



# DEMYSTIFYING OPENSHIFT

and Kubernetes

# WHAT IS A CONTAINER?



## CONTAINERS

A software container bundles software and its essentials for consistent performance. It's lighter than a virtual machine and ensures isolated, reliable operation.



# ABOUT THE PROJECT

1-12



## Building your Lego Set

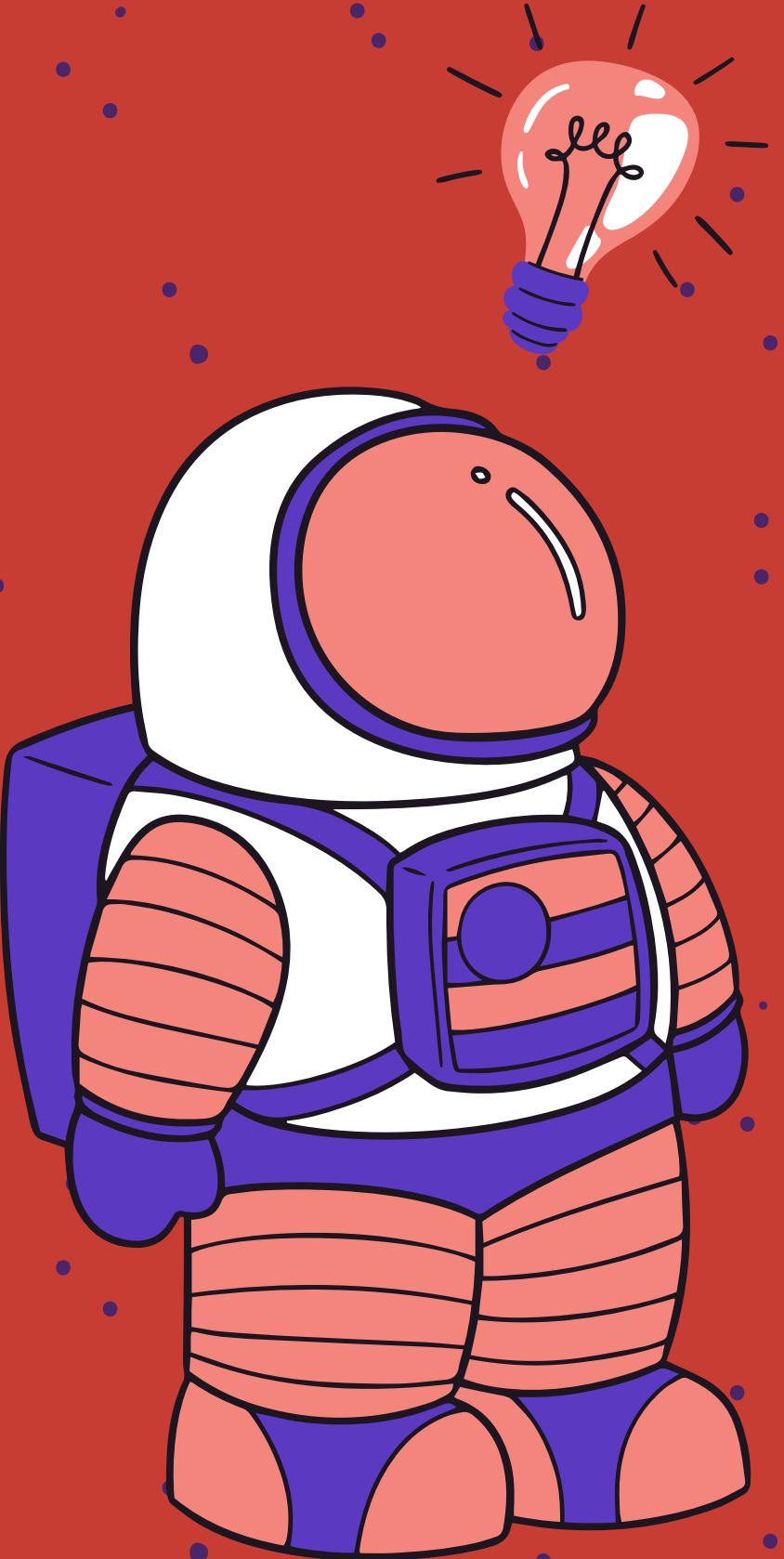
Each Page will have its own function that will correspond to a building instruction. For Example the current slide will go through Instructions

1-12.

