



# Containers Seus containers estão seguros?

Marcos Sungaila

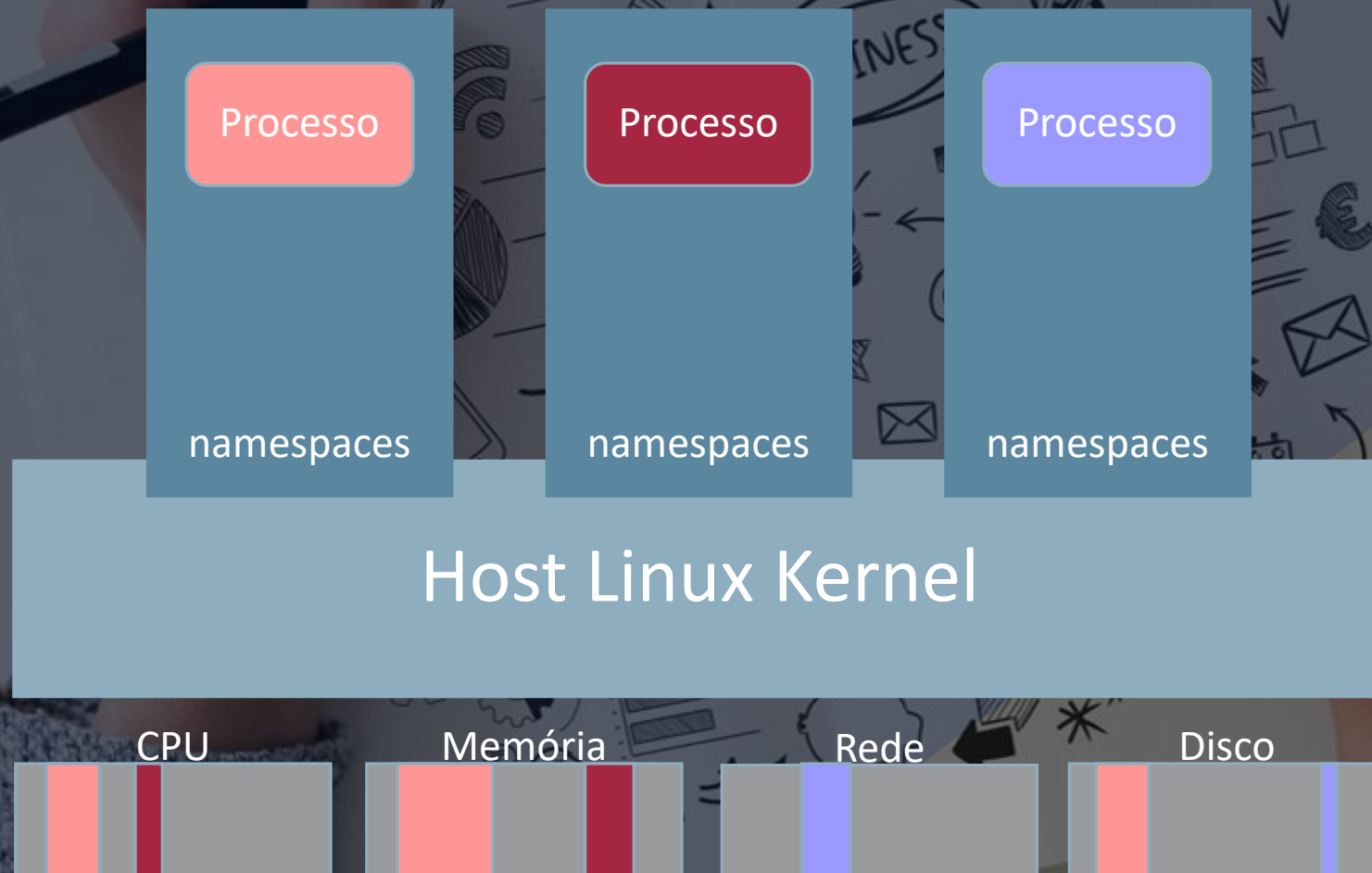




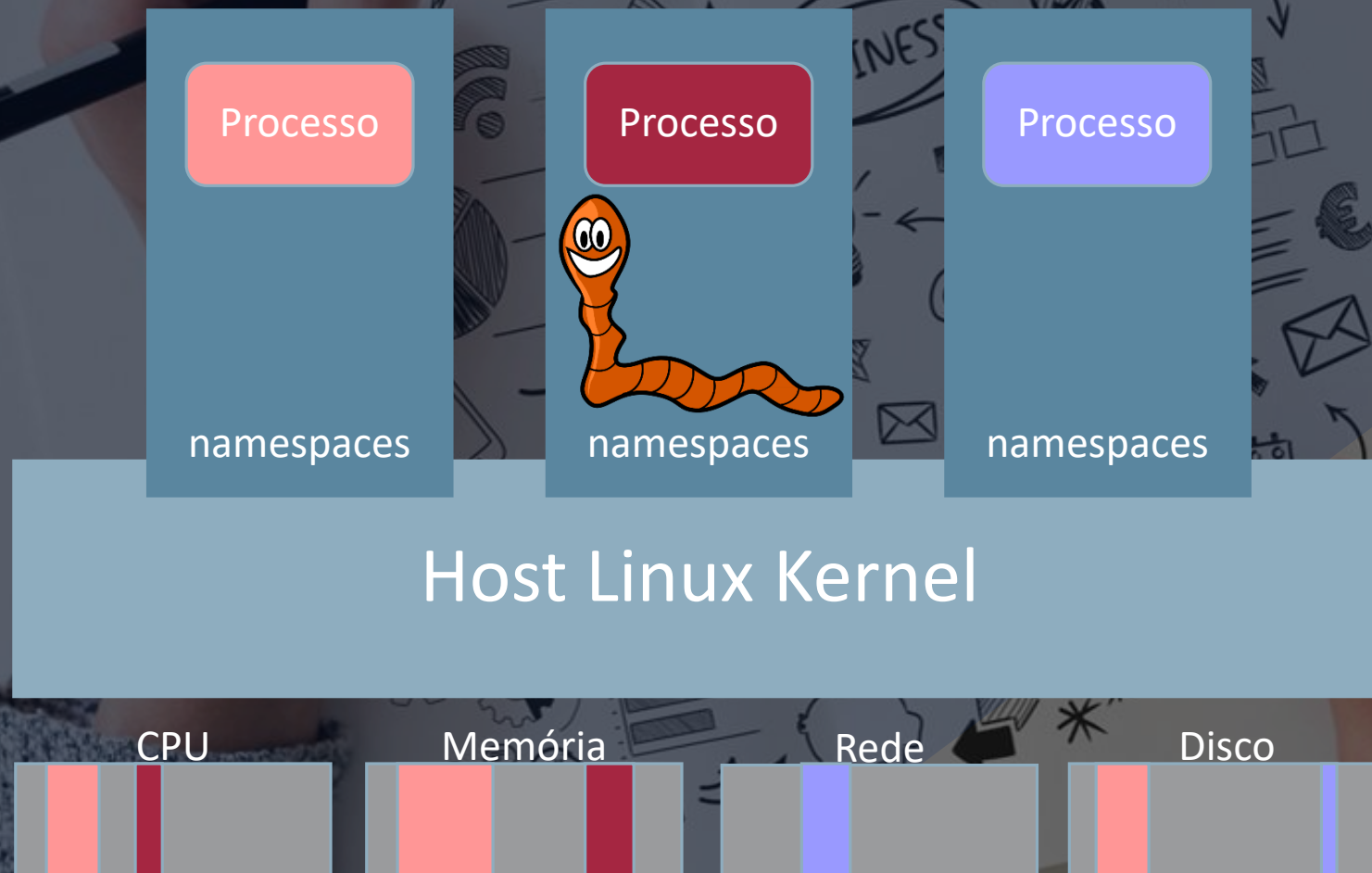




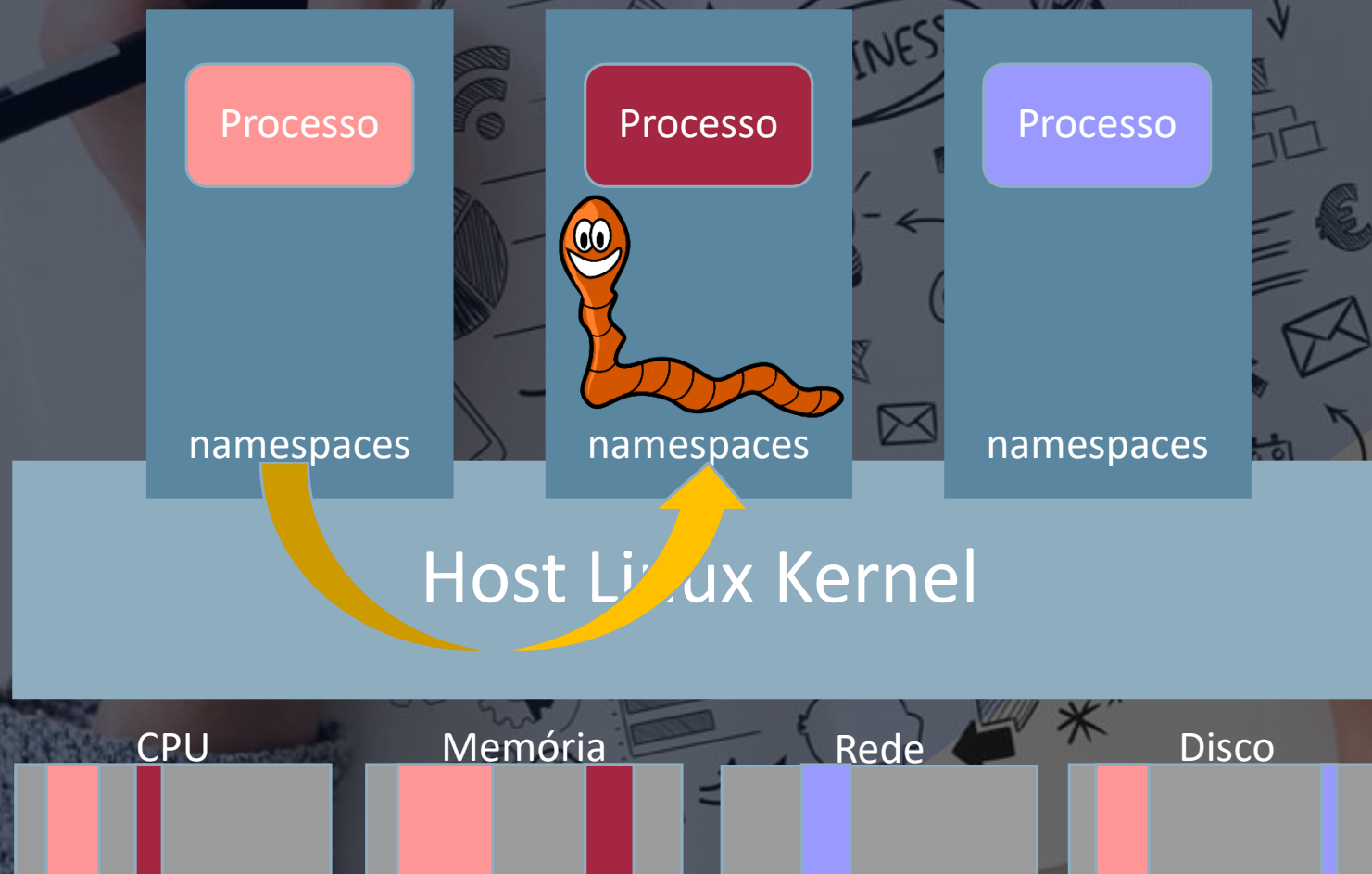
# Containers



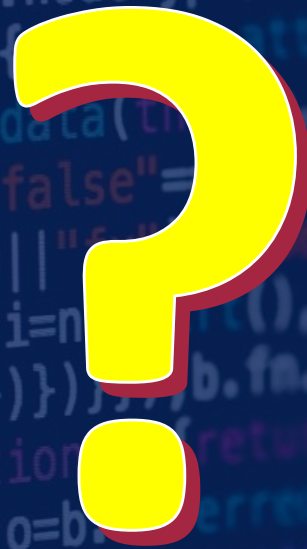
# Containers



# Só o controle por software não é suficiente!



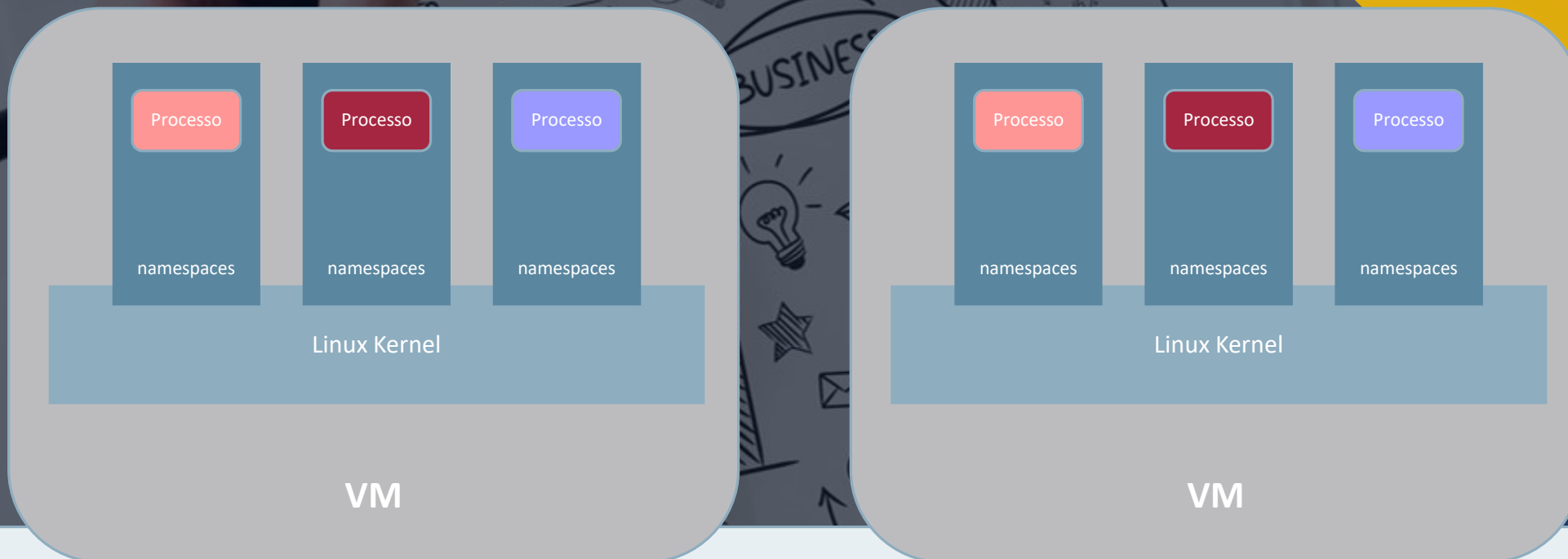






# Isolamento manual?

# Isolamento manual!



Host físico





# Kata containers

Rodar containers virtualizados de modo seguro



