Adventures Aboard the Kluster Kruise Ship

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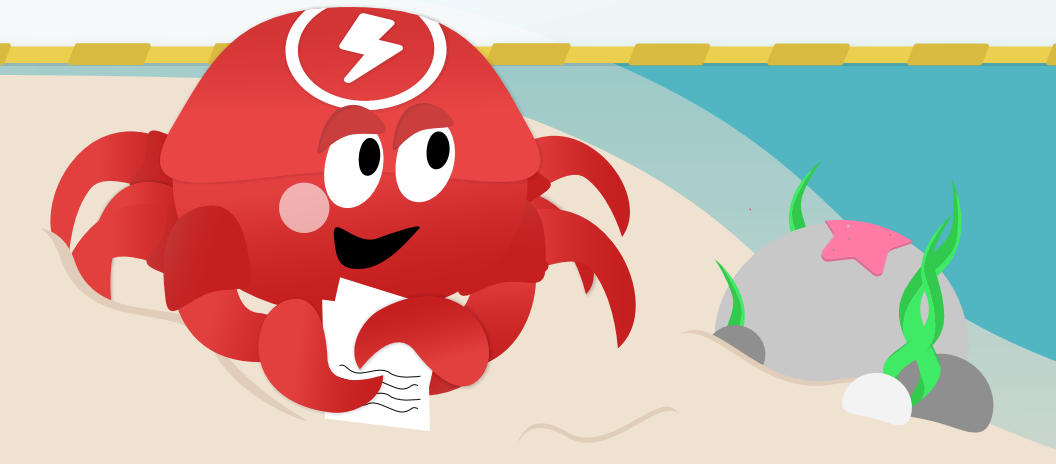
Illustrated by Mary Shakshober



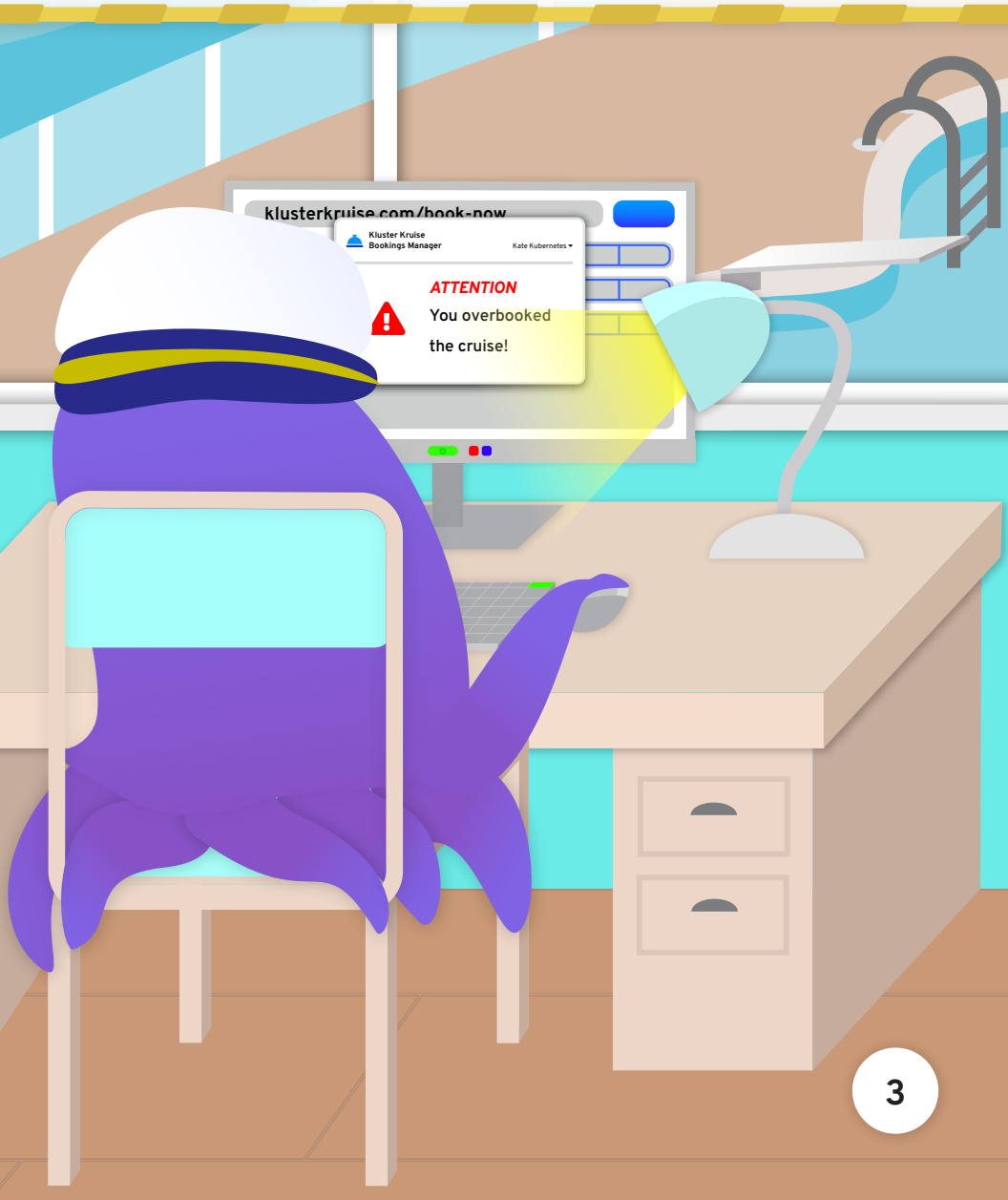
How many terms can you find?