If you are curious where to start Always look for the wrench.

1-12





# OPENShift IS DIFFICULT?

The concepts may seem complex and the barriers to entry intimidating, today we're committed to overcoming these hurdles together.

# LEGO CAR



## THE INSTRUCTION MANUAL

### (Master Nodes)

This is the instruction booklet that came with your LEGO set. It guides how to build and maintain the car.

## THE LEGO BUILDER

### (Worker Nodes)

This is you, or whoever is following the instructions to build and update the car.

## CAR COMPONENTS

### (Pods)

your LEGO car is made of separate sections (engine, cabin, trunk). Each of these is like a pod in the cluster. Each section (pod) can be built with several LEGO bricks (containers)

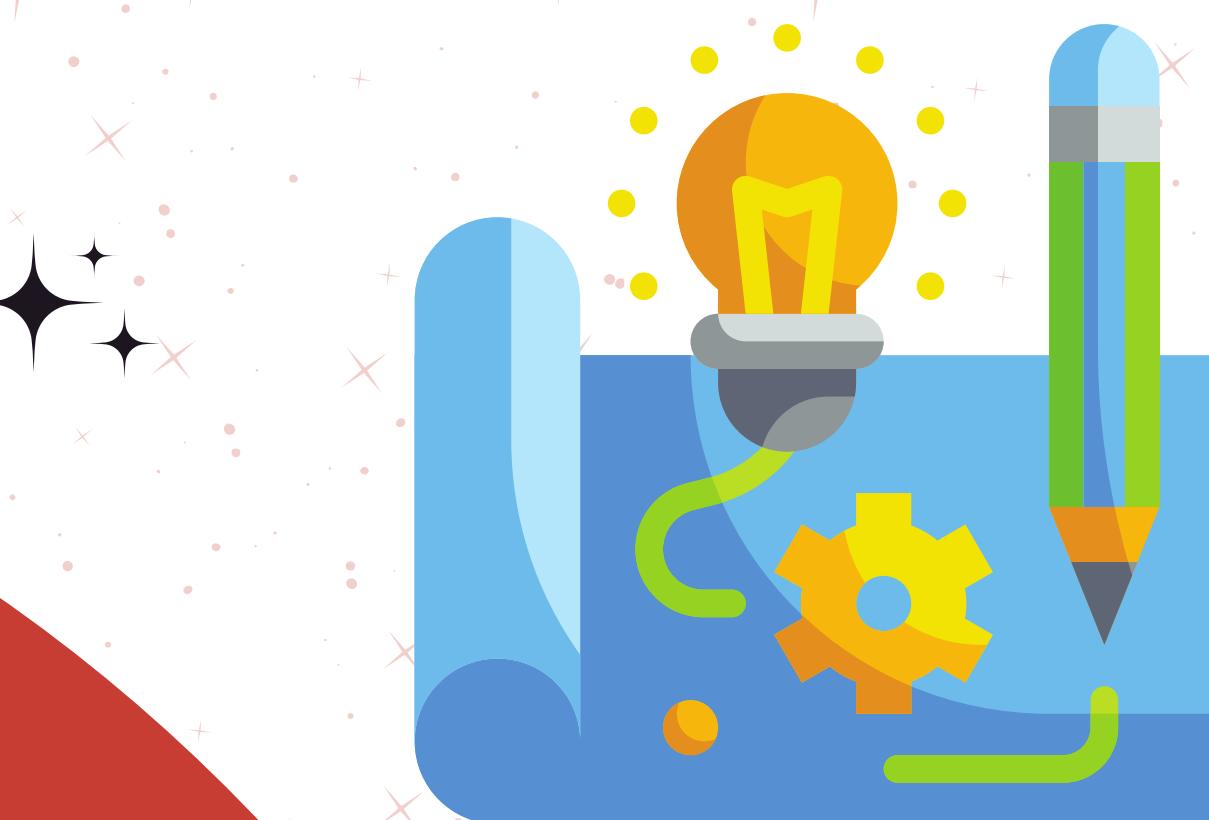
A cartoon illustration of a boy wearing a blue cap and headphones, holding a manual with a car on the cover. He is smiling and looking towards the right. The background is white with small red stars.