Baseado na apresentação

## **Kata Containers** - The way to run virtualized containers

de Sebastien Boeuf, realizada no OpenStack Summit 2018 em Vancouver

# Como surgiu?

## Intel Clear Containers

 HYPER.SH 

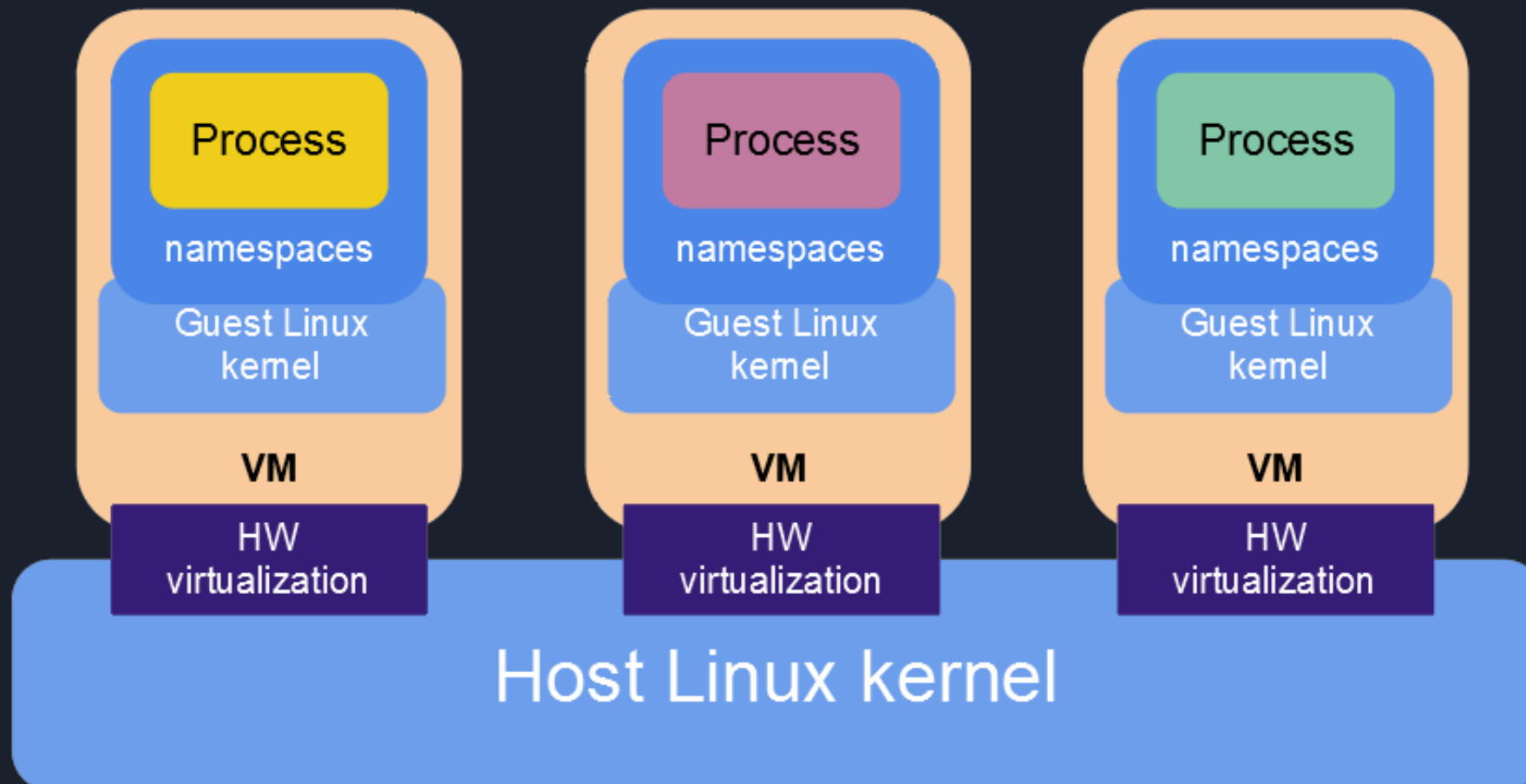
 katacontainers

Maio/2015

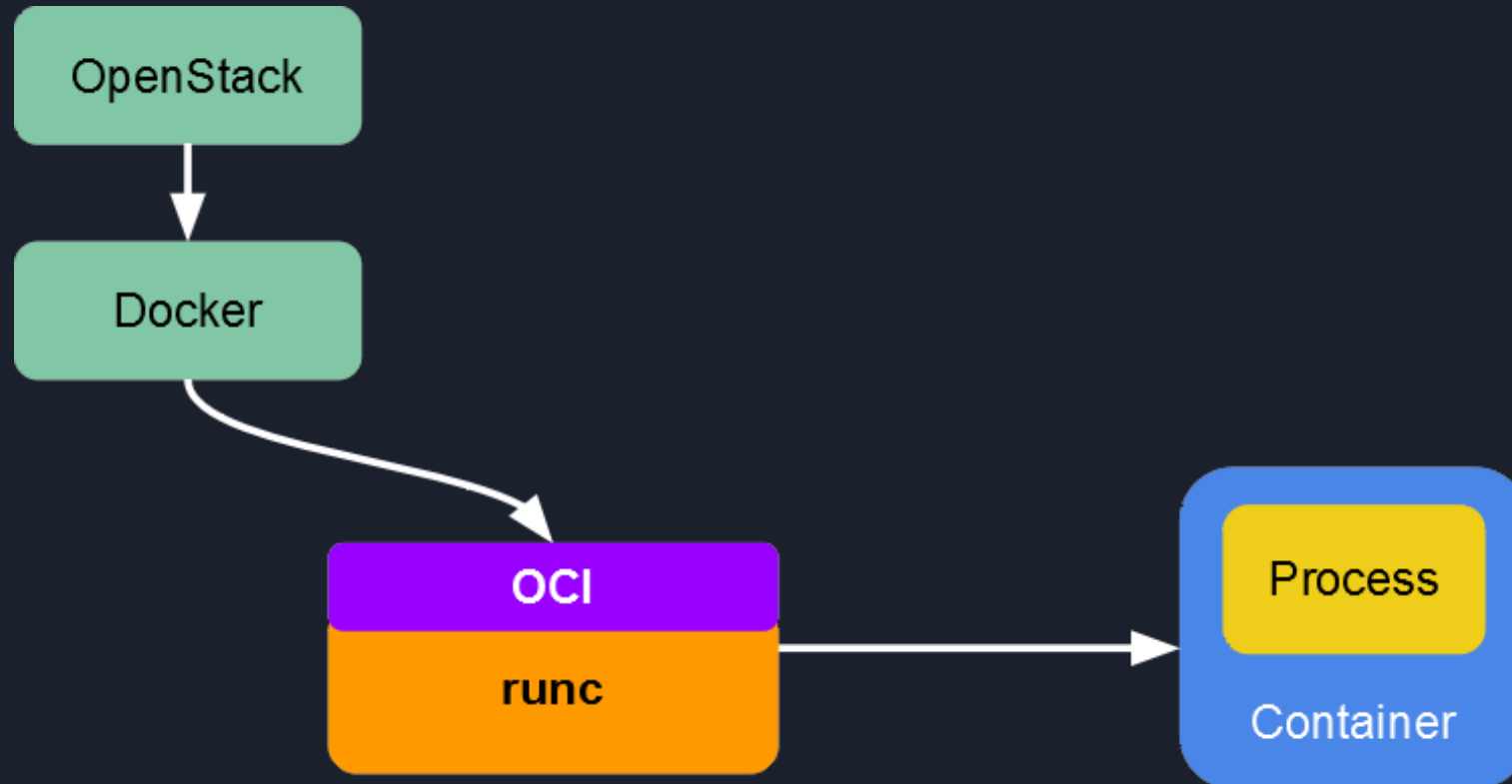
Dez/2017



# Kata Containers 101

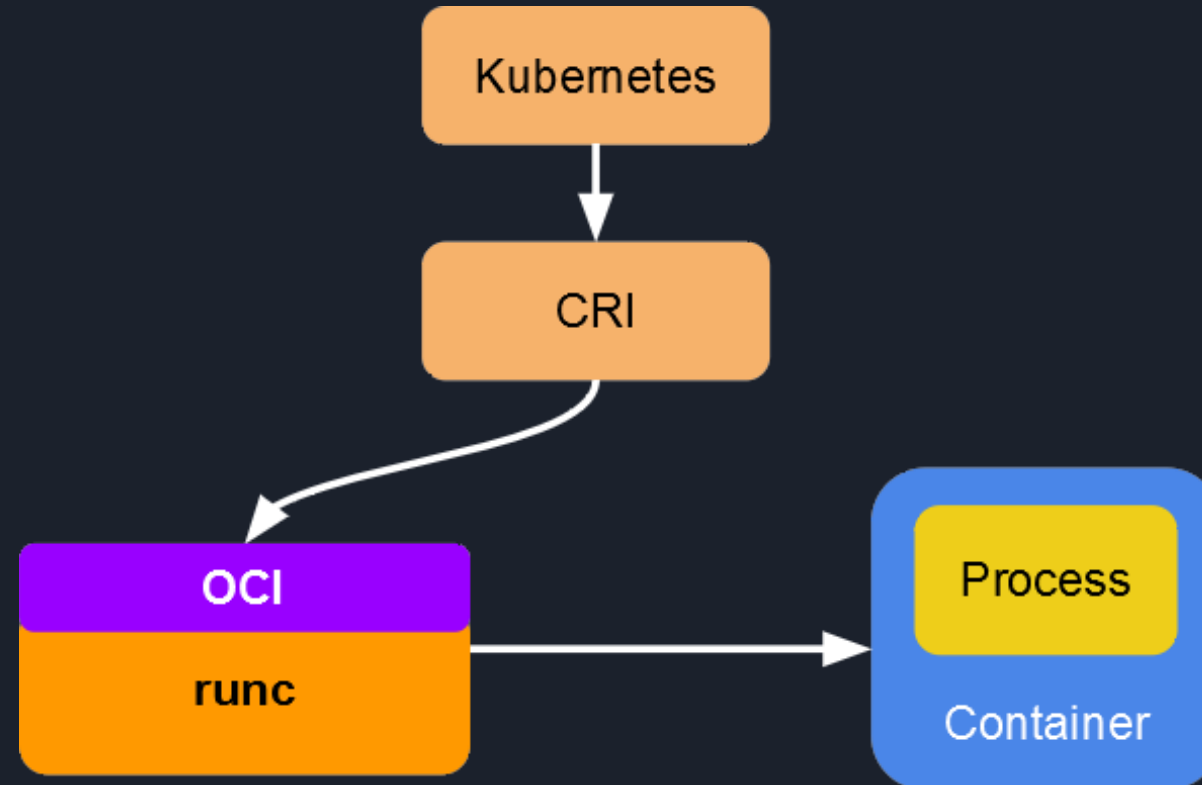


# Kata Containers 101

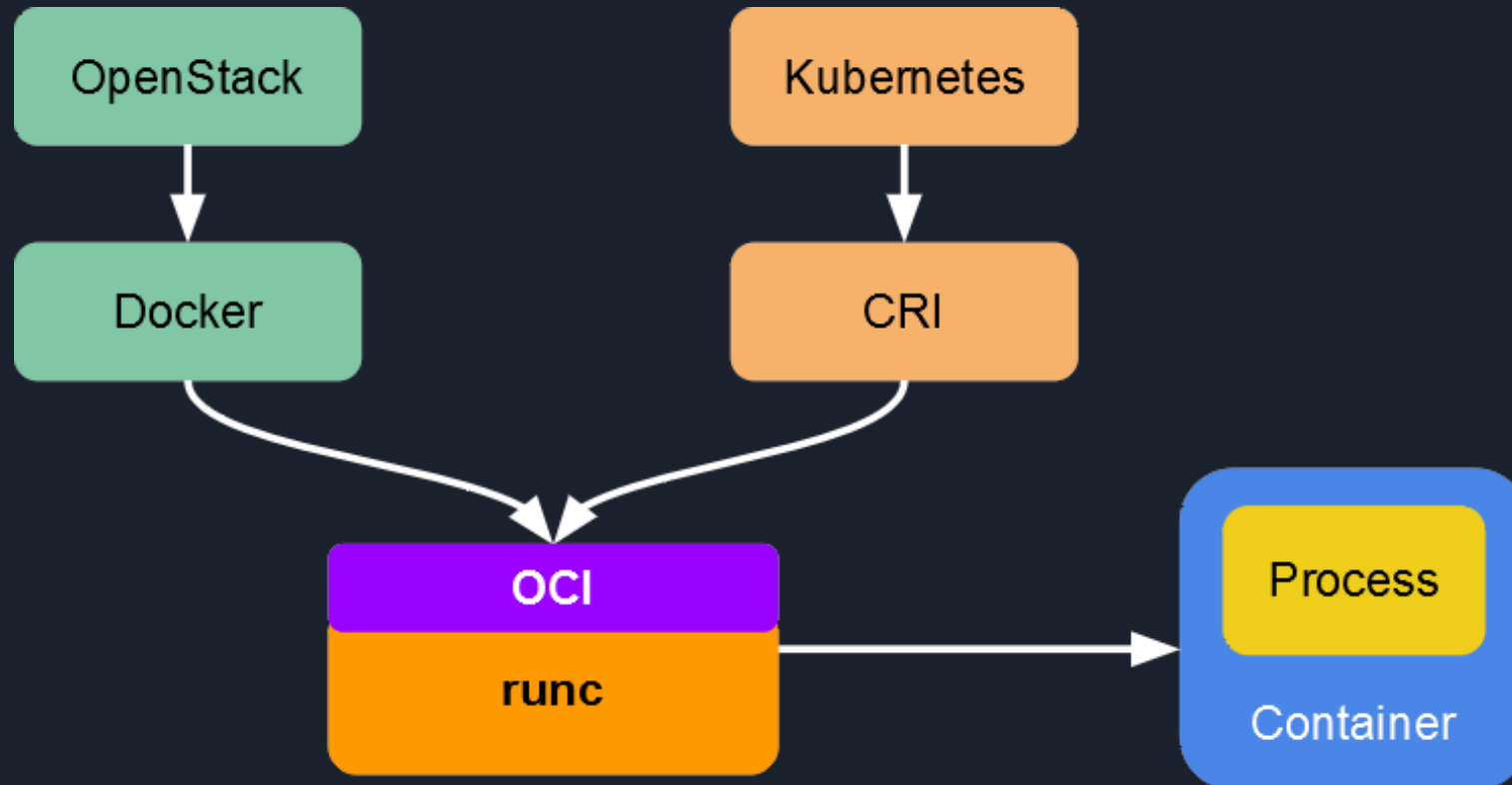




# Kata Containers 101

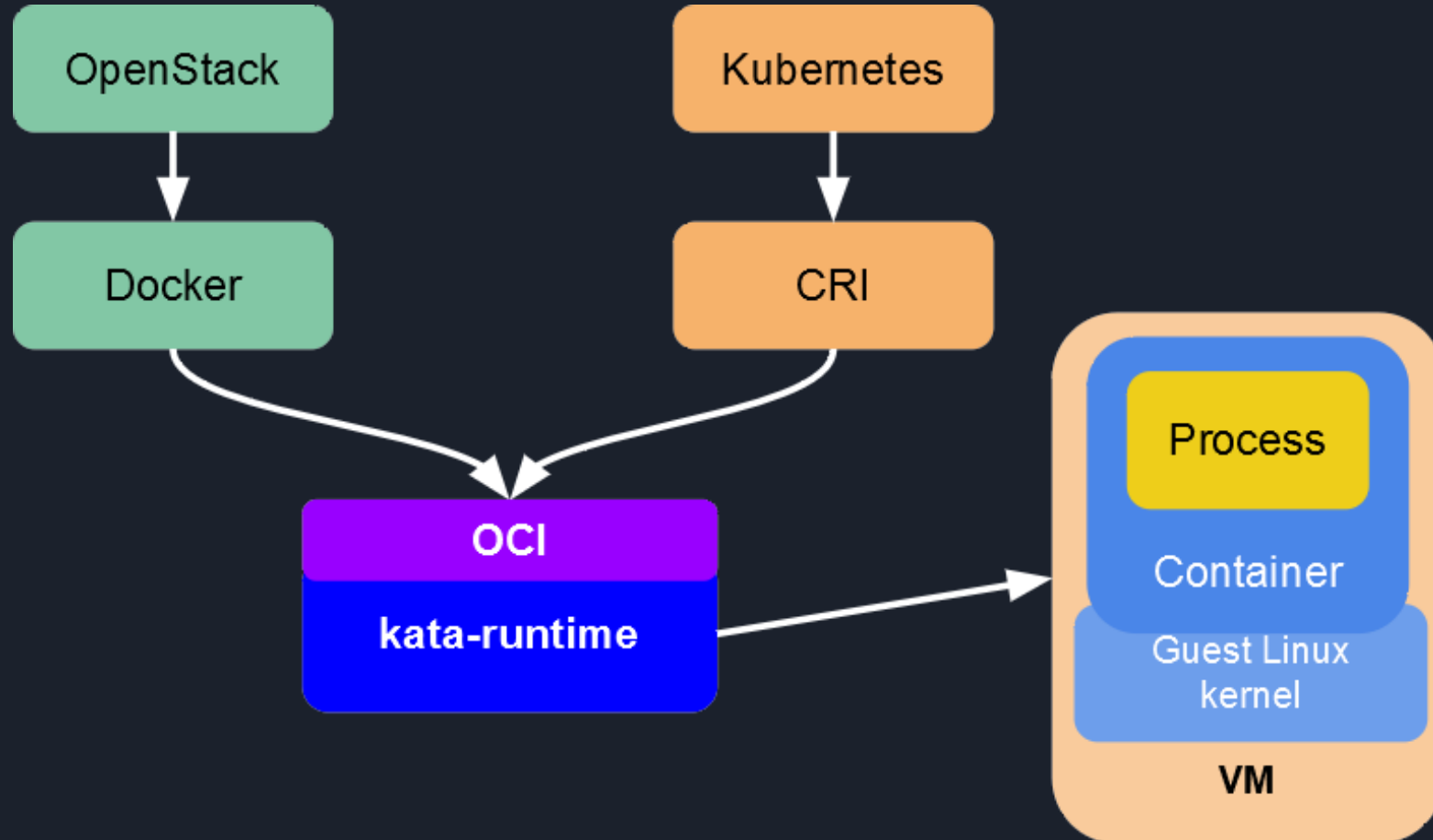