S R O T A R E P O U T K W J N
V E L M F P Z J Q Z D Z T B Z
C Q L M A V W M P W S E A H A
I U G C I I Z Y E H U D F S U
T G A H Y P N D M Z R V W K T
A P P L I C A T I O N S U T O
M T N D Y R E I E R N B U G S
O X Y D G L W F U N E V B J C
T O B P Y D B H I R A J U R A
U D U Y U Y V U N L Y N K K L
A M A N U A L E C D U U C S I
A B R G F H T S C V H H Y E N
Z V X P S E W N U C D T L S G
A E B F S P K P F A X E O Z H
M N R W D O T K L E T D F B P

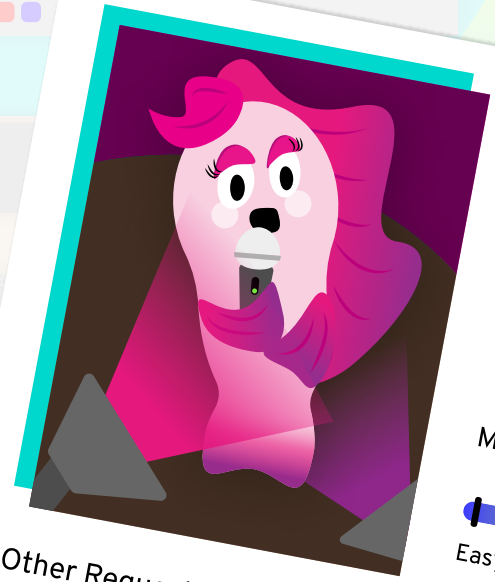
Word Bank

Applications
Upgrade
Operators
Kubernetes
Automatic
Autoscaling
Manual
Lifecycle
Maintenance

Kate was the captain of the Kluster Kruise cruise ship. Guests came from far and wide to relax onboard her tranquil decks. Kate was a master multi-tasker and handled all guest scheduling and booking with ease. She quickly booked rooms, upgraded passengers to larger suites, or downgraded them to smaller bunks.



One day, a new guest booked a reservation. Kate tried to manage her booking the same way she managed everyone else's, but the guest was rich and famous, and had specific requirements. She wanted her morning coffee with NO cream, but her afternoon coffee WITH cream. At night, she wanted a bowl of candies, but every yellow candy needed to be removed. She also wanted her bed sheets changed twice a day anytime she took an afternoon nap.



klusterkruise.com
Guest Reservation Report

Guest name:
Cariah "Silky Gills" Marey

Room Request:
Executive Sparkle Suite

Maintence-O-Meter

Easy! Good luck...