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# MASTER NODE

**The Instruction Manual (Master Node) contains all the details needed to build your LEGO car from scratch**

It provides step-by-step guidance on how to put together each part of the car and how they fit together. The Master Node in Kubernetes/OpenShift contains the control plane that manages the cluster.





# INSTRUCTION MANUAL

**Directions (API Server):** Tells you (the builder) what pieces to use and where to put them.

**Blueprints (etcd):** Keeps track of what the car should look like. Assignment

**(Scheduler):** Decides who should build what part of the car. Checklist

**(Controller Manager):** Makes sure everything is built correctly and also fixes it if not.





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# THE BUILDER

You! As the Builder, Are the Worker Nodes in a  
Kubernetes Cluster

Worker nodes in a Kubernetes/OpenShift cluster do the work of running  
applications (as containers within pods), keeping them running, and  
communicating with the master node about what they're doing.



# THE

# BUILDER



1

2

3

4

## BUILDING

(Running Containers)

- You follow the instructions from the manual (Master Node) and start putting bricks (containers) together to make different parts of the car (Pods).

## UPDATING

(Running Containers)

This is you, or whoever is following the instructions to build and update the car.

## REPORTING

(Node Status)

You tell the manual (Master Node) what you've done, what you're doing, and if there's any issue with the LEGO car.

## FIXING

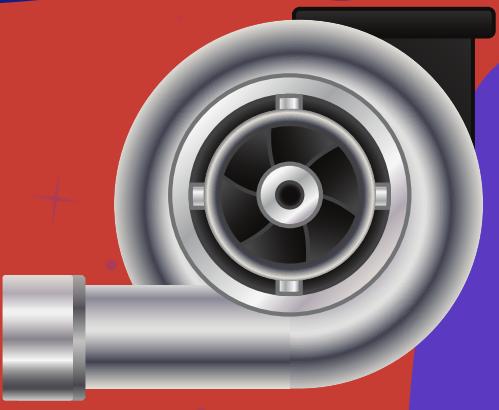
(Health Checks)

If a part of the car breaks (a pod fails), you fix it.



## Parts(Pods)

Car Sections (Pods): Different parts of the LEGO car, like the engine or the wheels, are like pods in Kubernetes or OpenShift.



## Each Component of the car (Containers)

Each part of the car is made of many LEGO bricks. These bricks are like containers in a pod.



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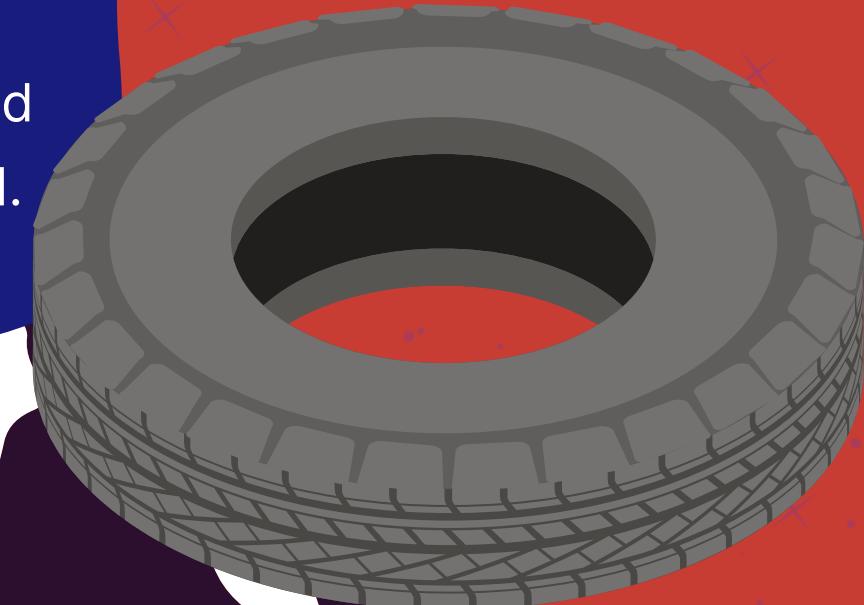
# CAR PARTS