# Kata Containers 101

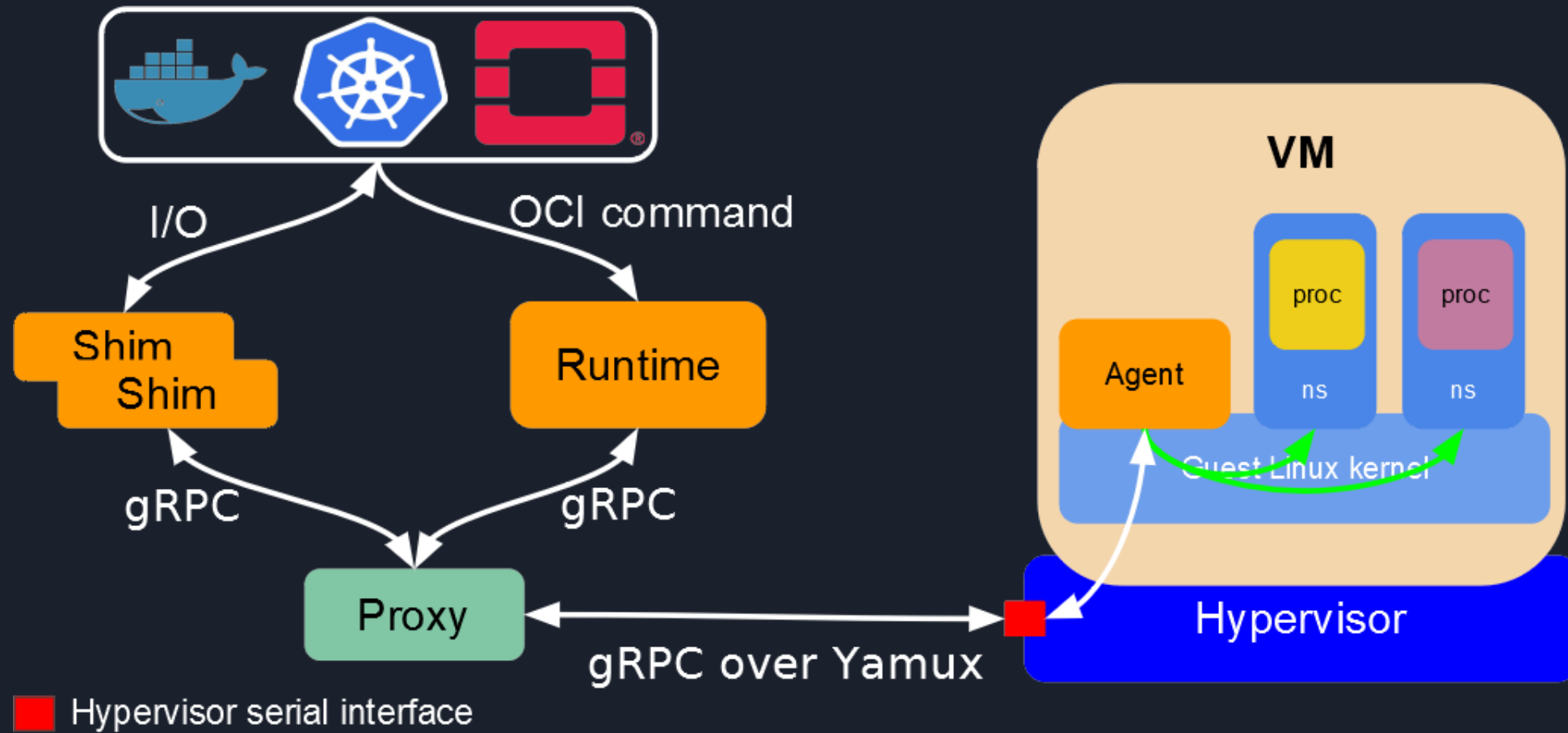




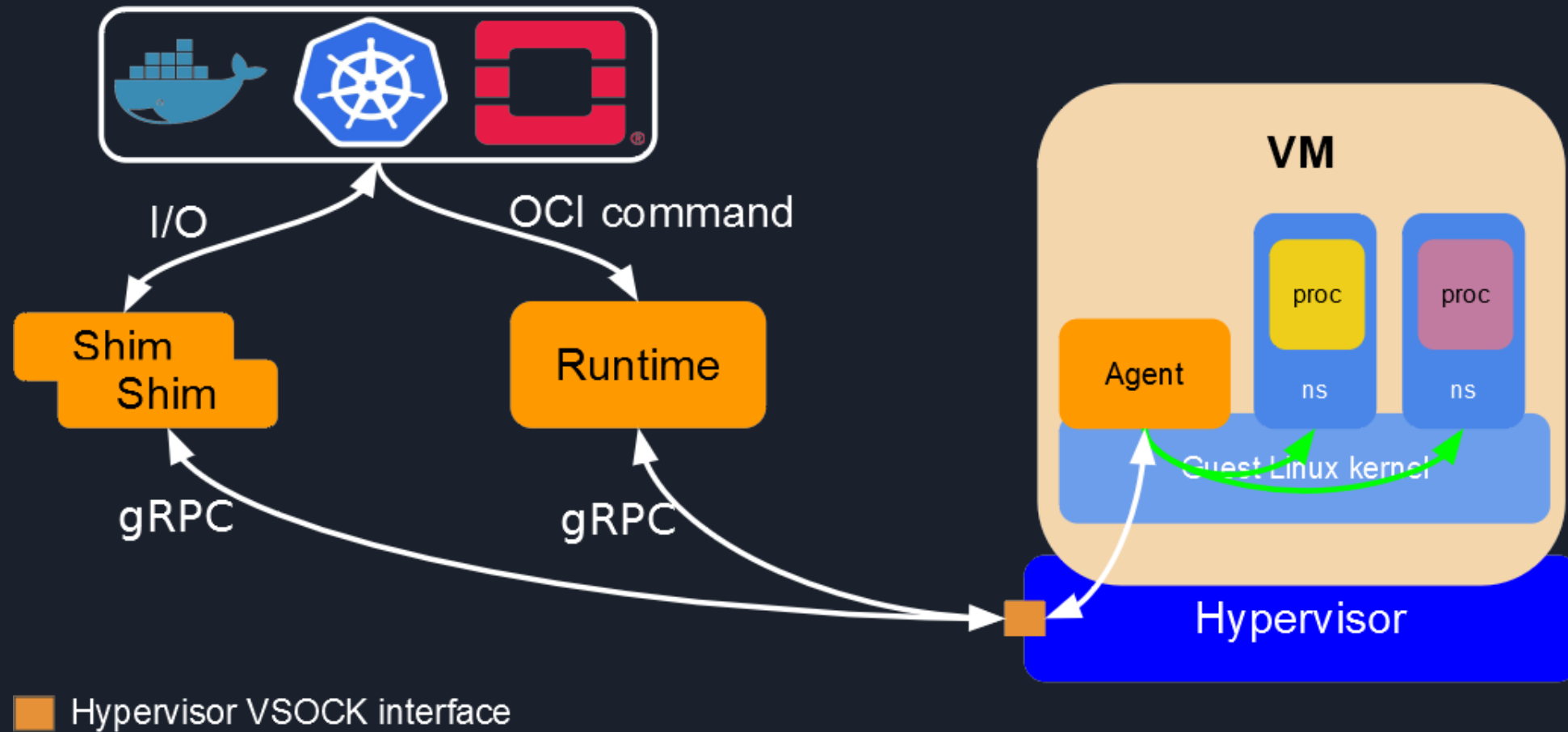
# Integração



# Arquitetura



# Arquitetura simplificada

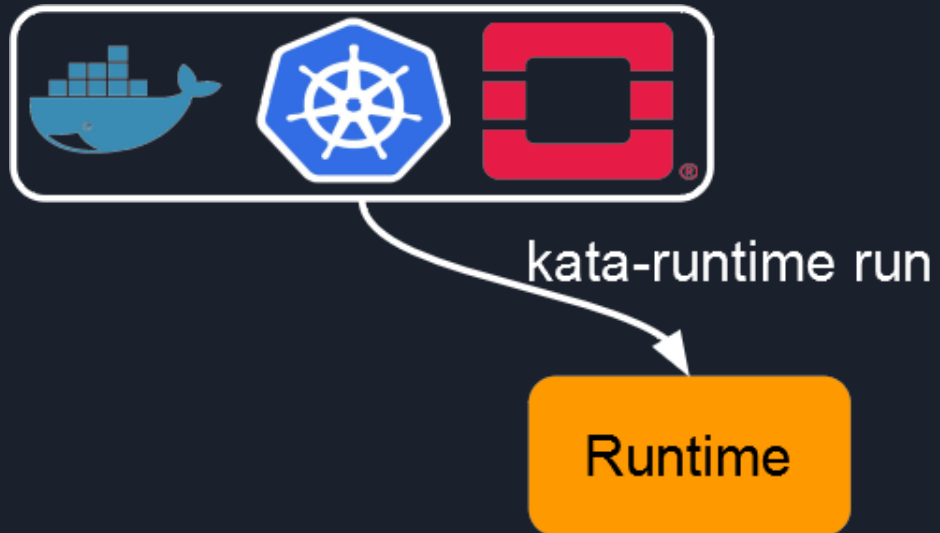




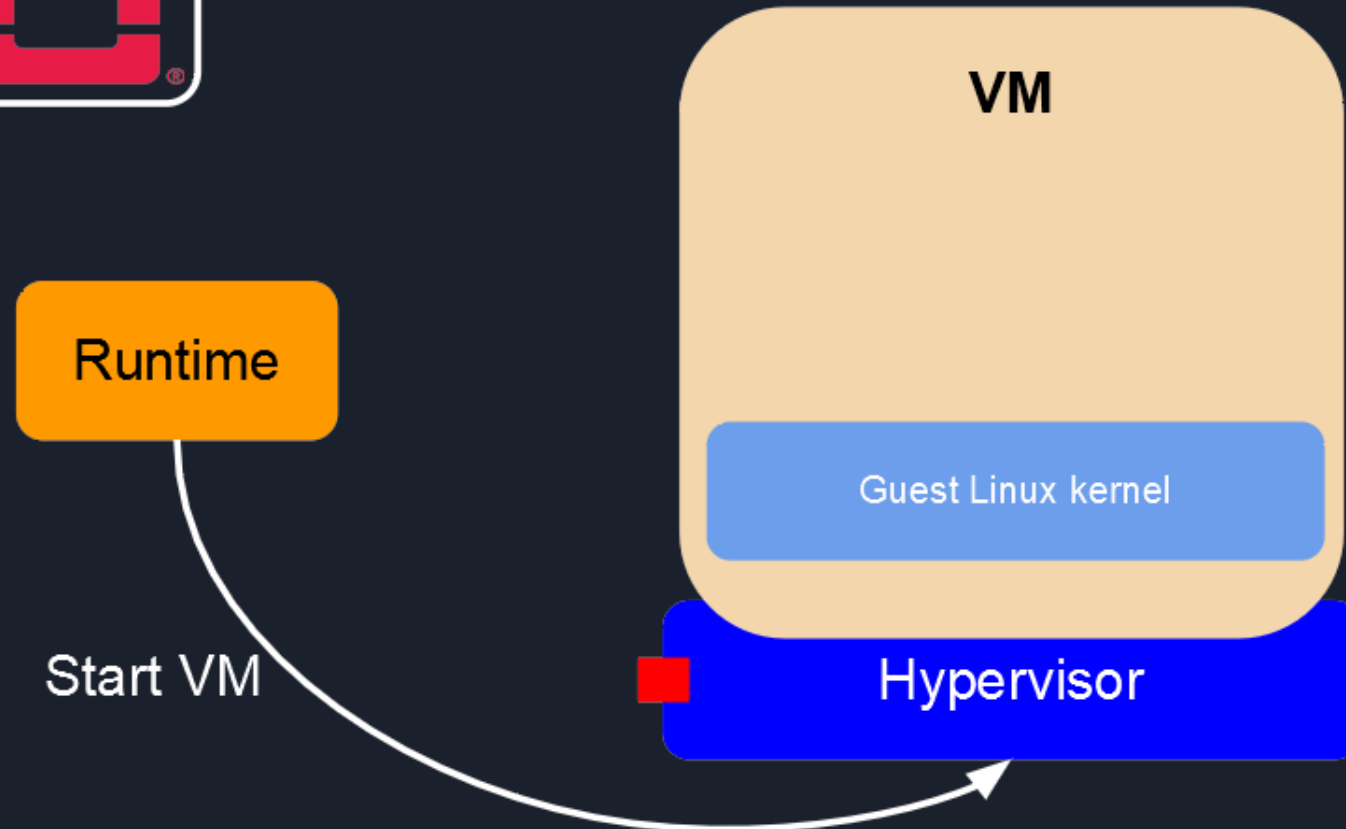
# Ciclo de vida OCI



# Ciclo de vida OCI - run



# Ciclo de vida OCI - run

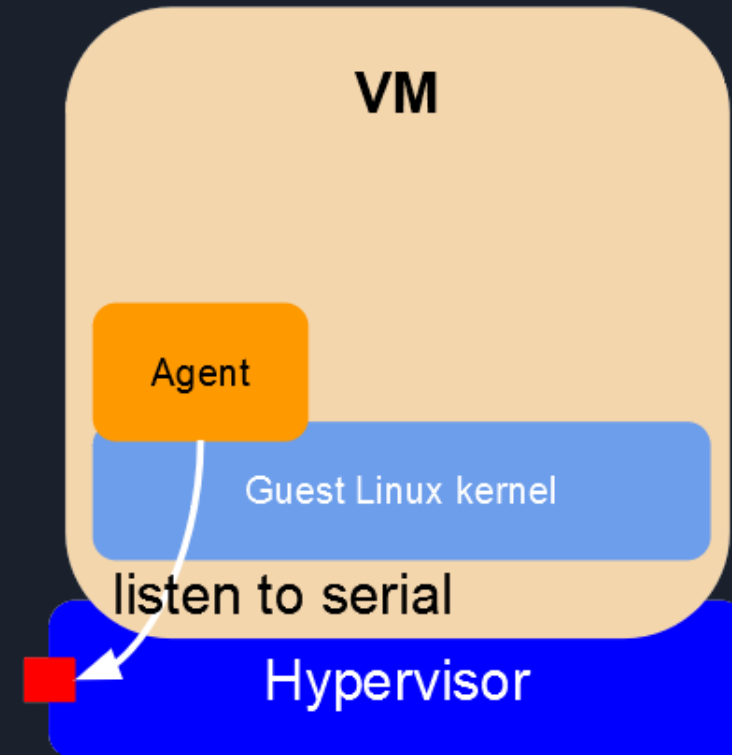




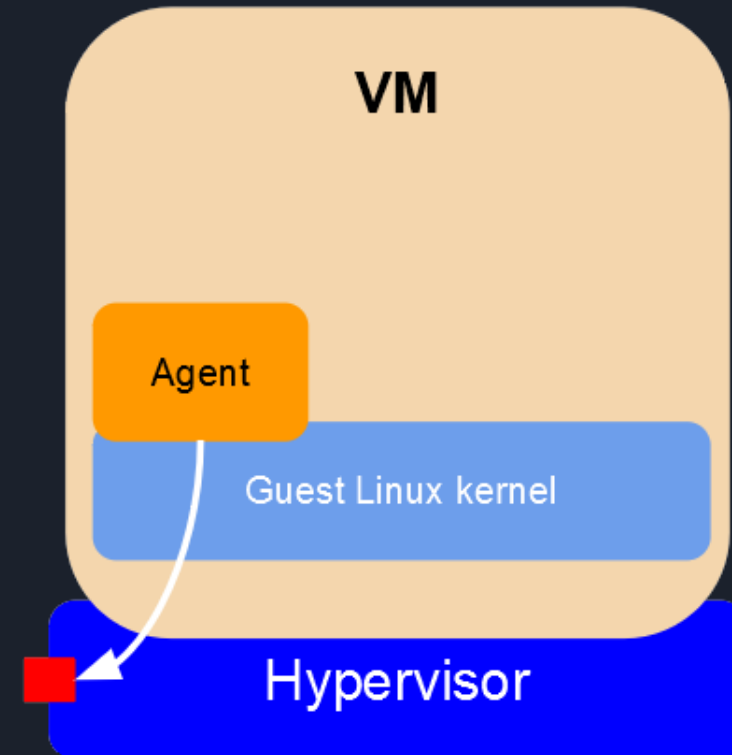
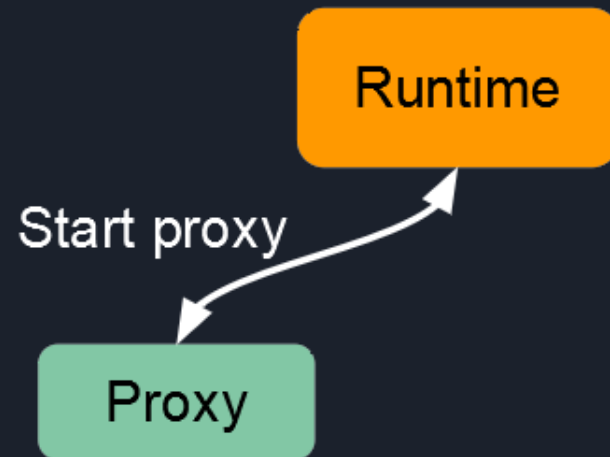
# Ciclo de vida OCI - run



