the old Pods.
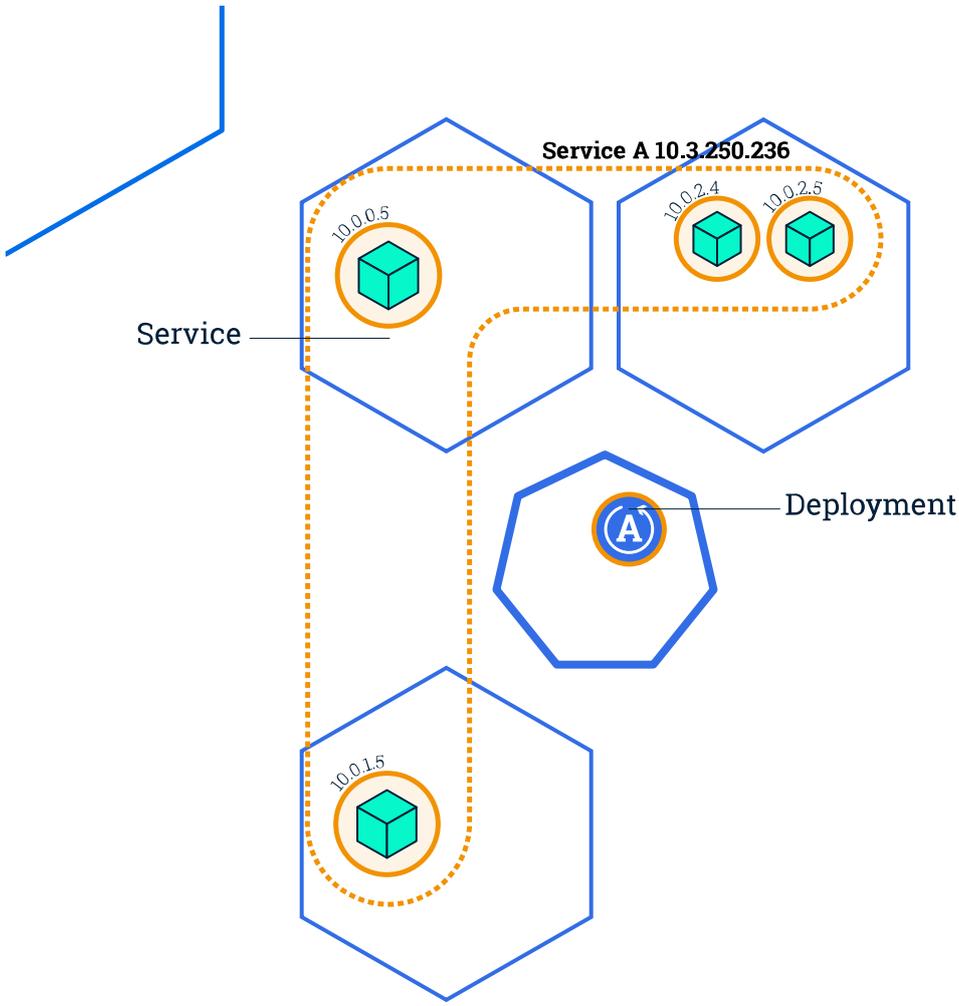
Actions

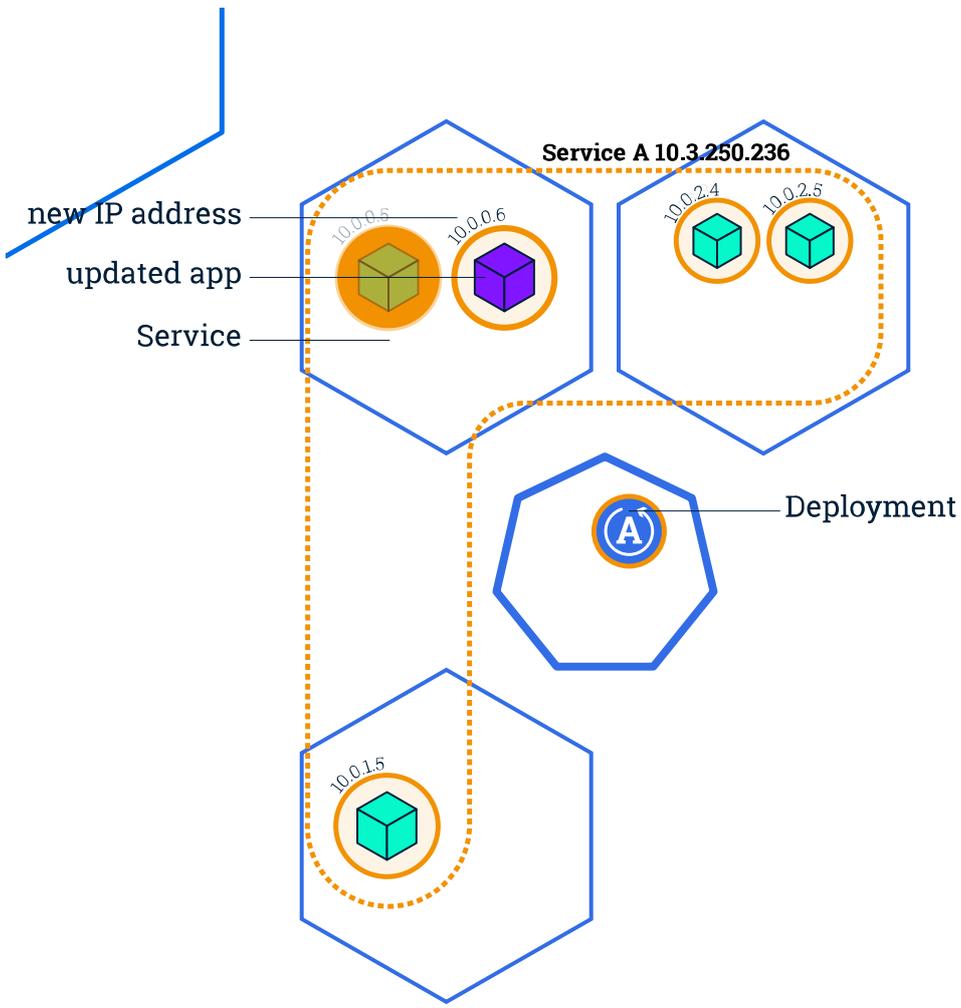Rolling updates allow the following **actions**:

- Promote an application from one environment to another (via container image updates)