Other Requests:
room must consistently be at 67 degrees
linens must be in color 'Pink Coral Paradise'
any/all towel animals should be in the shape of a three-toed sloth

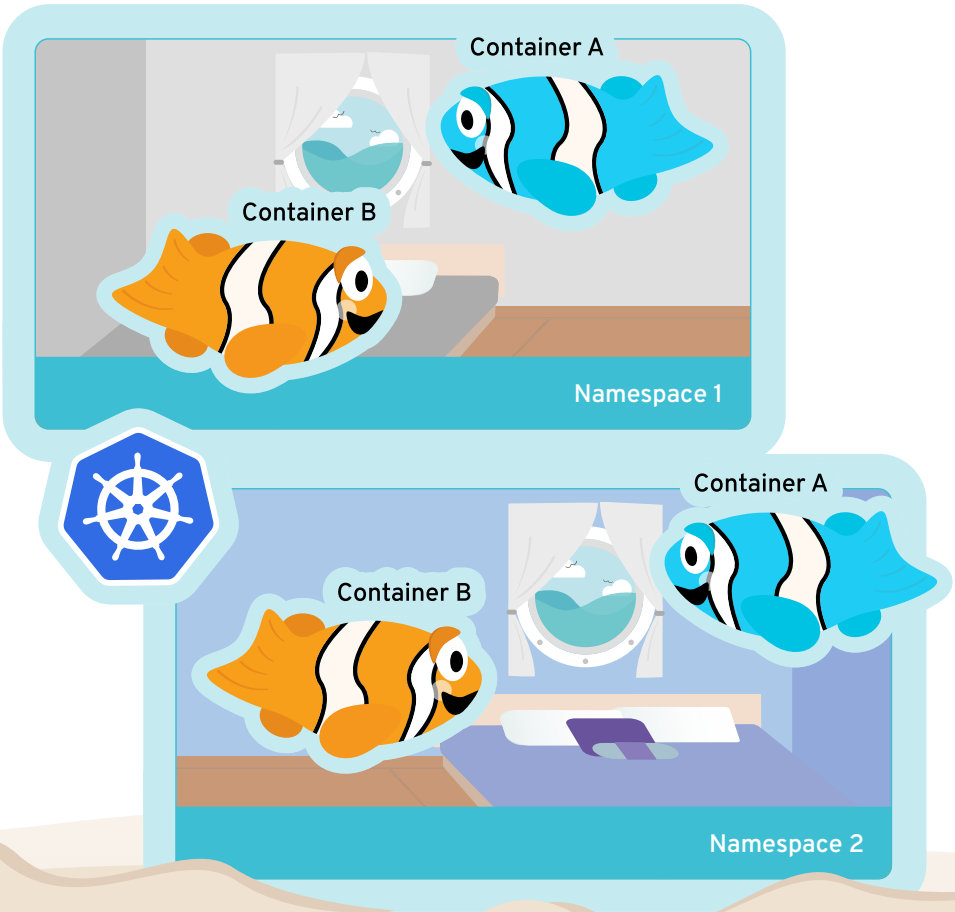
Cici was the cruise ship's reservation coordinator and made sure that every guest request was met accurately. Cici worked closely with Kate to try and make sure everything went smoothly. But it took a long time to explain everything! Kate couldn't keep up with the complicated special requirements of this new guest. And if they made a mistake and she spotted a yellow candy in her bowl, she would send it back and complain. Every time Cici tried to take a break, something went wrong.