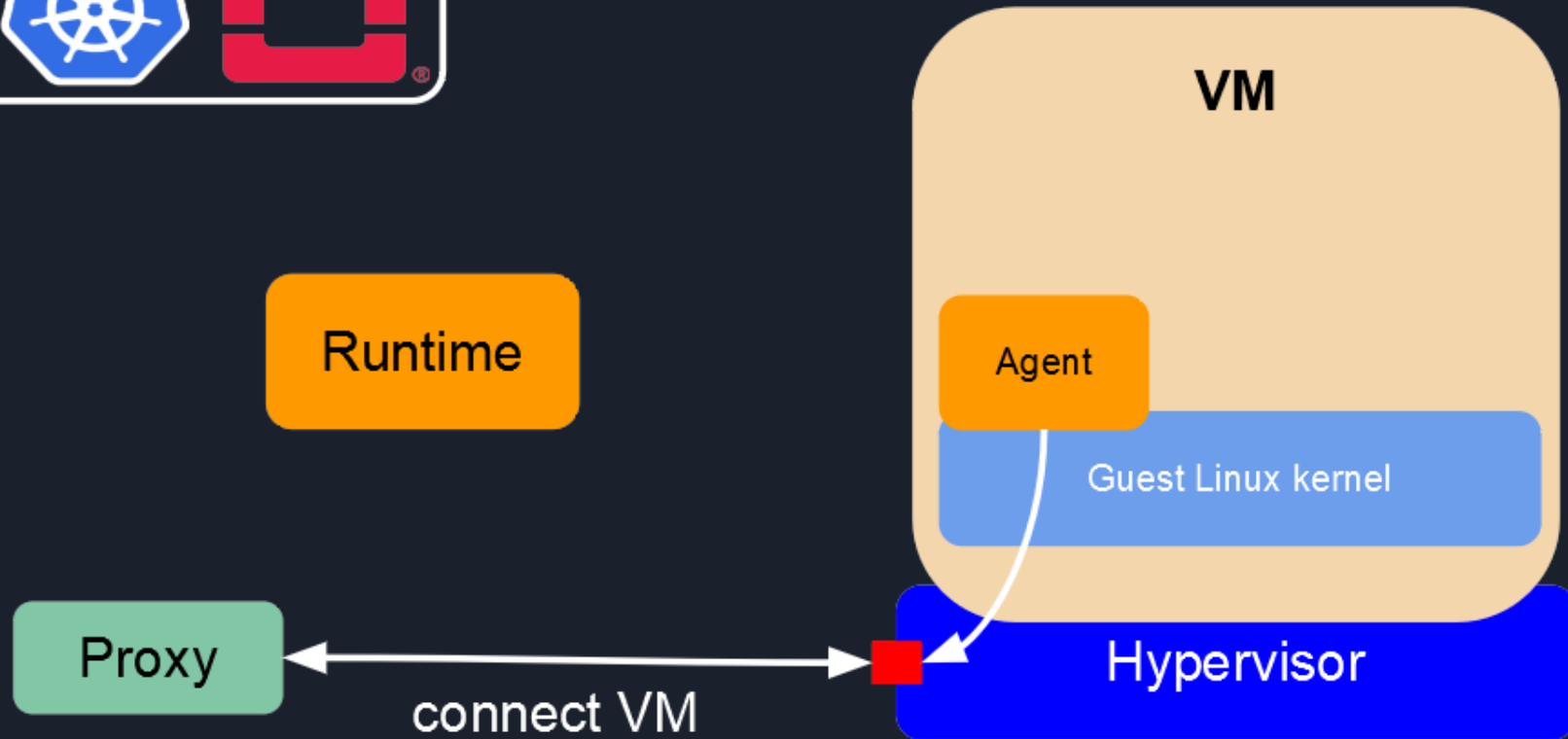
Runtime



# Ciclo de vida OCI - run

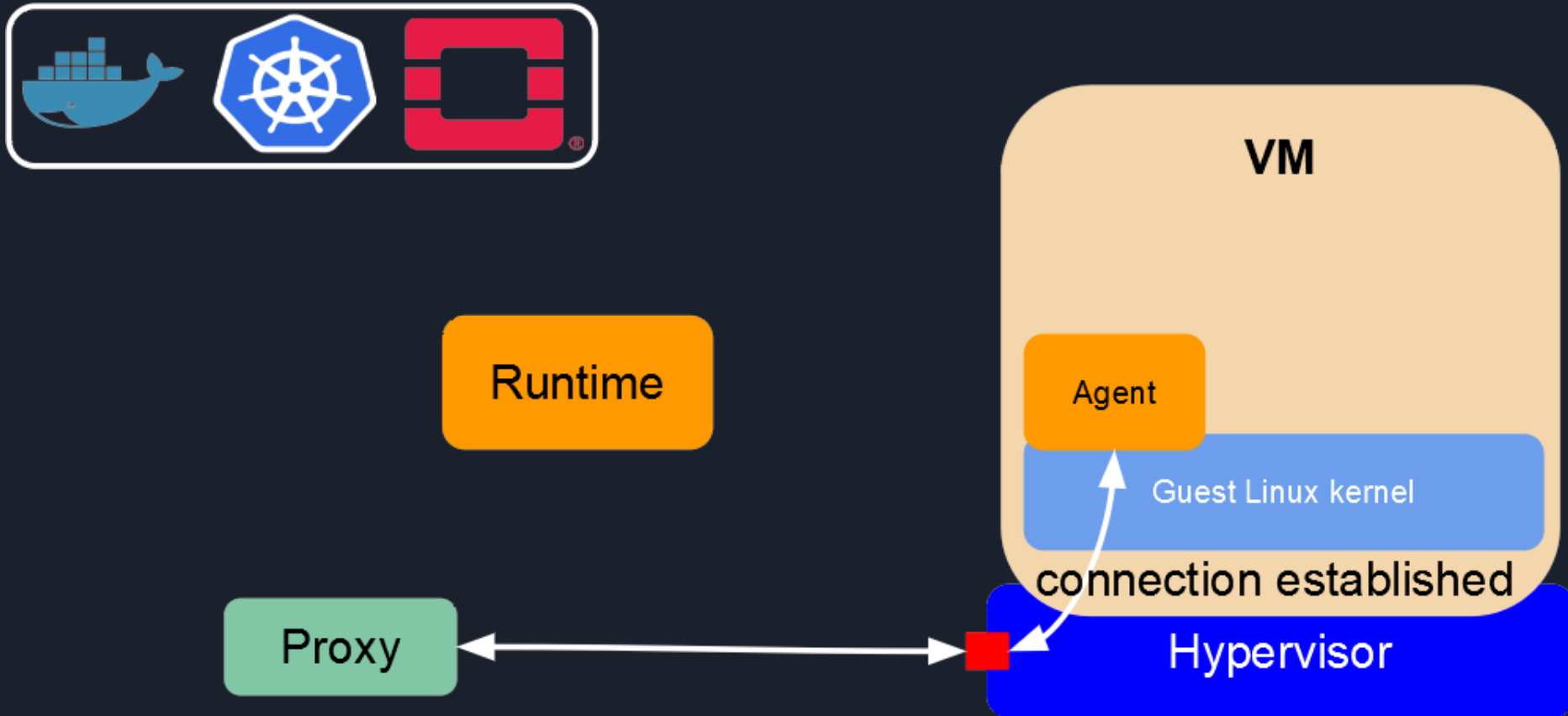


# Ciclo de vida OCI - run

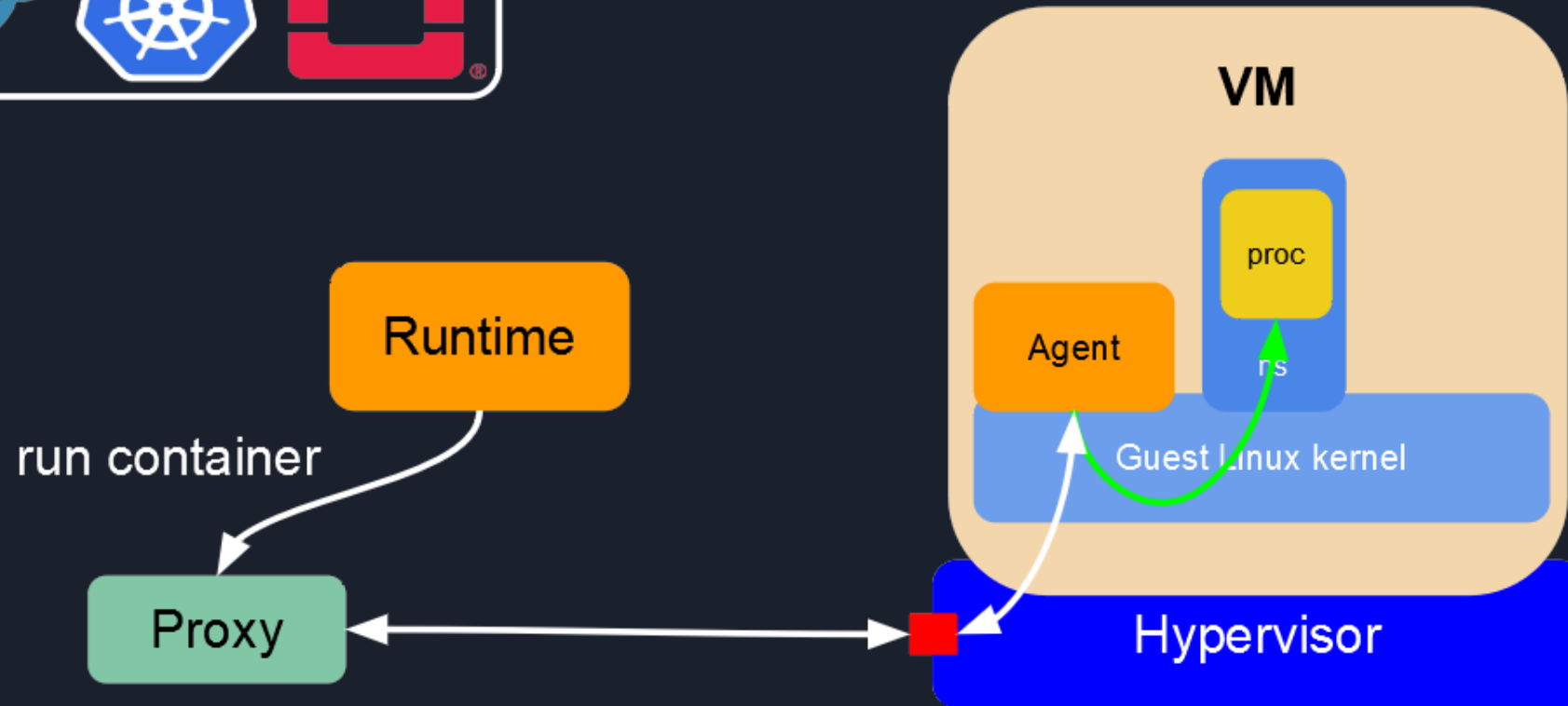




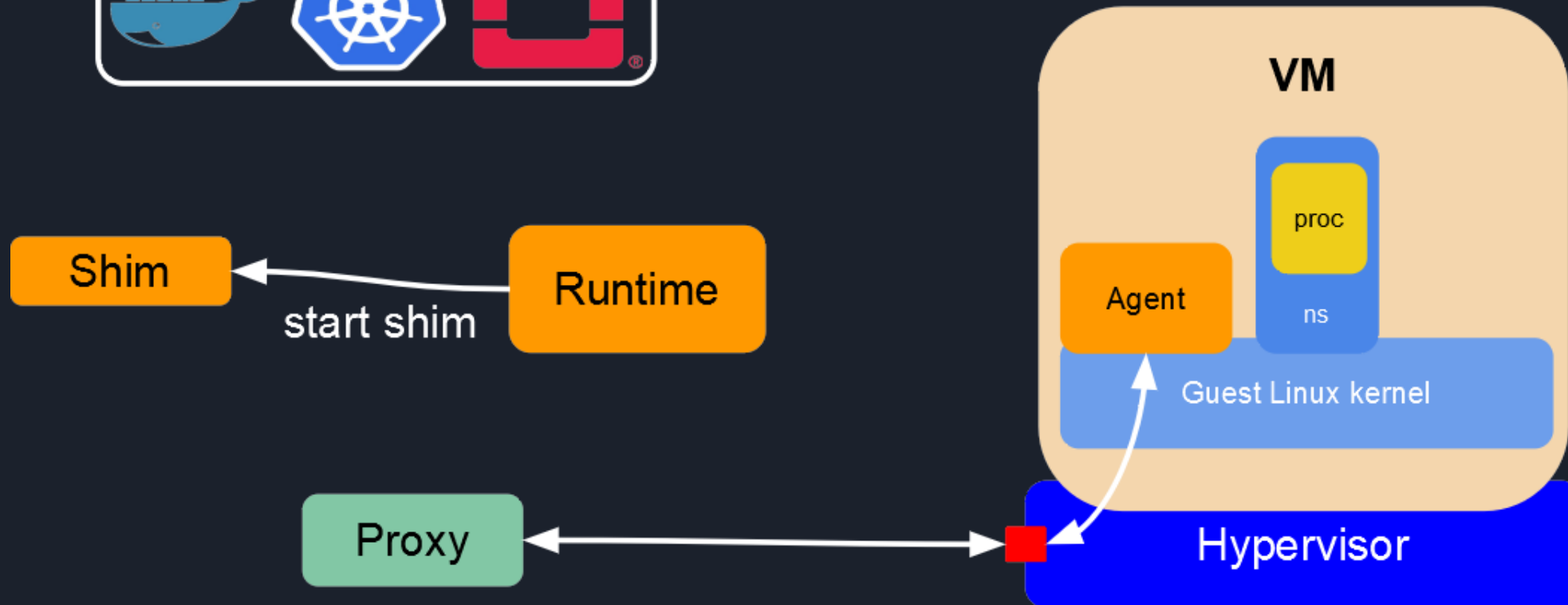
# Ciclo de vida OCI - run



# Ciclo de vida OCI - run

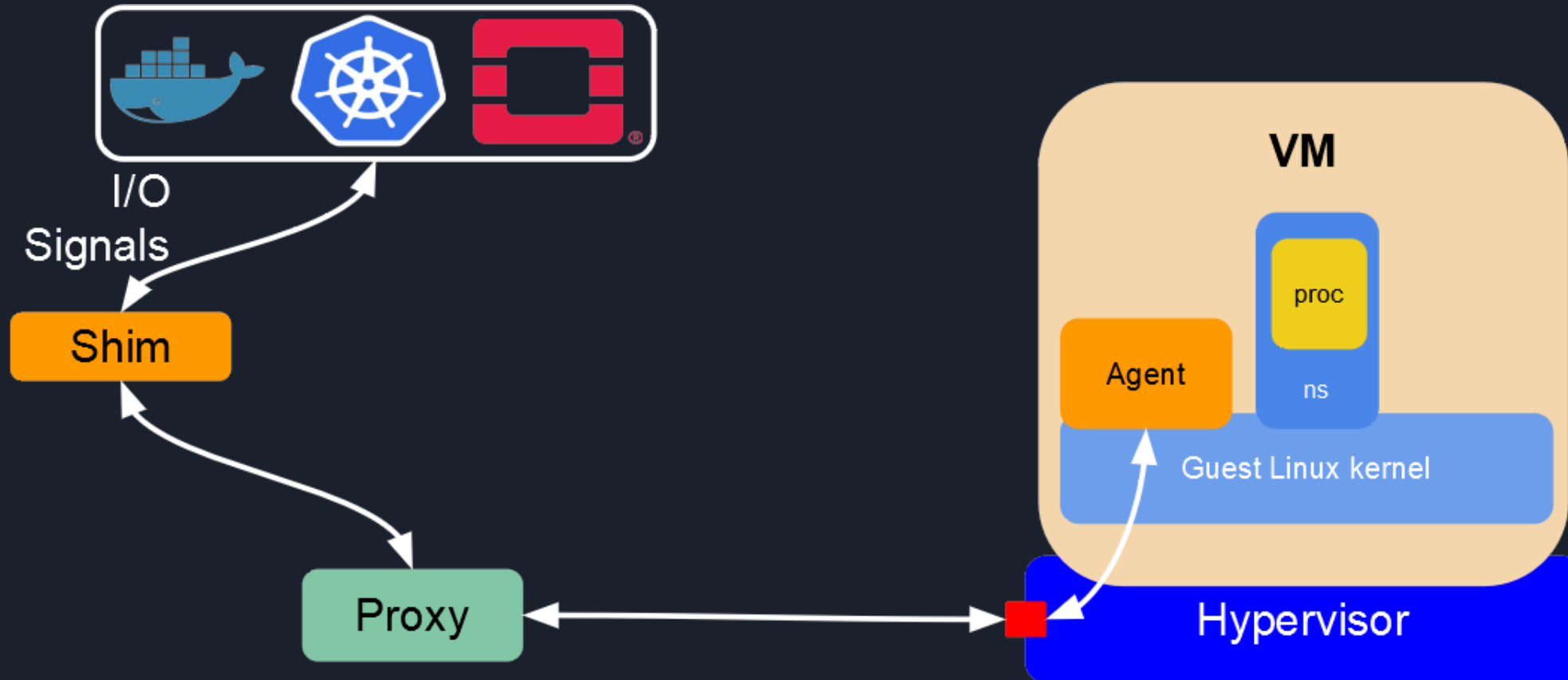


# Ciclo de vida OCI - run

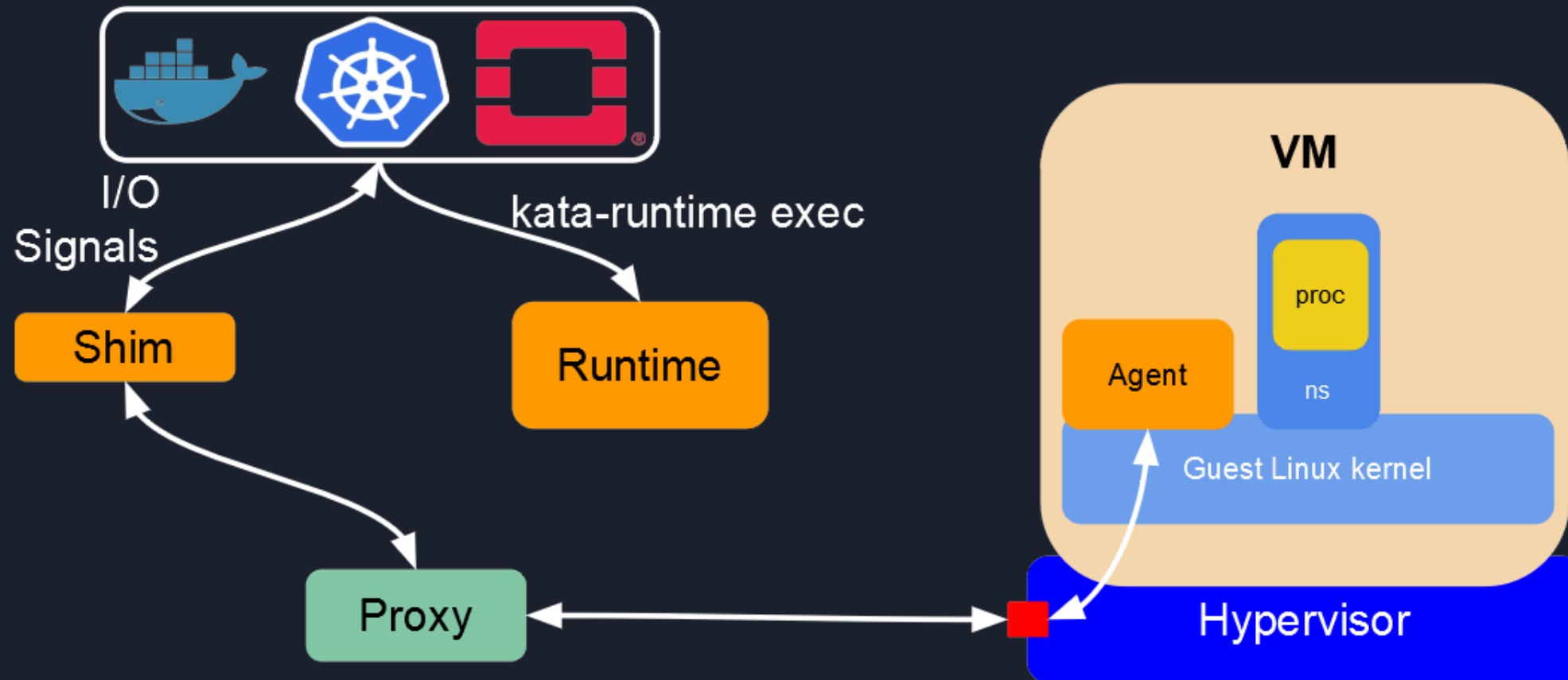