- Rollback to previous versions
- Continuous Integration and Continuous Delivery of applications with zero downtime
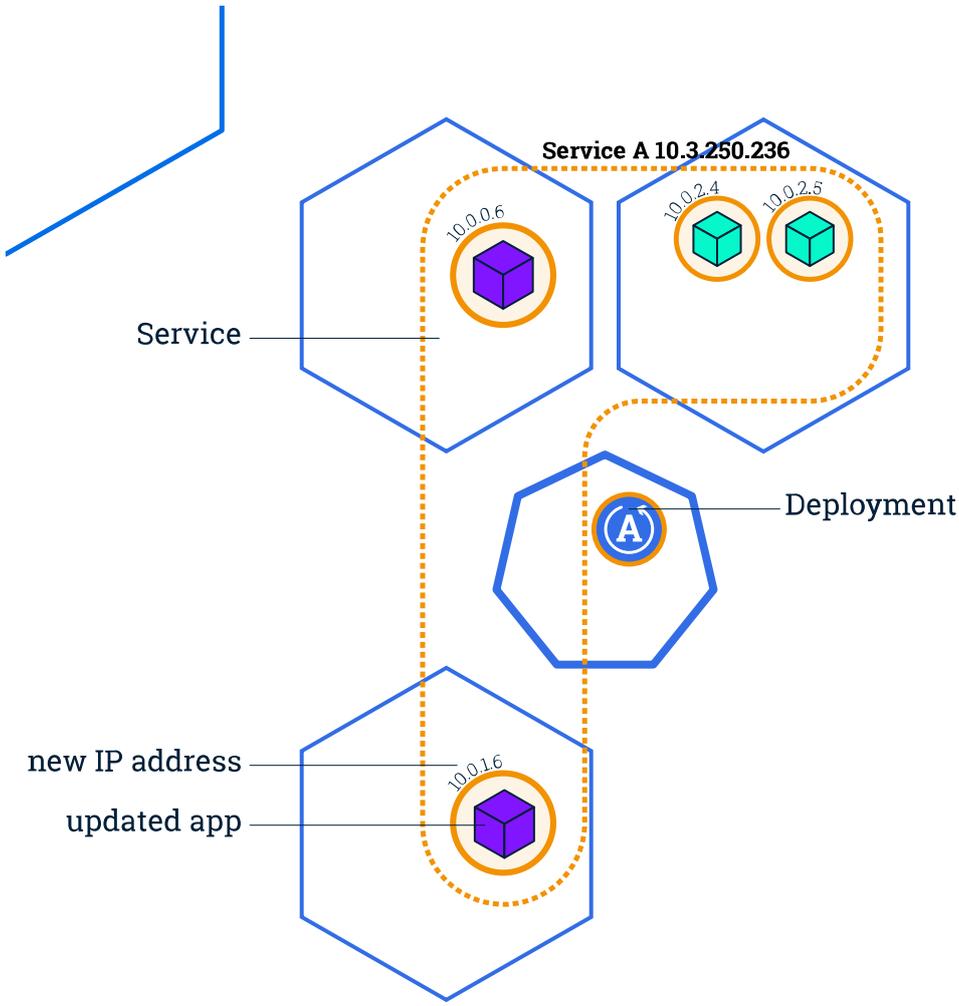
Steps of rolling update