Meet the Crew

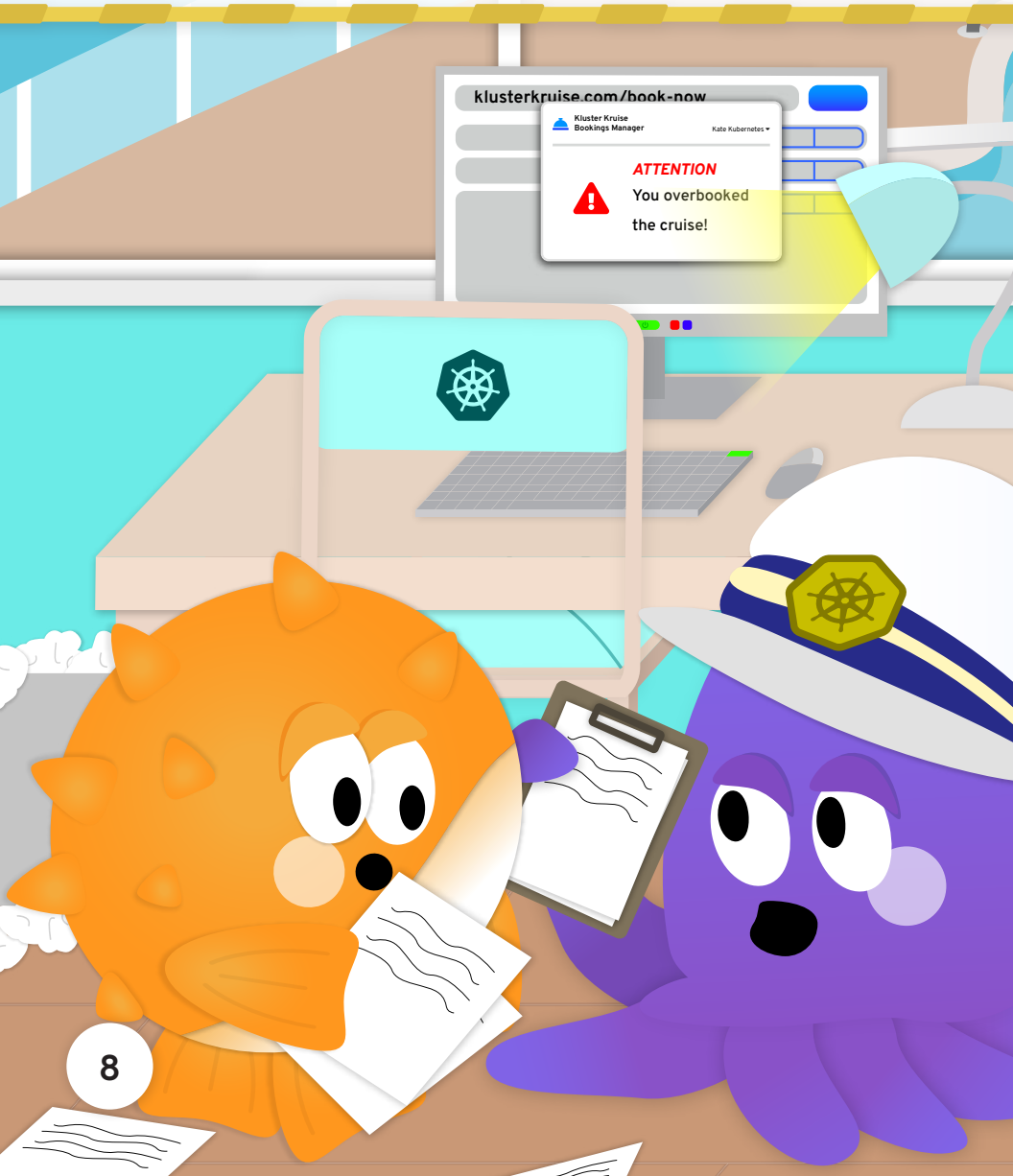
To draw connections to Kubernetes concepts in this book, understanding the various metaphors is important.

Namespaces

A cluster can have multiple namespaces, which can segment your services into manageable chunks.



Over time, more special guests, like Kings and Queens and even very famous musicians, began reserving rooms aboard Kluster Kruise. All of these special guests could be particular and demanding. Even with Cici's help, Kate couldn't manage all of their needs! Cici would have to give her every special instruction from every different guest one by one! They both knew it could never work this way forever.