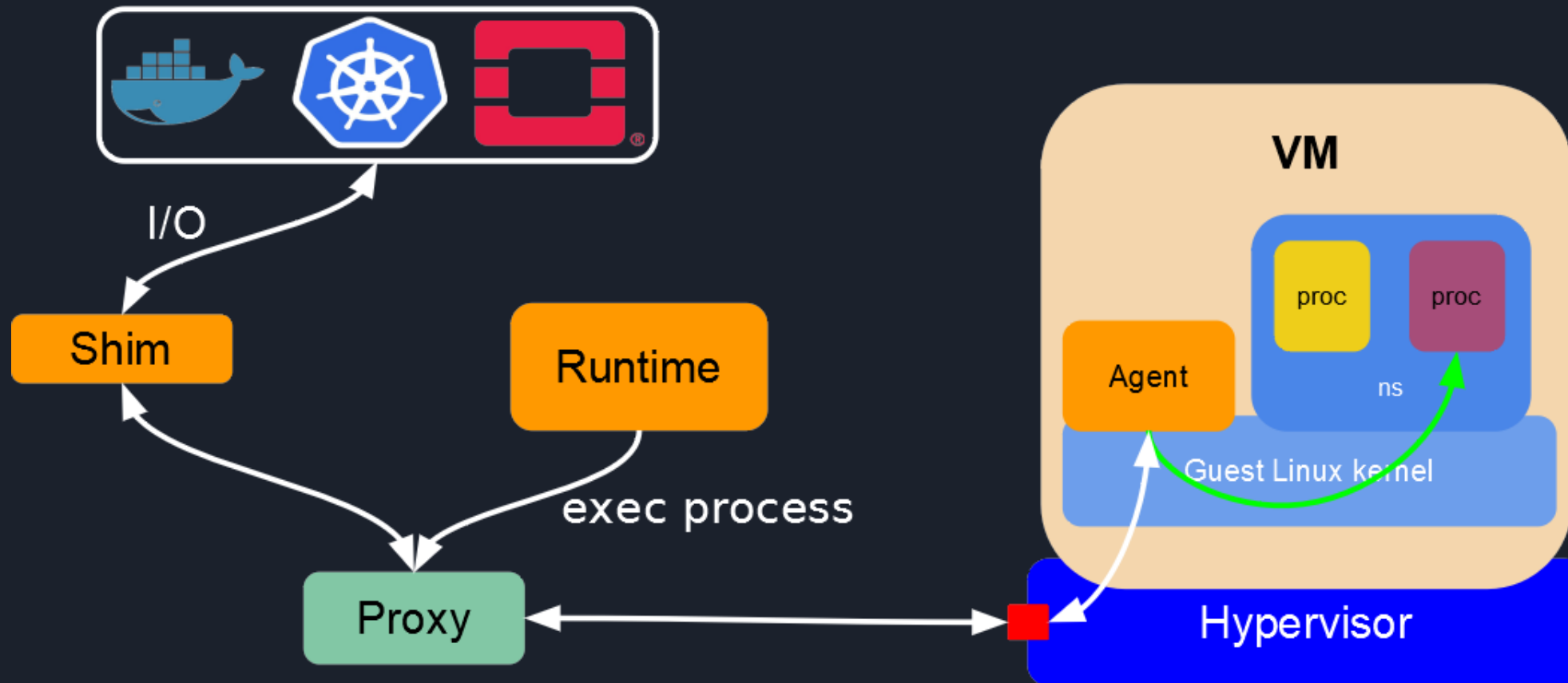
# Ciclo de vida OCI - run



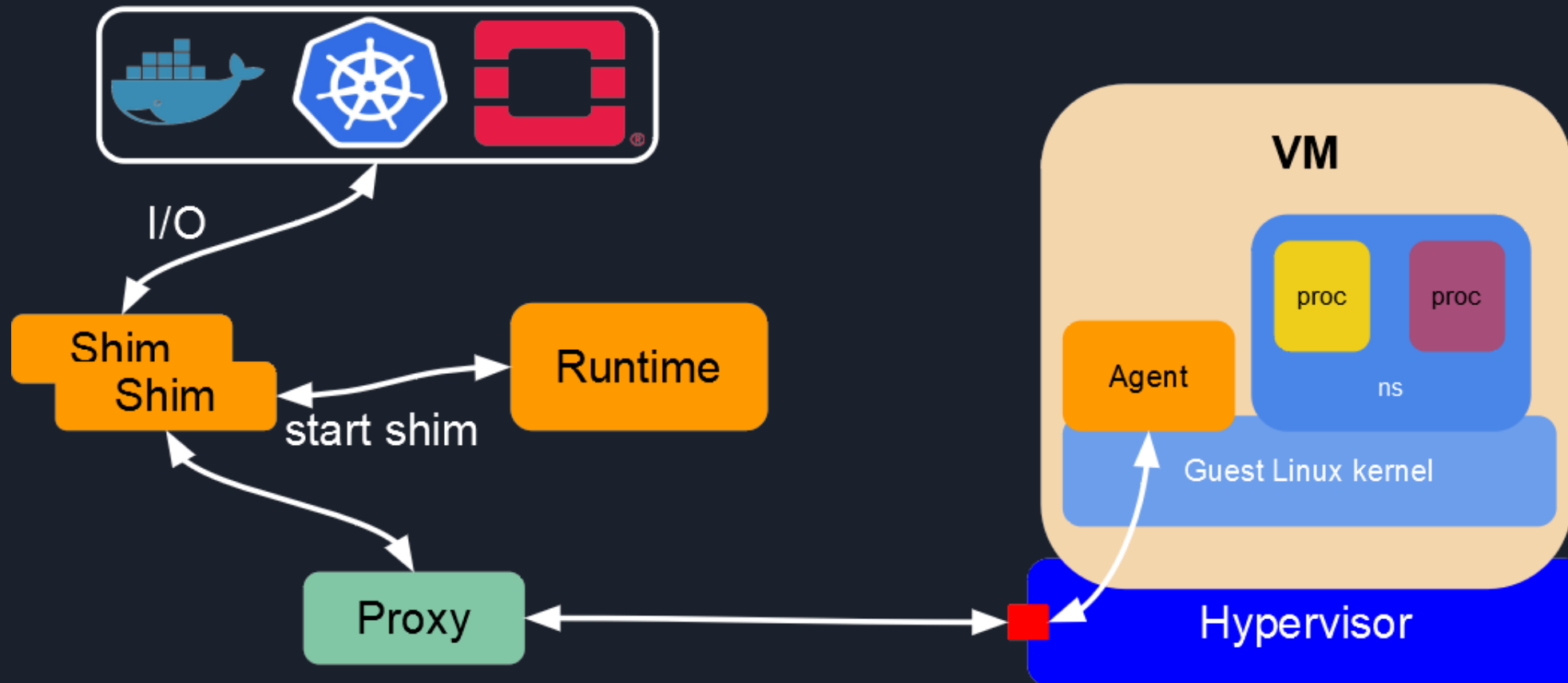
# Ciclo de vida OCI - exec



# Ciclo de vida OCI - exec

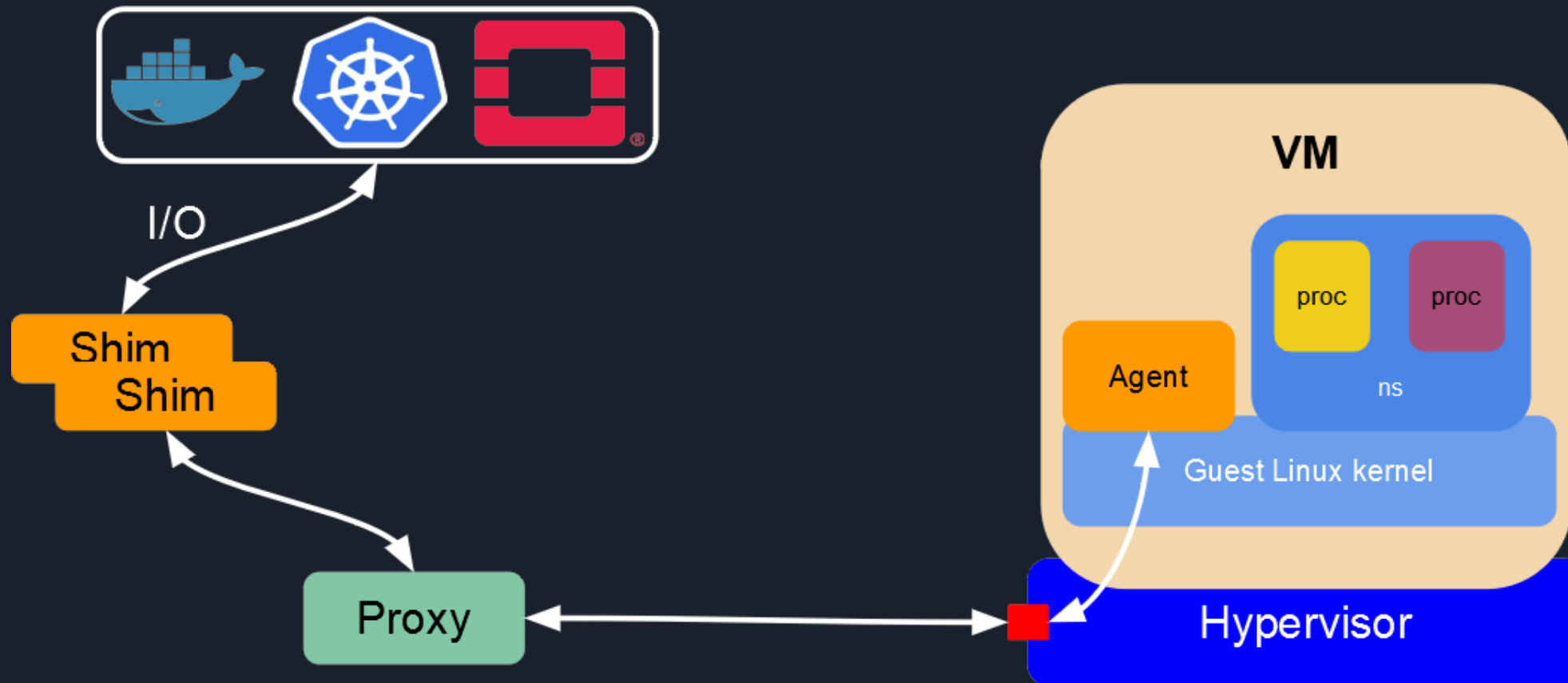


# Ciclo de vida OCI - exec

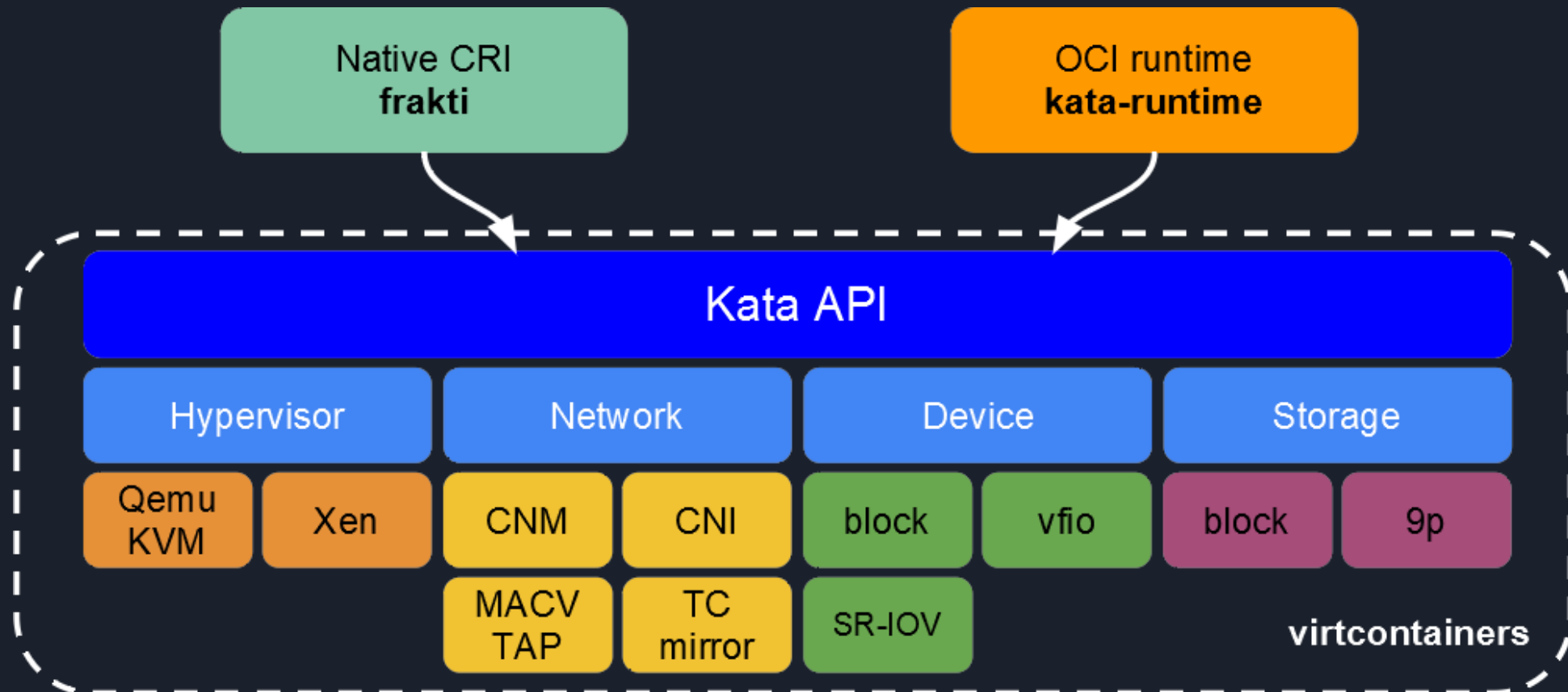




# Ciclo de vida OCI - exec

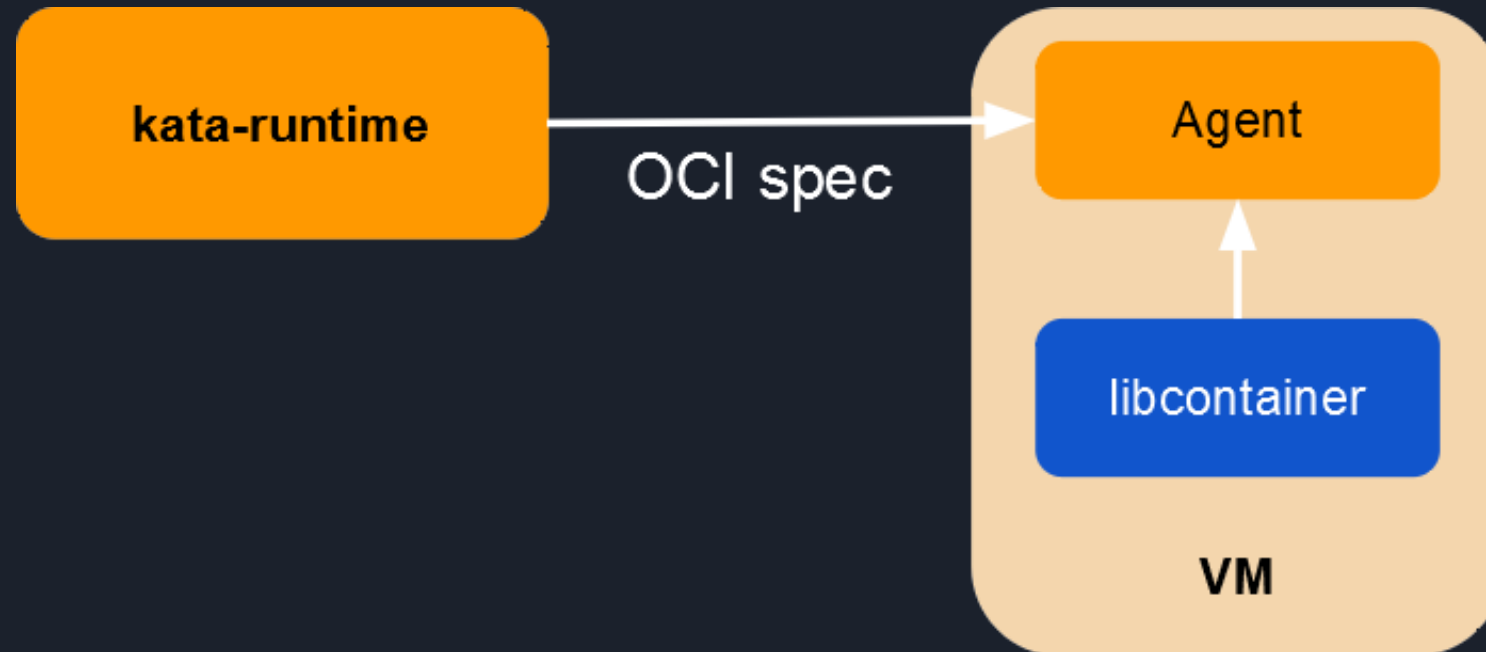


# Mais do que apenas OCI



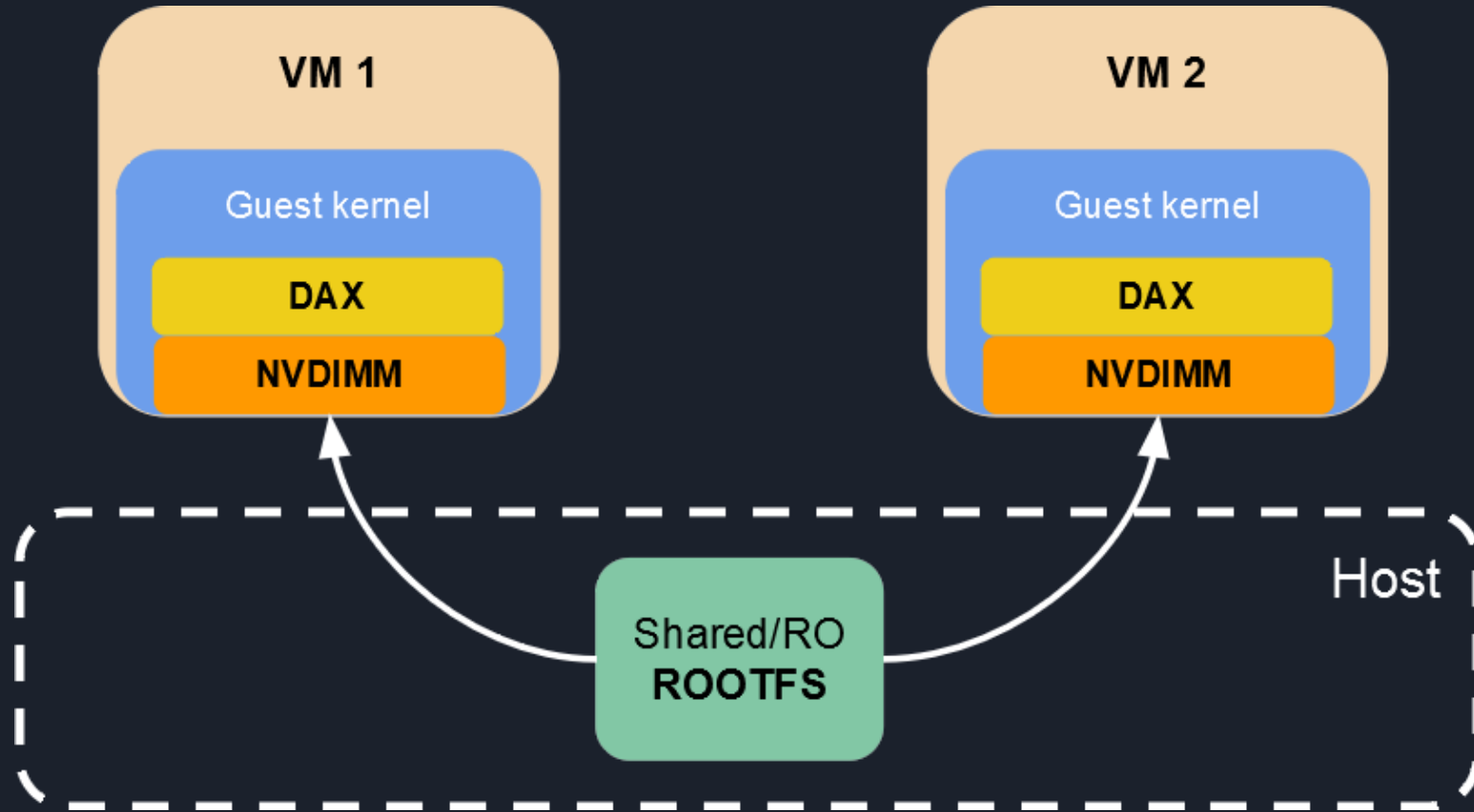
# Como é por dentro?