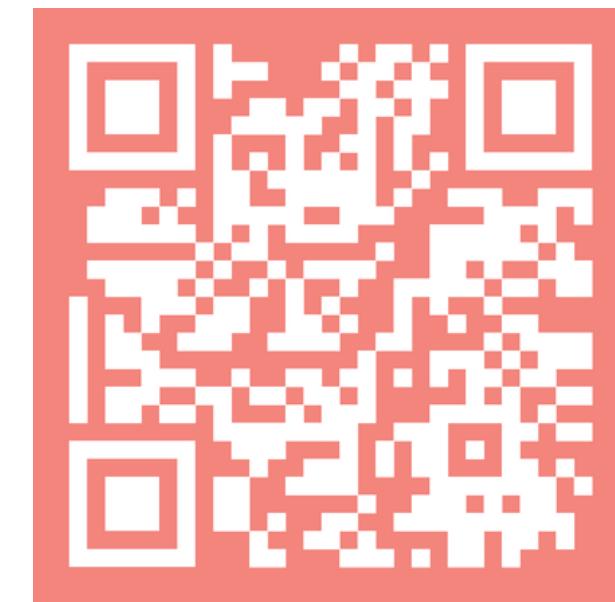
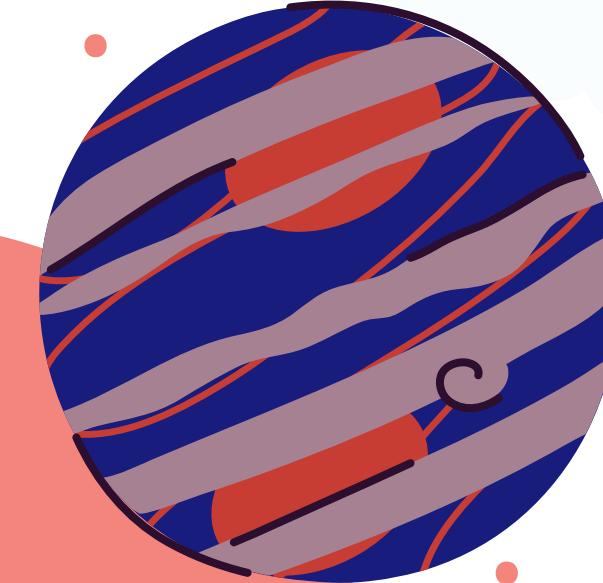
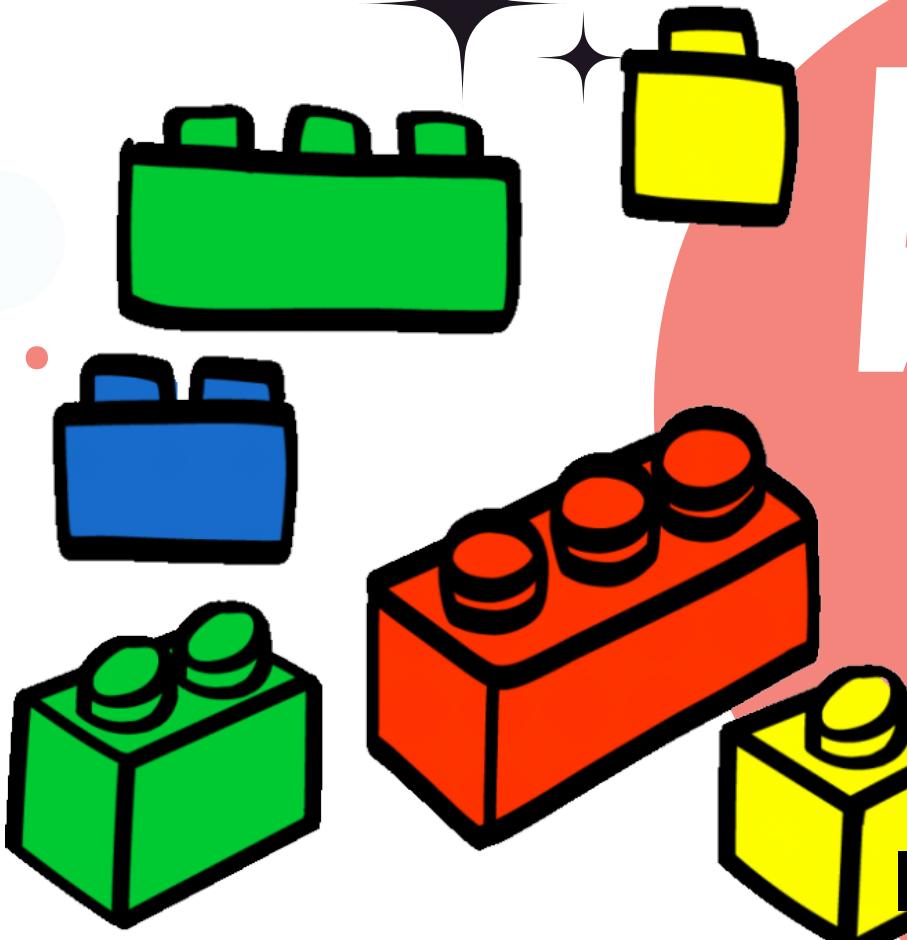
pods (like parts of a car) are small but important pieces of your Kubernetes/OpenShift cluster (the whole car). They can have one or more containers, and can be created, scaled, and deleted as needed.