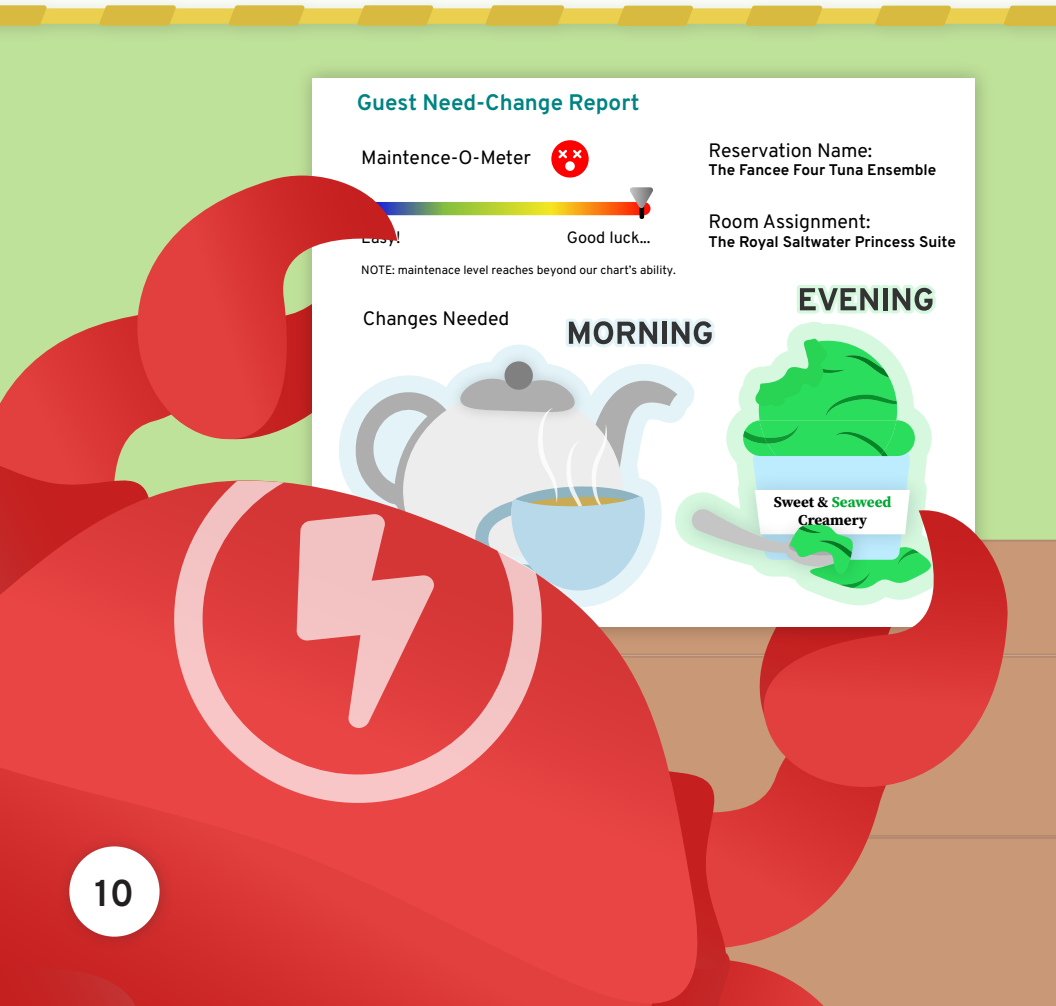


Application Maintenance

Application maintenance of complex applications is difficult. How can application maintenance be scaled? Hire more System Administrators to help OR automate!

One day, Cici was feeling exceptionally overwhelmed by her demanding guests. She had four special guests and each one required a padlocked safe to store their valuables in. They also required coffee delivered in the morning and ice cream delivered in the evening. If the guests needed to upgrade or move rooms, Cici needed to ensure that their safes were also moved, and that they still received their coffee and their ice cream. But then she got a genius idea!

She wrote out the instructions for the special guests and passed them out to four of the crabs. She enlisted them to take care of every instruction on her list. They were thrilled to have new jobs! Every day, the crabs would follow Cici's instructions precisely.

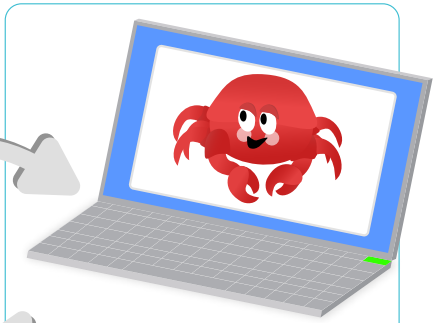


What's an Operator?