# Compatibilidade com OCI

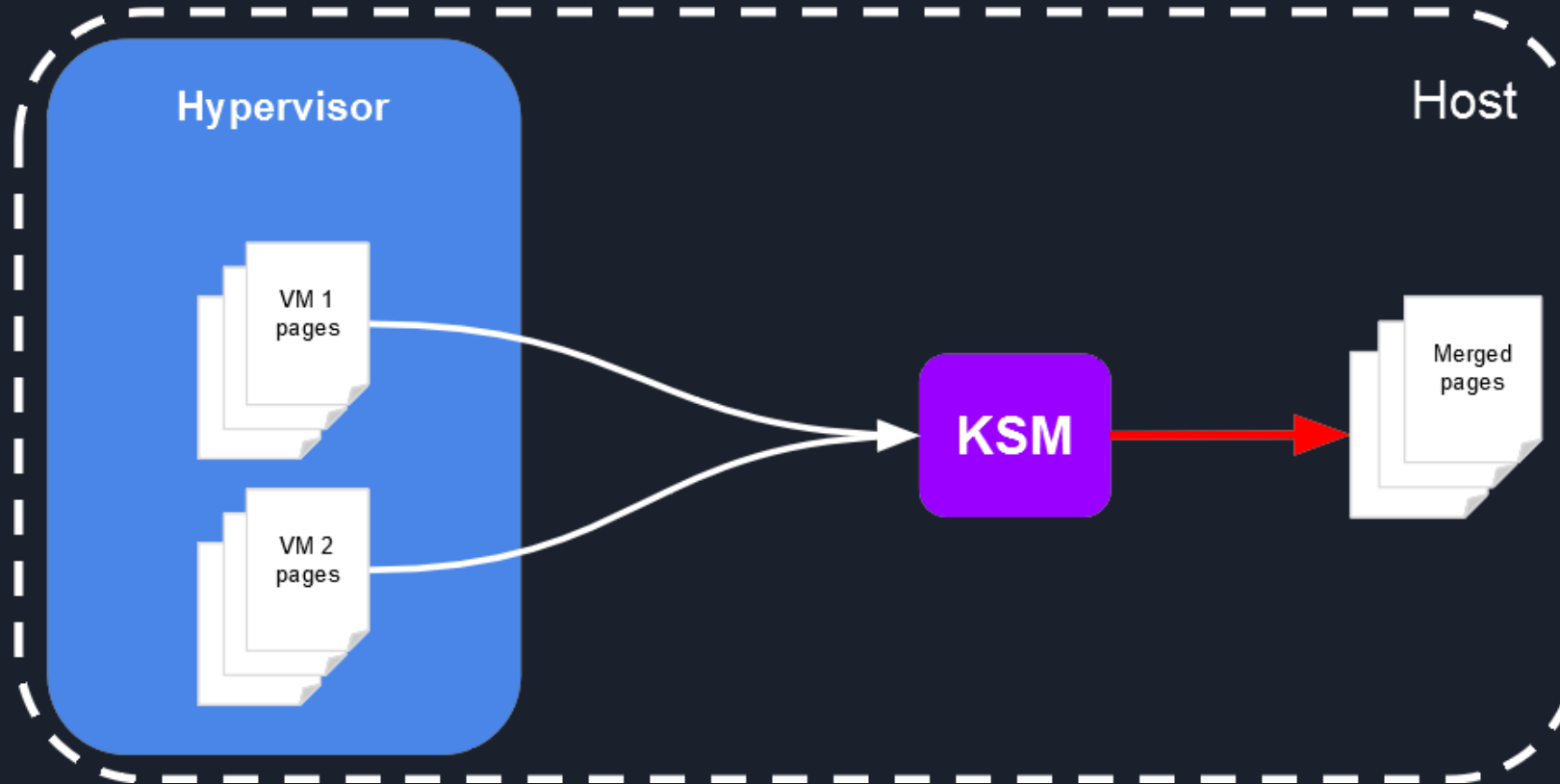




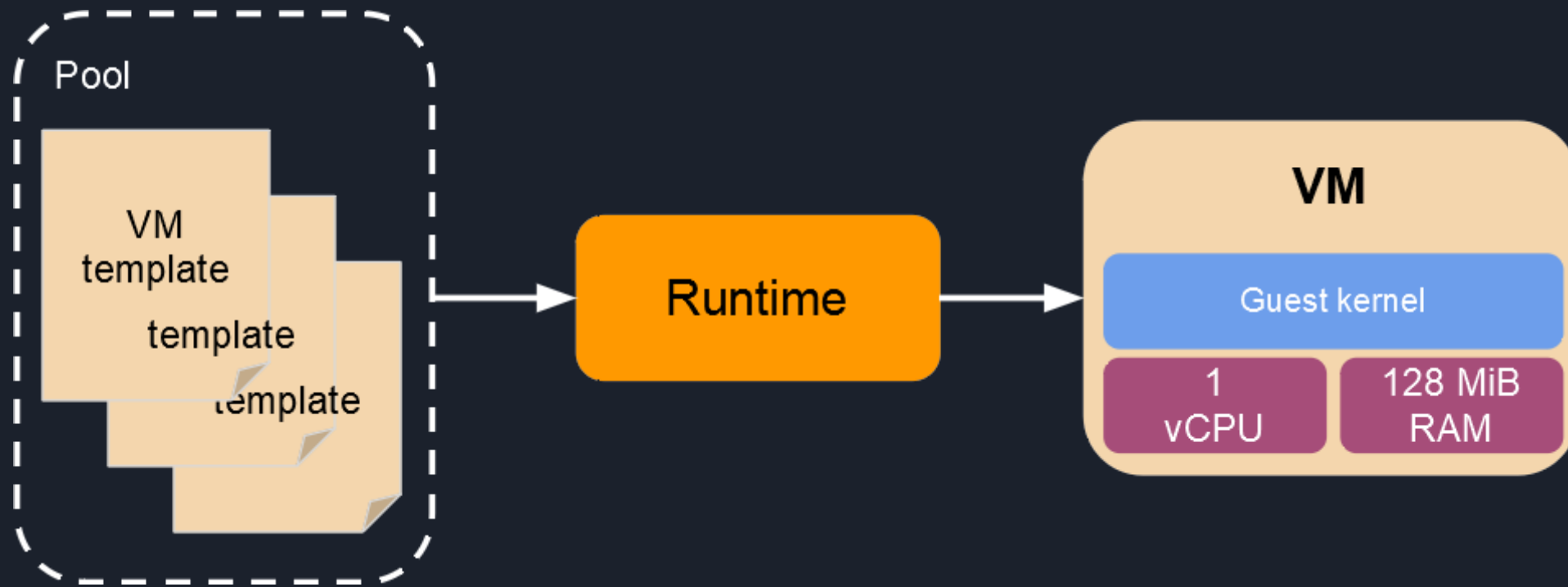
# VM light – NVDIMM/DAX



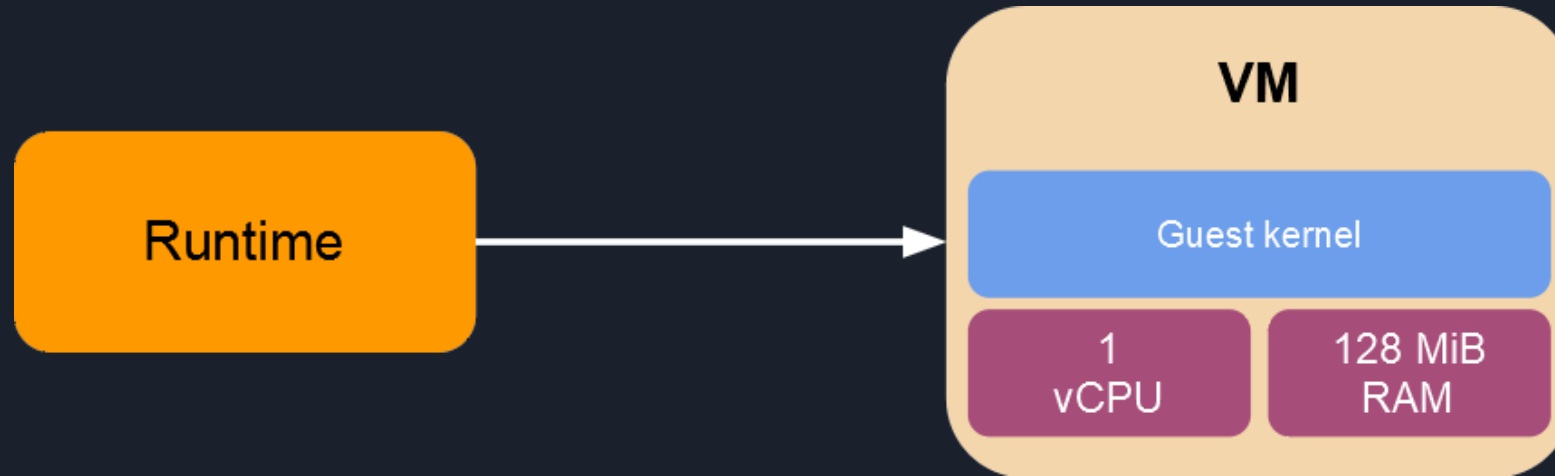
# VM light – KSM



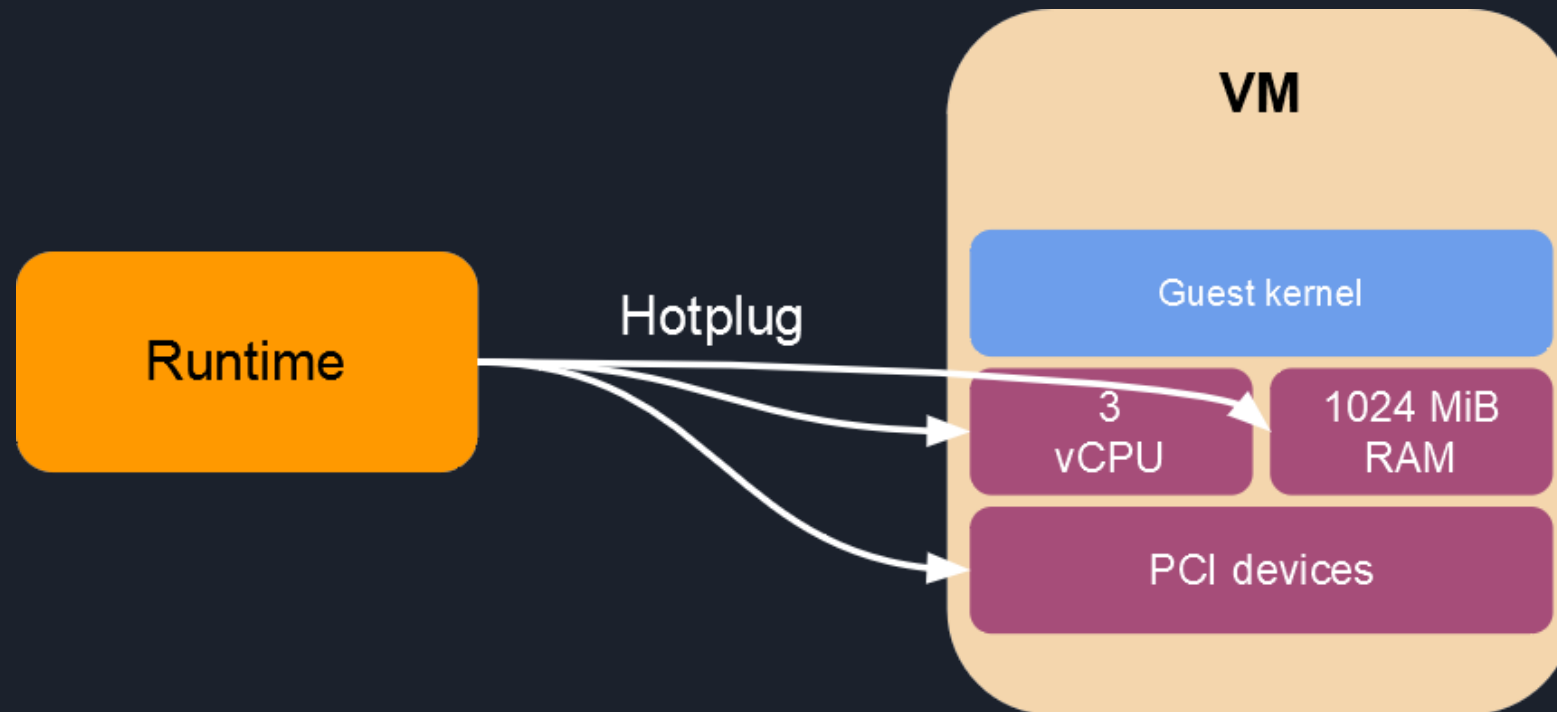
# VM? Usando templates



# VM - hotplug

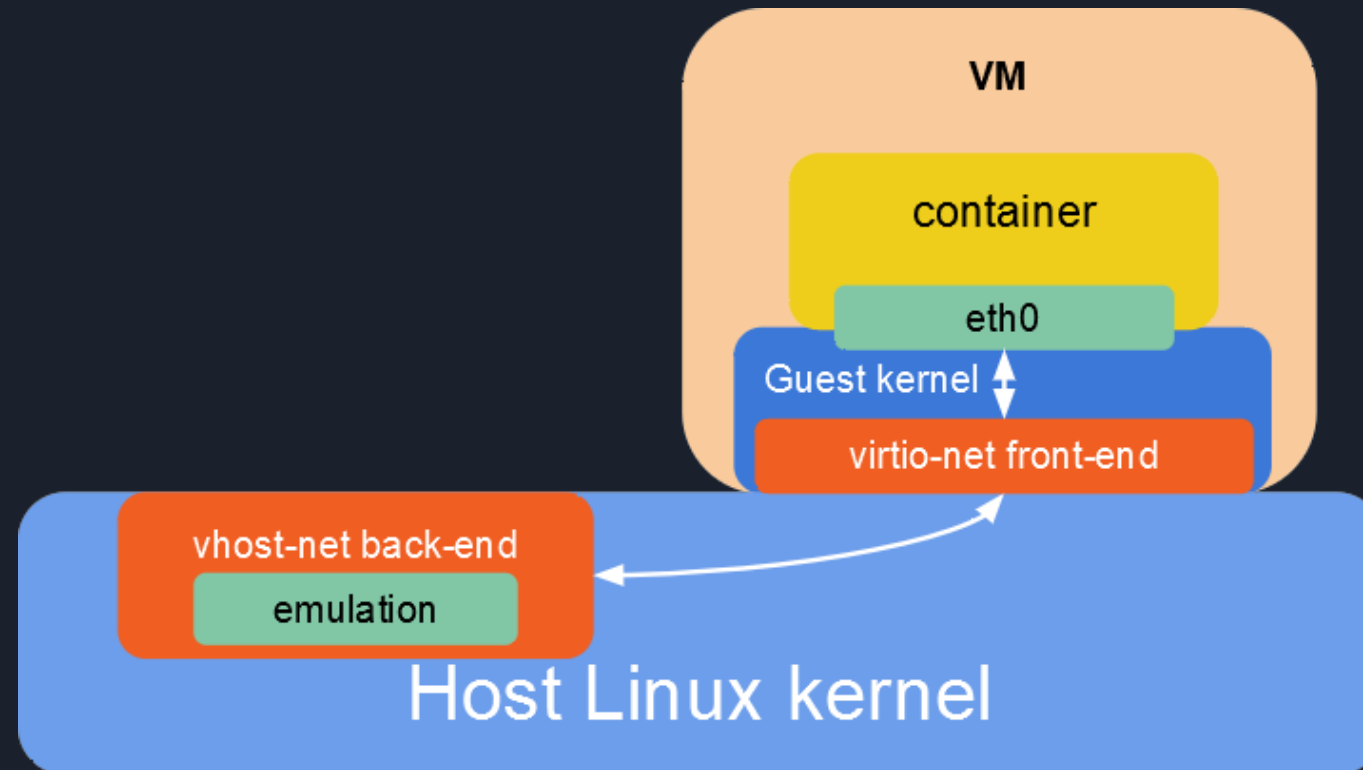


# VM - hotplug

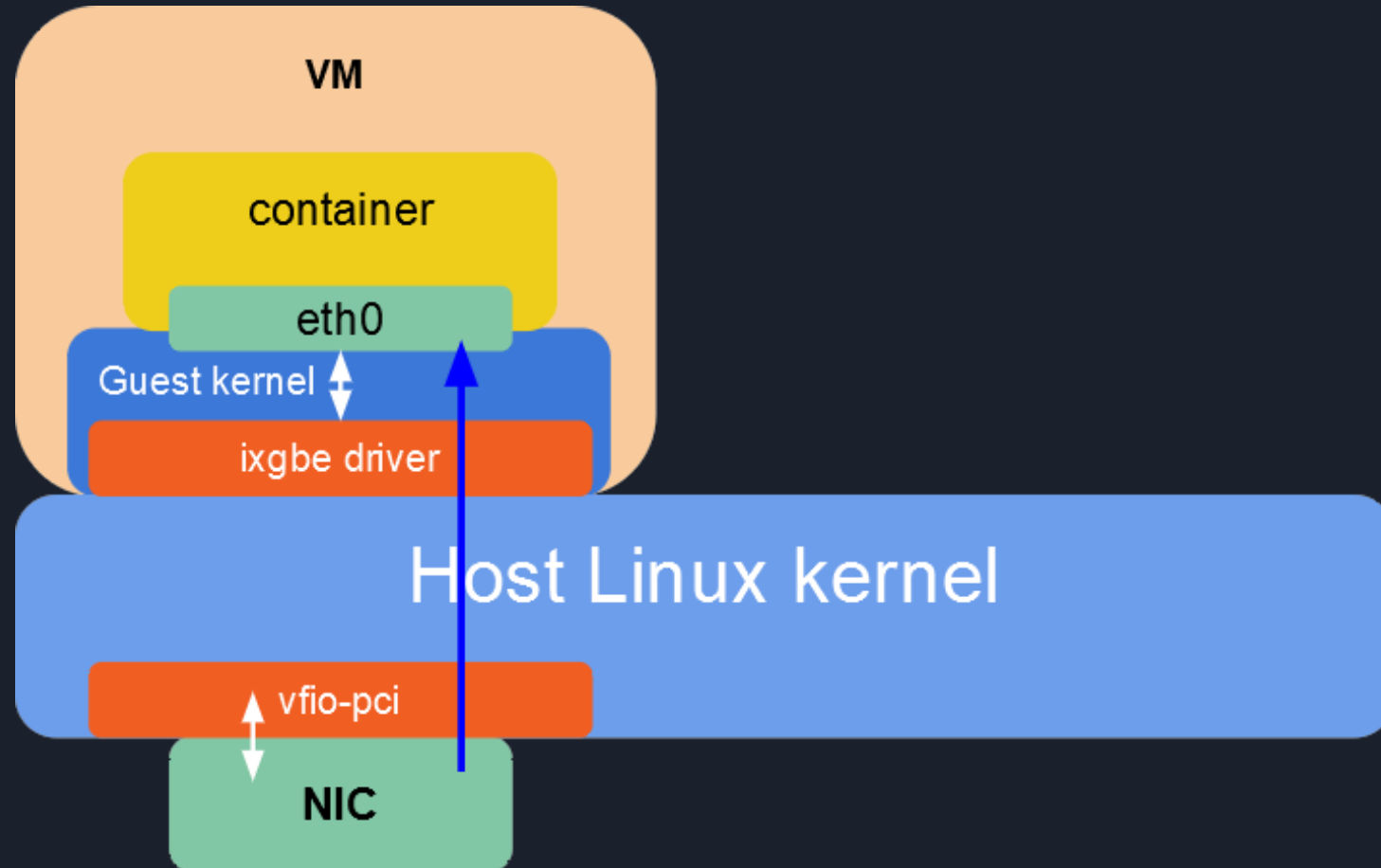




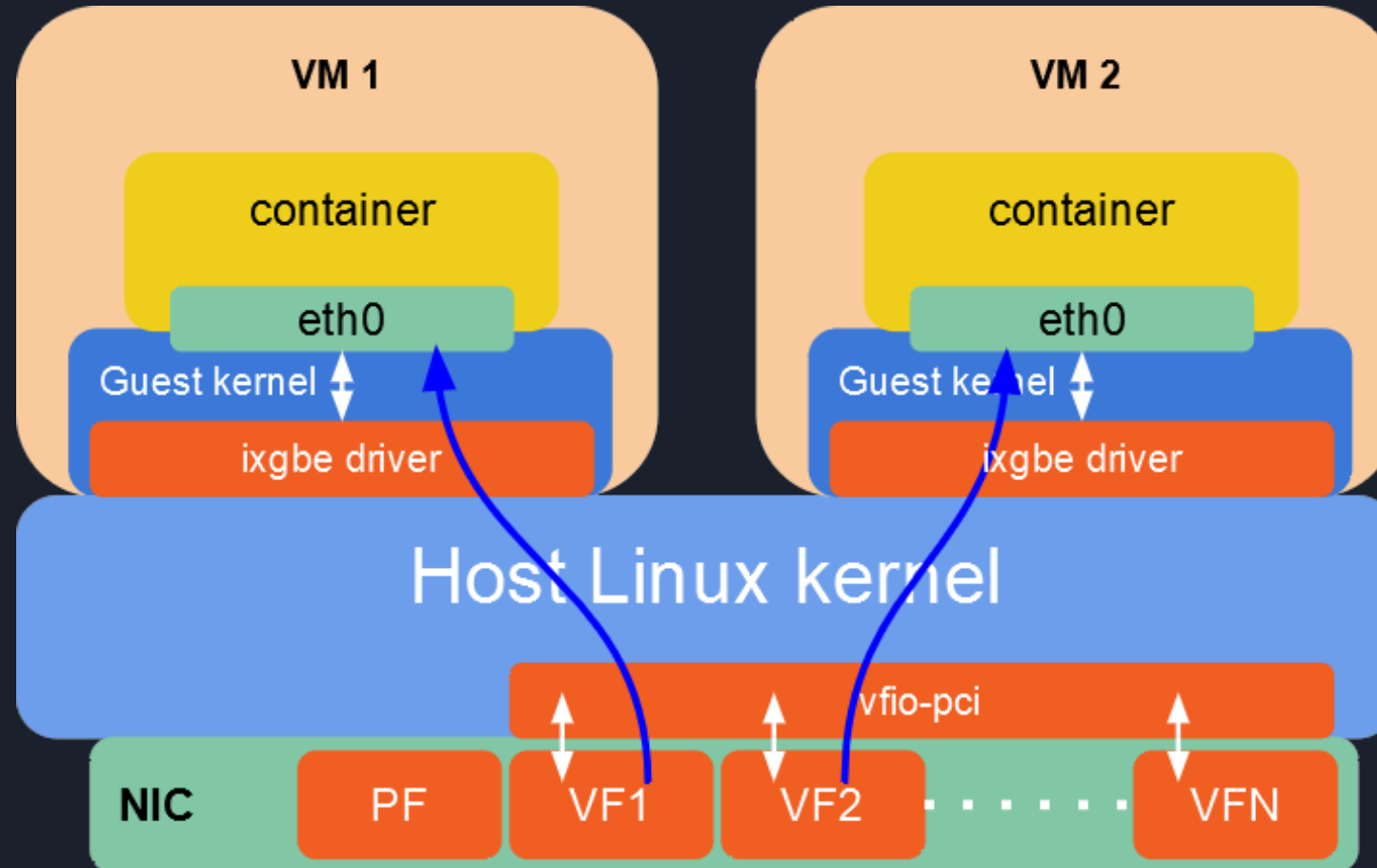
# Devices - virtio



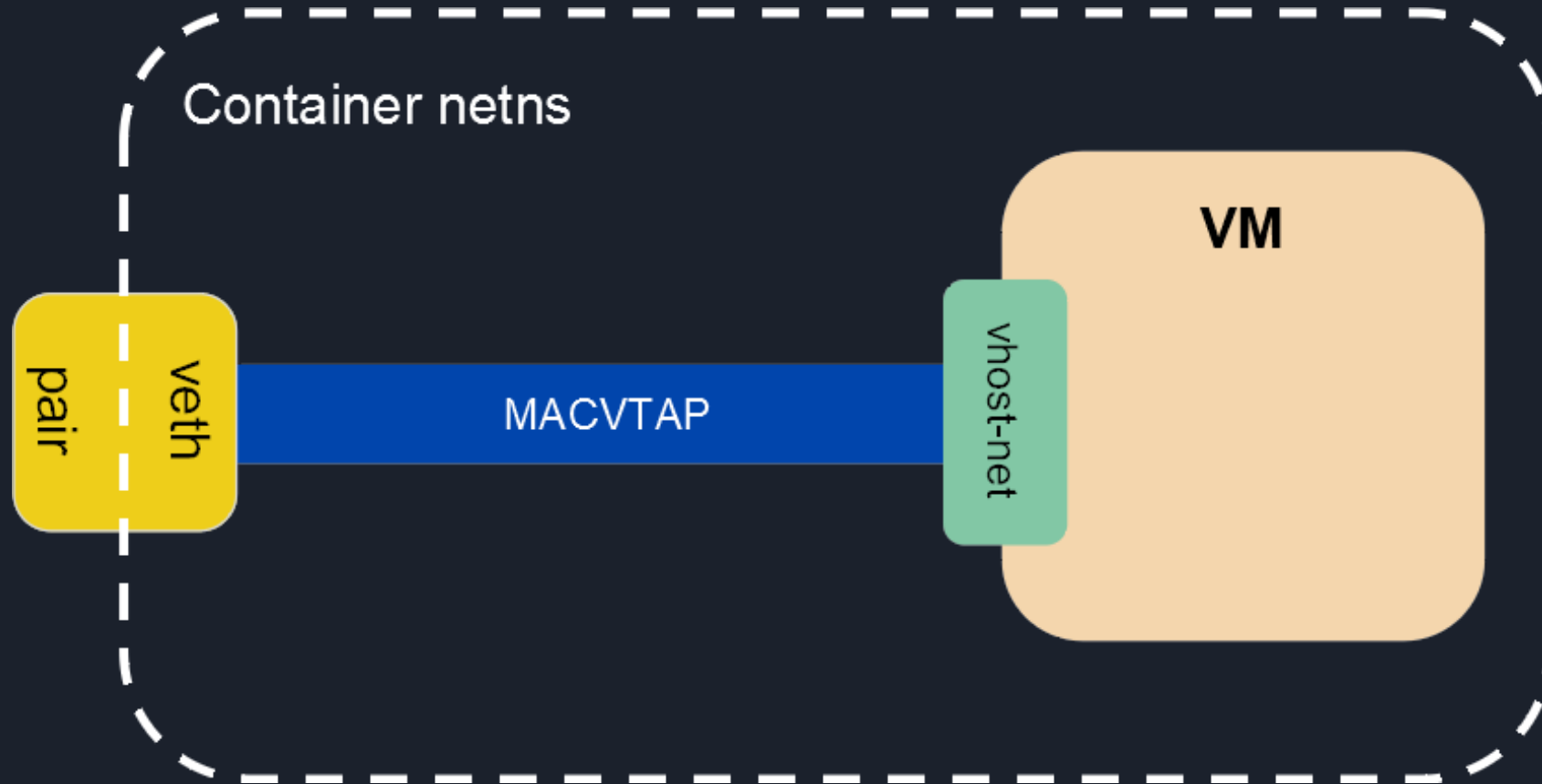