## Replacing Parts (Pod Lifecycle):

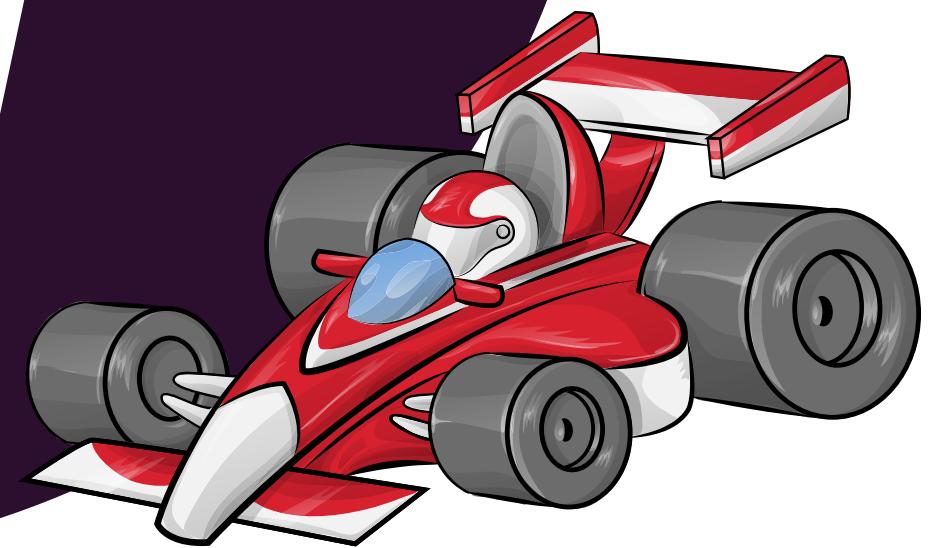
If a car part gets old or broken, you replace it. Same with pods, they can be deleted and new ones created as needed.



# VERIFY YOUR WORK?



**THANK  
YOU**



# LEARN MORE

## Get in Contact

Feel free to Reach out to see  
how we can help at

[RedHatSe@TDSynnex.com](mailto:RedHatSe@TDSynnex.com)

## Get Hands On

Start with Learning More  
about how OpenShift can  
accelerate your Business needs  
here.

<https://developers.redhat.com/learn.openshift>

## Get More Information

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