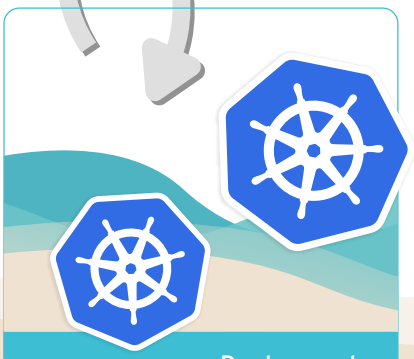
An Operator is a piece of software that extends Kubernetes to understand a specific application's operational requirements, such as how to install it, how to scale it, how it fails over, and how it's upgraded.

This means you can ship an entire distributed system over to someone and have them deploy it perfectly, without being an expert in every detail.

Embed operator knowledge from the experts



Operator v1.1.2



Deployments
Stateful Sets
Autoscalers
Secrets
Config Maps

For weeks, the crabs used Cici's instructions to manage the guests and everything was going smoothly. With the crabs in place, Kate managed all of her bookings without having to worry about any of the special requirements of her demanding guests, and Cici didn't feel so overwhelmed all the time. She could finally start to relax and take some time for herself!

Operators Controlling Applications

Operators can be installed for all Namespaces across the cluster or within specific namespaces. Not all Operators support each of these installation methods.

Cici was thrilled, but she wanted to make it even easier to let the crabs know about changes to their daily instructions. She developed the seagull notification system. Each time she made a change to the instructions, she sent a flock of seagulls to notify the crabs. The crabs listened to the seagulls and made the necessary changes automatically. It was so simple! Cici loved how much easier her life was becoming.

Upgrade Strategy

The upgrade strategy determines how Operators running in namespaces are upgraded when new versions are released. The upgrade is either automatic or manual. When the strategy is manual, approval is needed for the upgrade to occur.

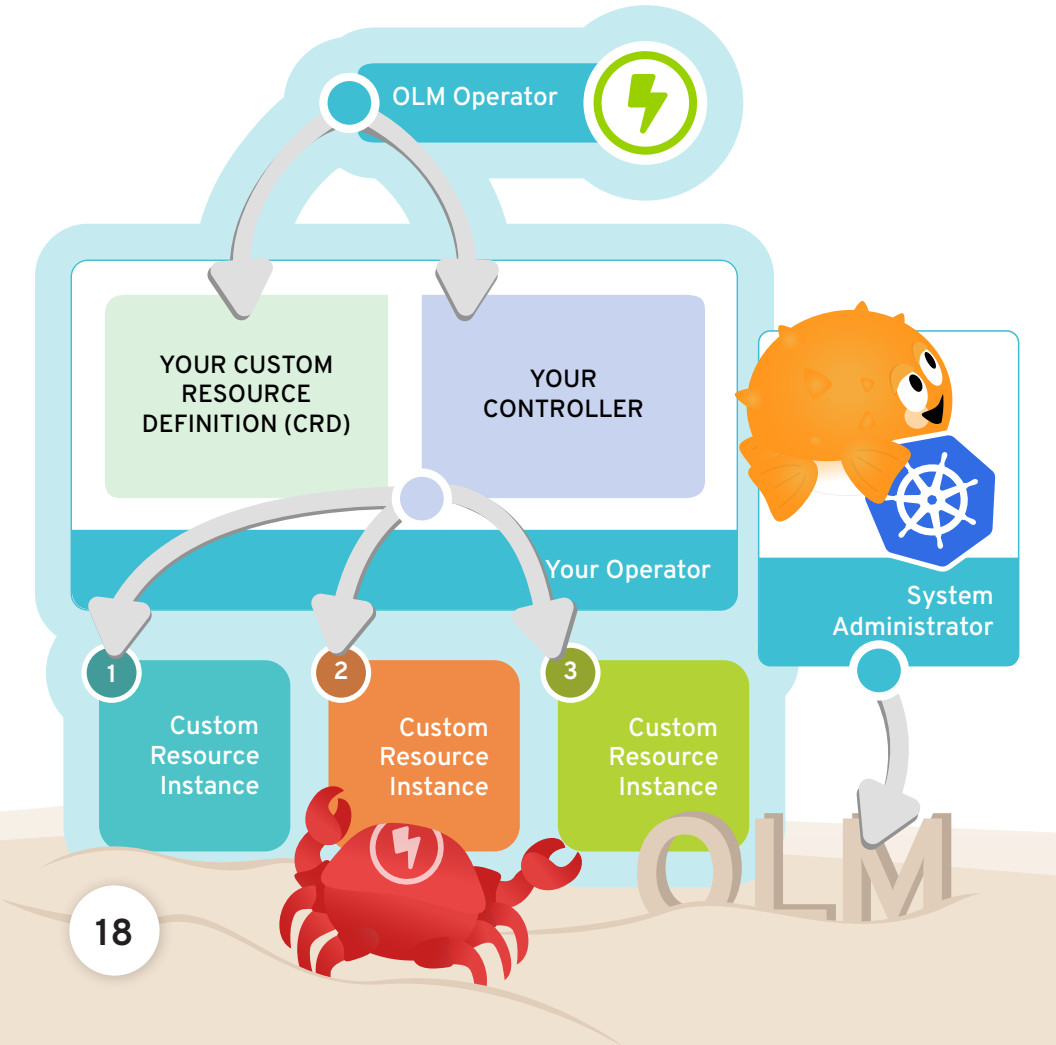
One day, Cici decided to upgrade all of the linens in every guest cabin. She also changed the brand of hot tea that was offered. "All of my guests will love this!" she thought. She updated the instructions and sent the seagulls to notify the crabs. The crabs automatically updated their routines by changing the linens, the tea, and more. But…