# Devices – HW passthrough



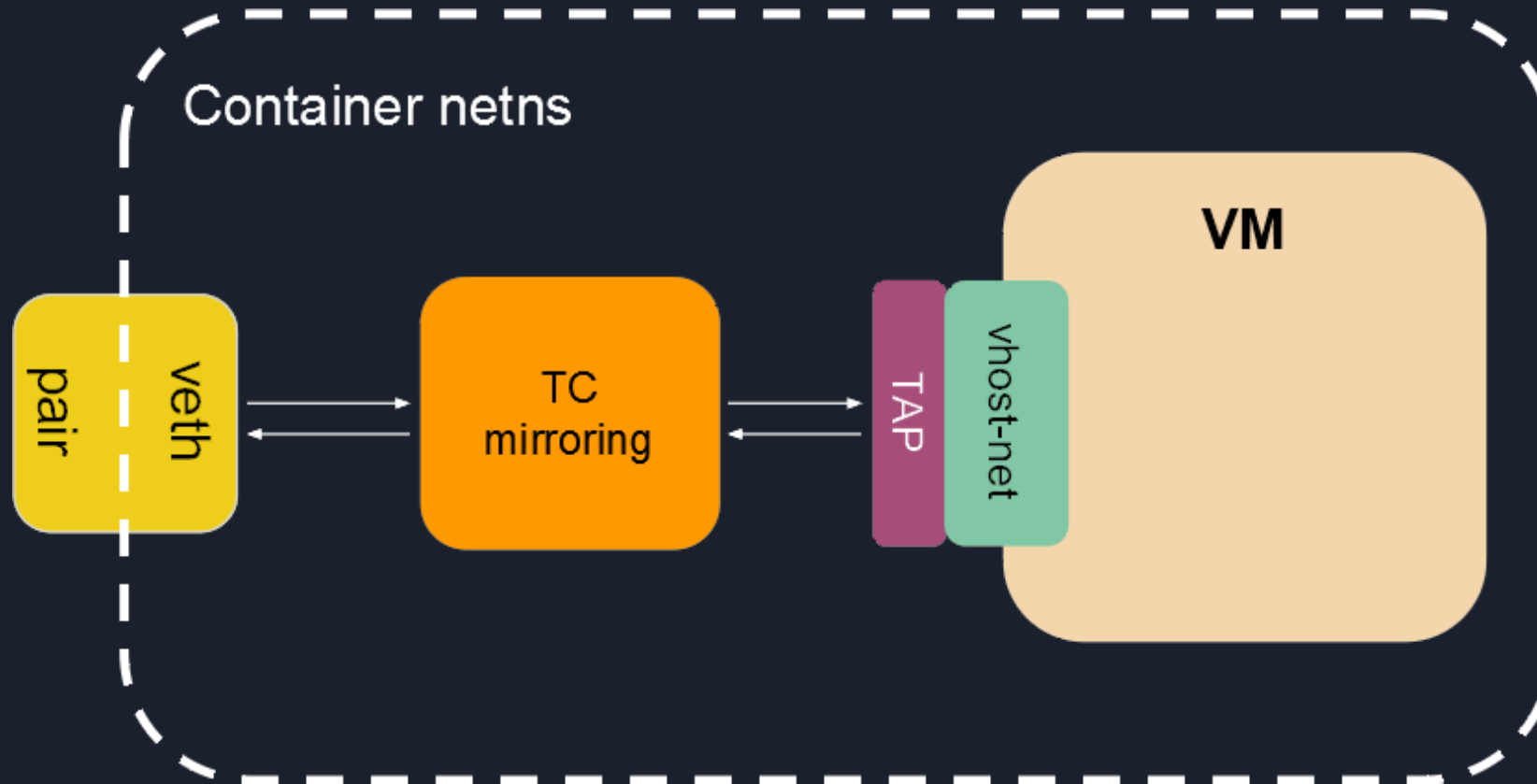
# Devices – SR-IOV



# Network - MACVTAP

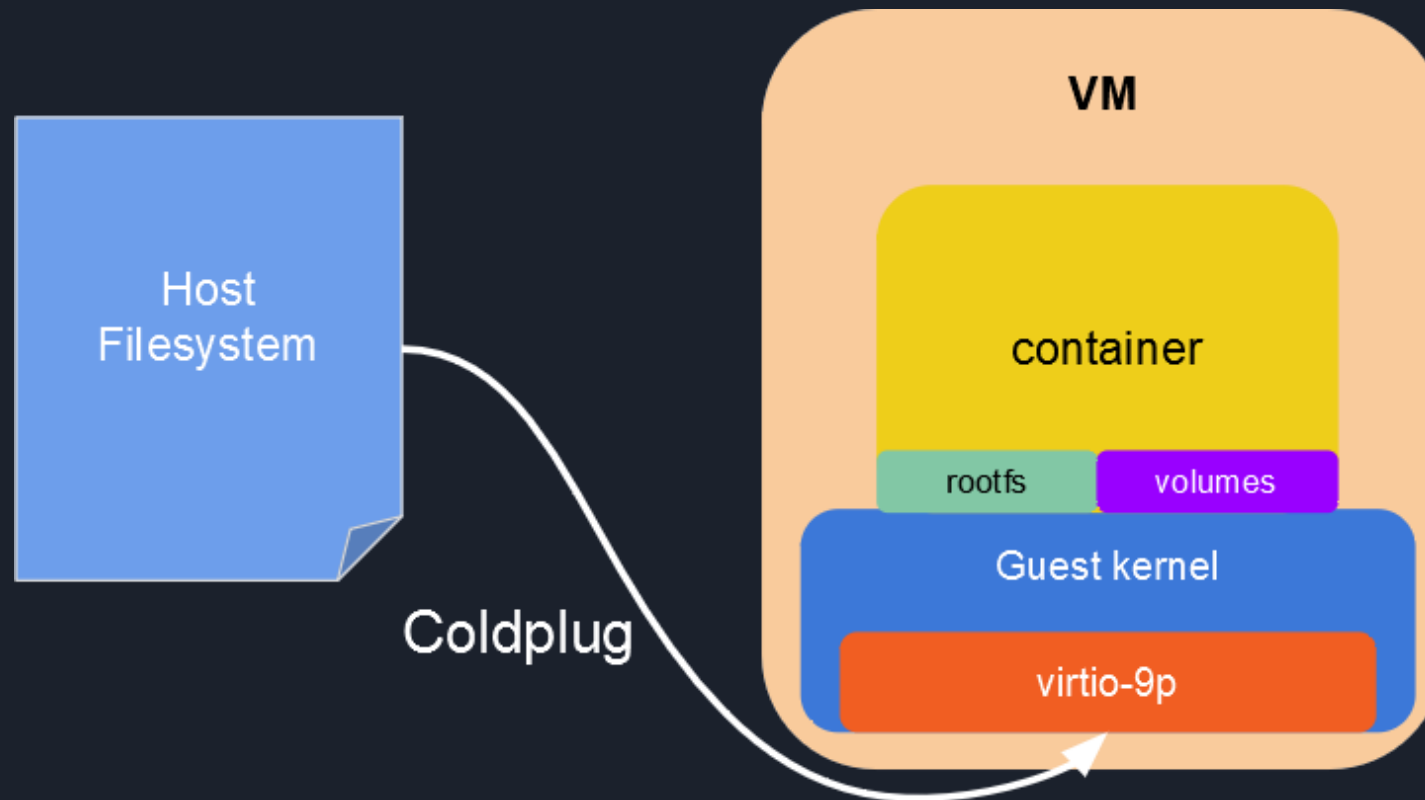


# Network – Traffic Control

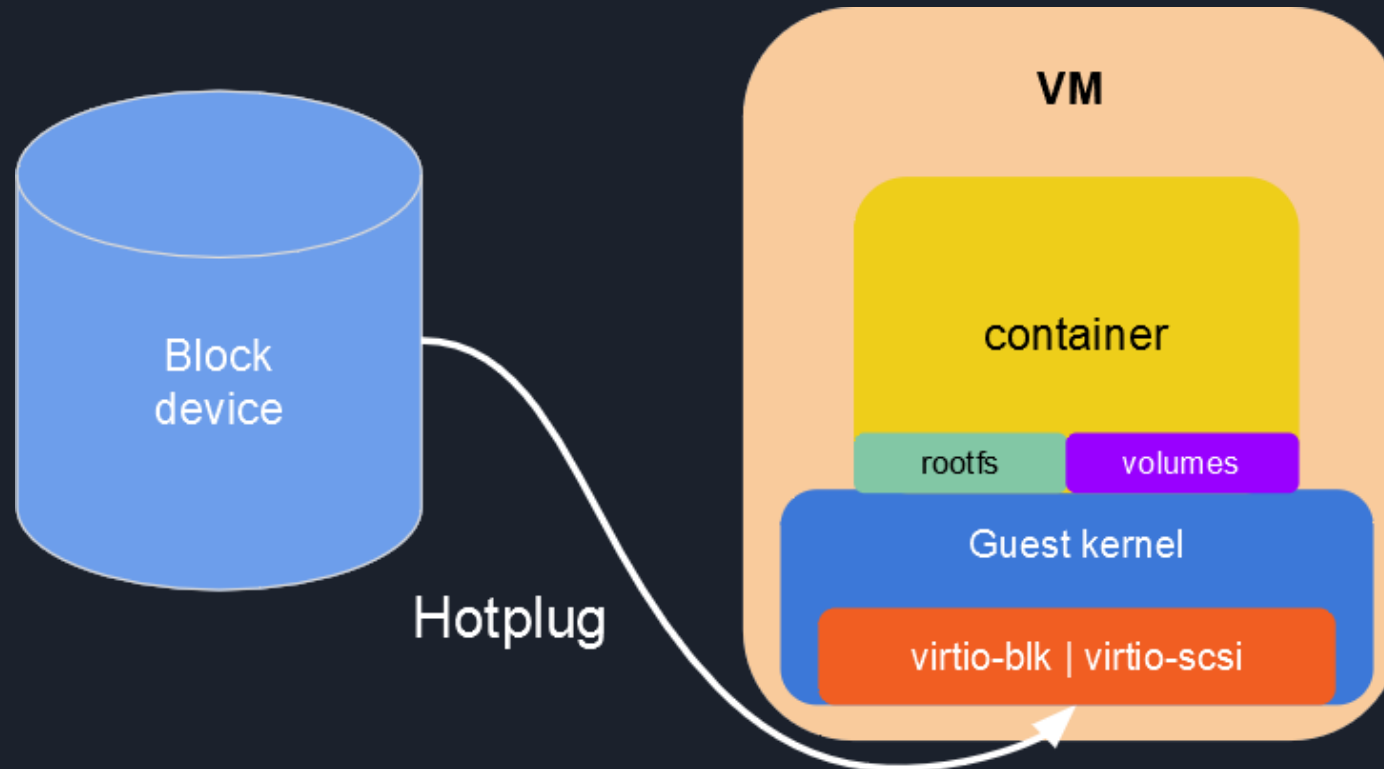




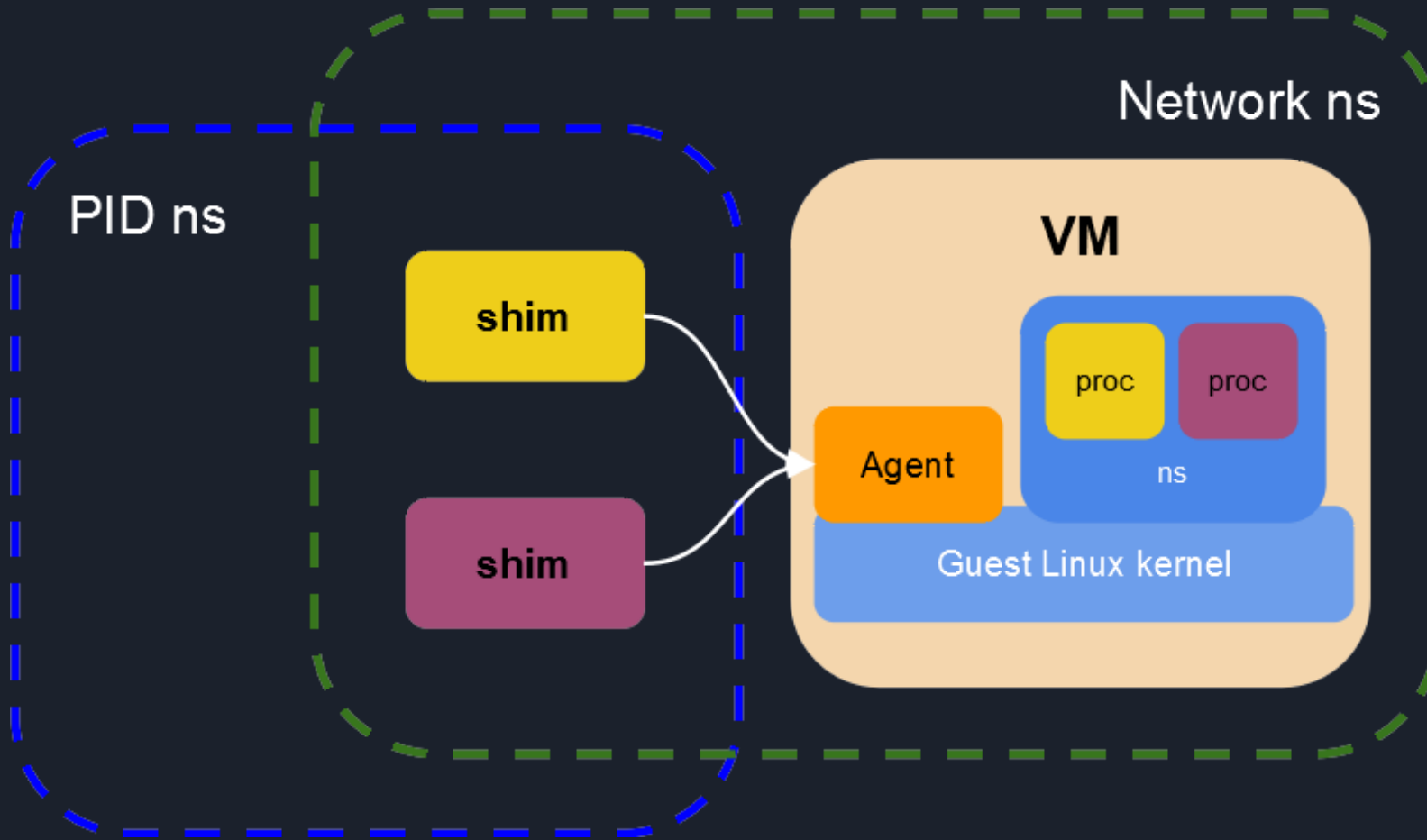
# Storage – 9p



# Storage – block

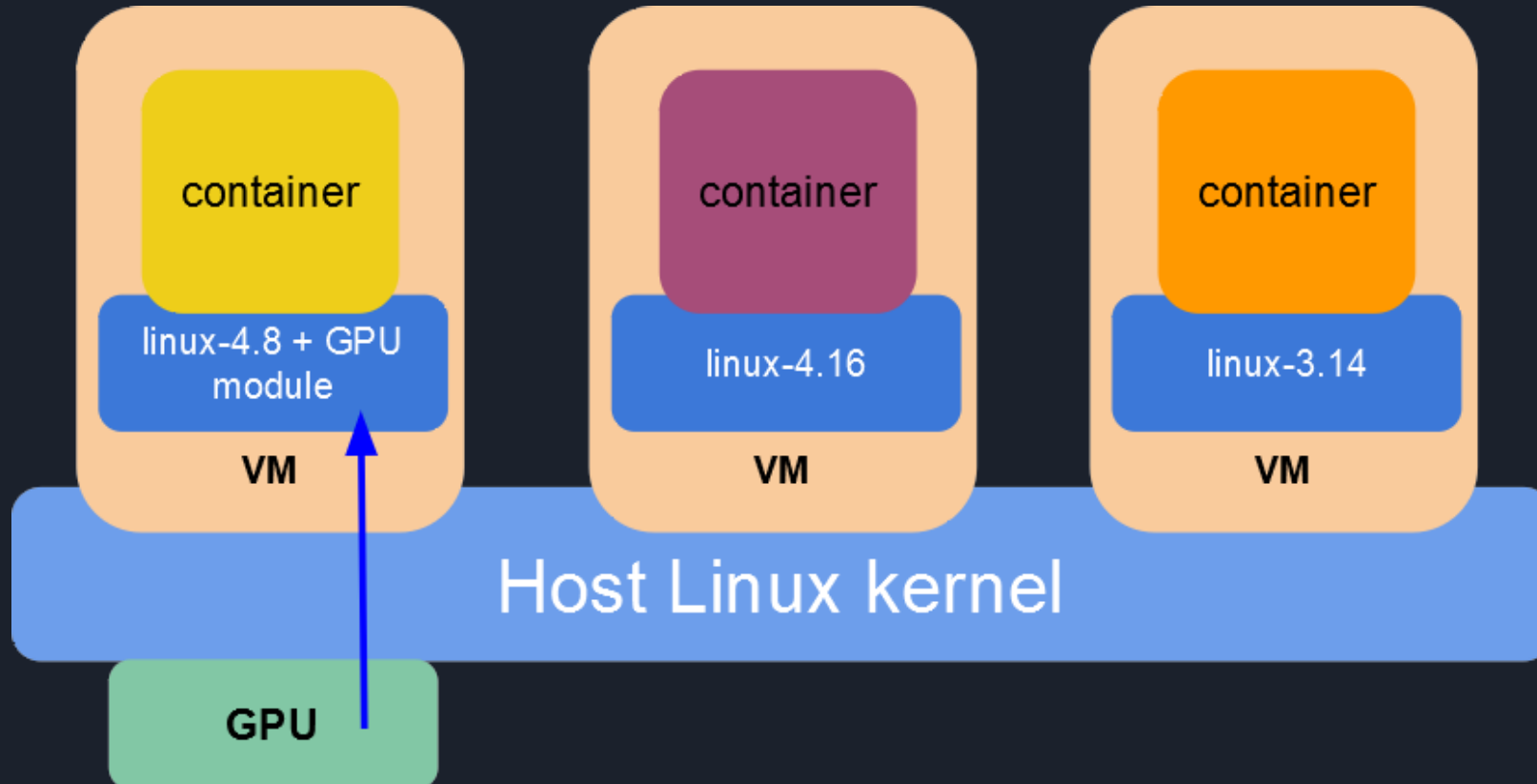


# Host namespaces





# Multi OS





# Resumindo...



# Resumindo...



# Resumindo...



# Teste, use, contribua

Instalando kata containers:

*<https://blogs.oracle.com/linux/kata-containers:-an-important-cloud-native-development-trend-v2>*

Get started:

*<https://github.com/kata-containers/documentation/blob/master/Developer-Guide.md>*

FAQ:

*<https://katacontainers.io/faq/>*



# ORACLE®

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nosso  
Estande



Faça  
um  
Trial



Ganhe  
um  
Brinde



Faça  
um  
Hands  
on



Ganhe  
outro  
Brinde