Step 1
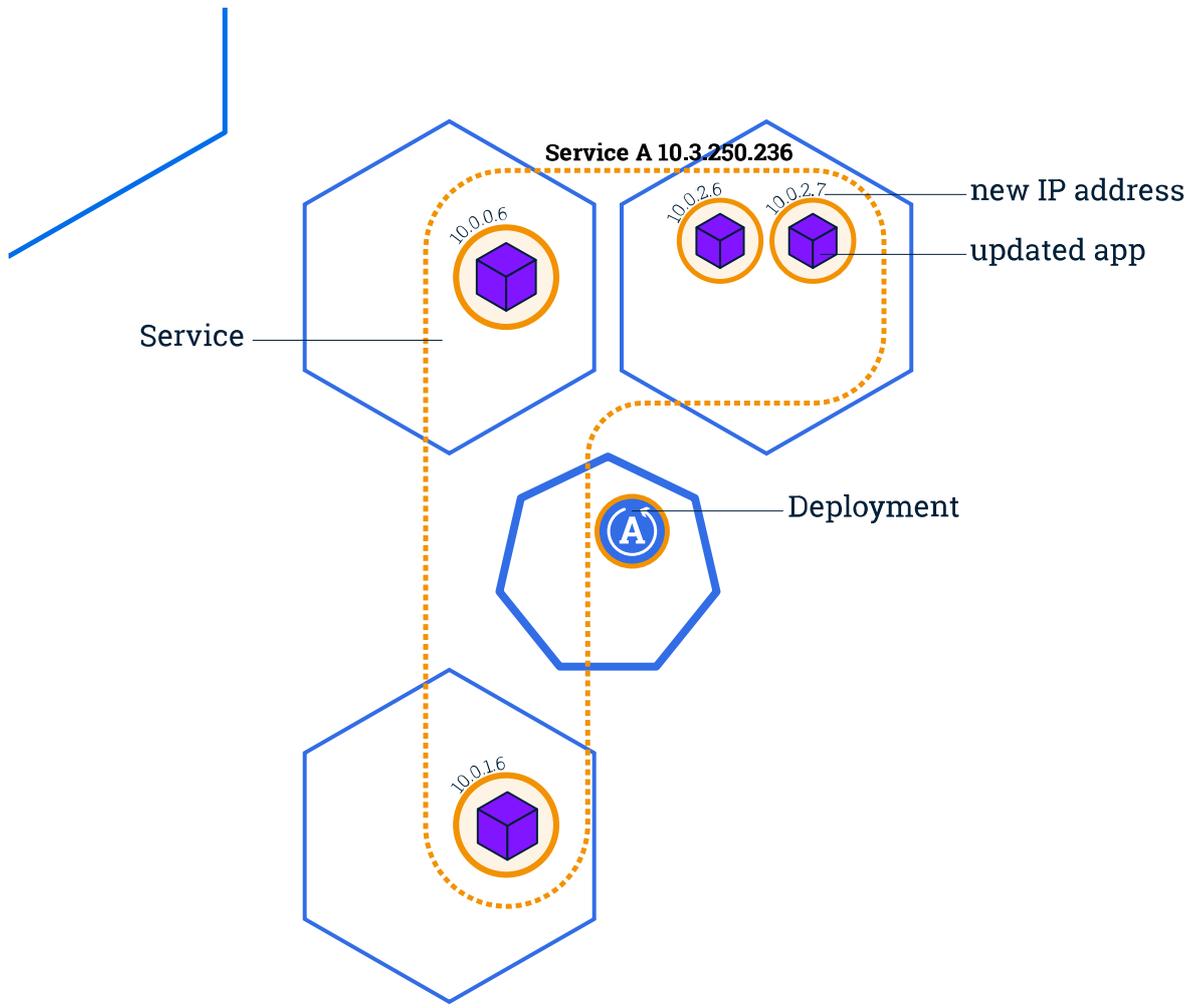
Service A 10.3.250.236

Service

10.0.0.5

10.0.2.4 10.0.2.5

Deployment

A

10.0.1.5

Step 2

Service A 10.3.250.236

new IP address

updated app

Service

10.0.0.5

10.0.0.6

10.0.2.4

10.0.2.5

Deployment

A

10.0.1.5

Step 3

Service A 10.3.250.236

10.0.0.6

10.0.2.4   10.0.2.5

Service

Deployment

new IP address

updated app

10.0.1.6

Step 4

Service A 10.3.250.236

10.0.0.6

10.0.2.6 10.0.2.7

new IP address

updated app

Service

A

Deployment

10.0.1.6

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