Suddenly Cici was receiving angry calls from two of her more difficult guests. The new linens were too scratchy! The new tea was too spicy! These guests didn't accept the new changes and they were upset. Cici realized that some of her guests should not receive updated instructions automatically, and so she told the crabs who managed those rooms to ignore the seagulls. She would handle any changes required for those guests manually. She was still saving a ton of time with the automatic upgrade system, even if she needed to handle some things on her own.

Operator Lifecycle Management (OLM)

The OLM aids System Administrators in installing, upgrading, and granting access to Operators running on their clusters.

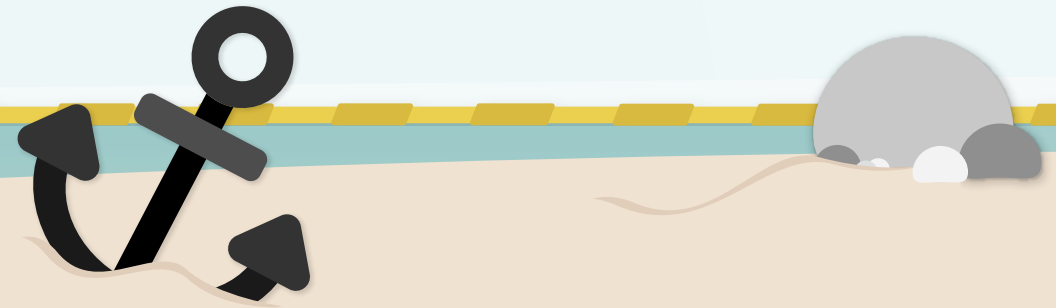
The OLM supports role-based access control (RBAC) for certain teams to use certain Operators. It also helps you install, upgrade, and manage the lifecycle of the Operators and associated services running on your clusters.



With the crabs and the seagulls handling so much of Cici's workload, she was finally able to take a break! She left work at a reasonable hour and took her first vacation in years!

Kate and Cici were overjoyed, and all of the guests on Kluster Kruise were so happy with their experiences that they left 5 star online reviews, making Kluster Kruise the highest-rated octopus-owned cruise line in history.

Explore the fascinating world of Operators as you jet-set off to the Island of Automation with Opie, Cici, Kate, and the Kluster Kruise's all-star passengers on board.



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