

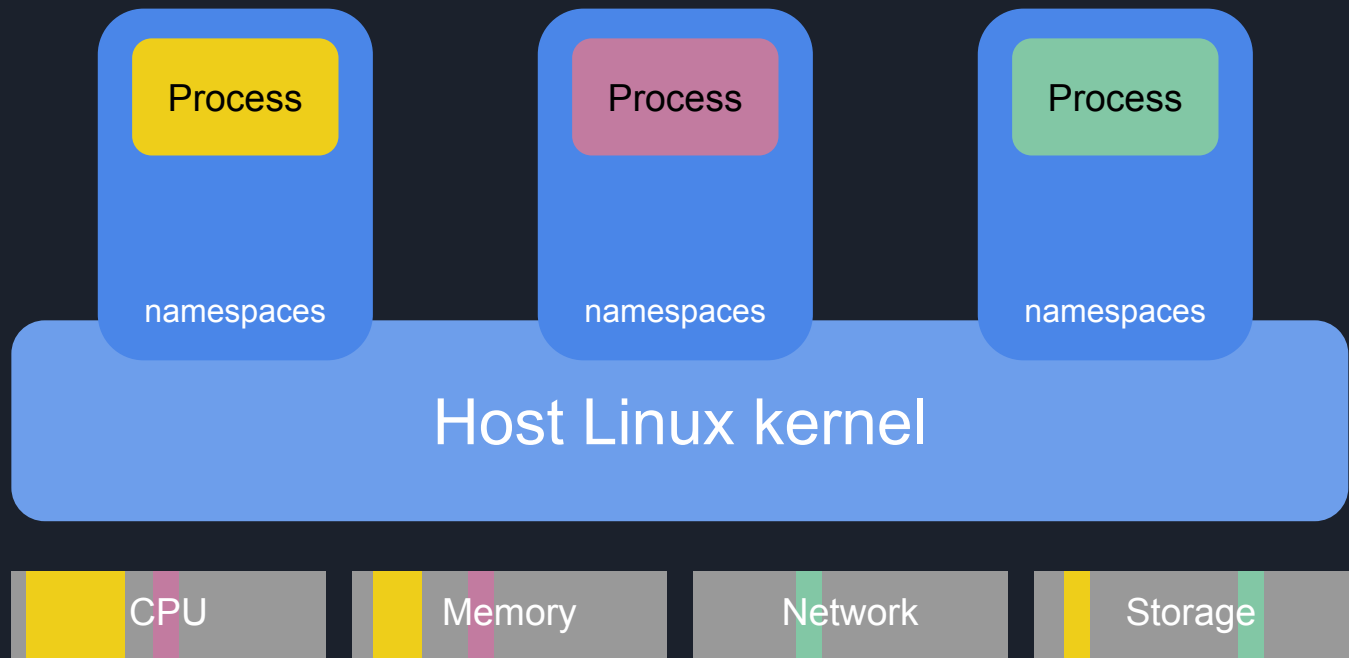
Kata Containers

The way to run
virtualized containers

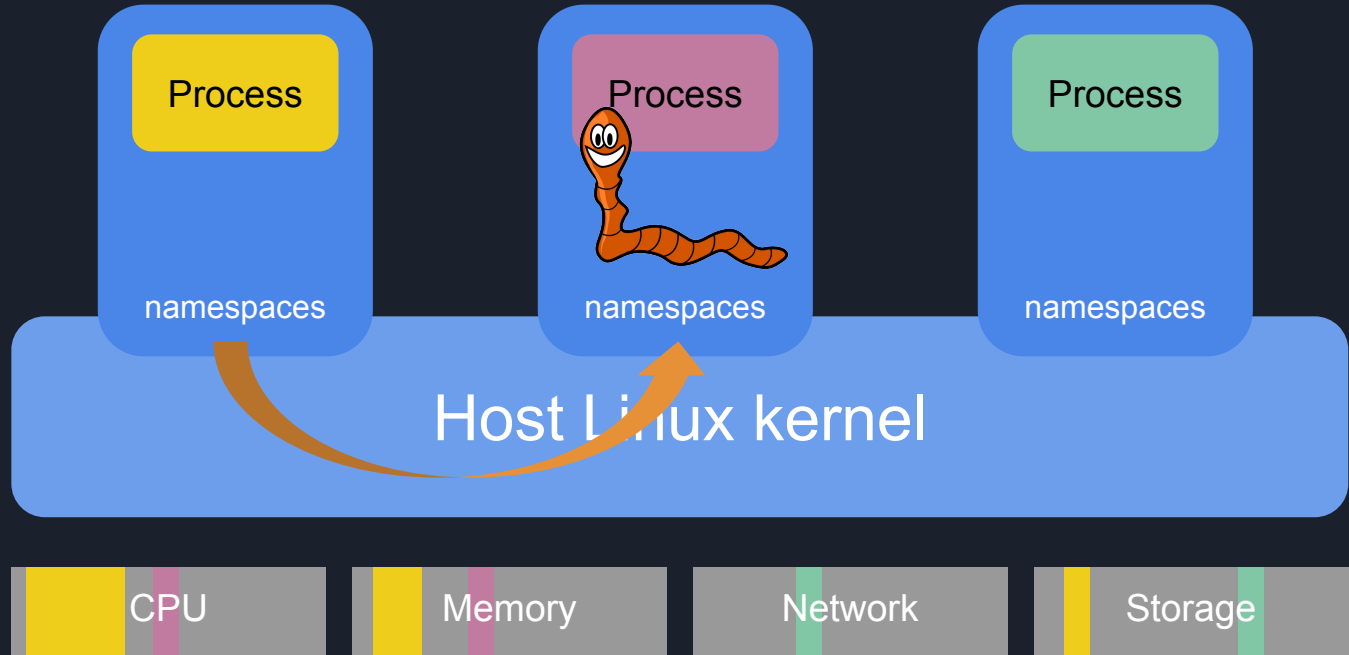
Sebastien Boeuf, Linux Software Engineer
Intel Corporation



Containers 101

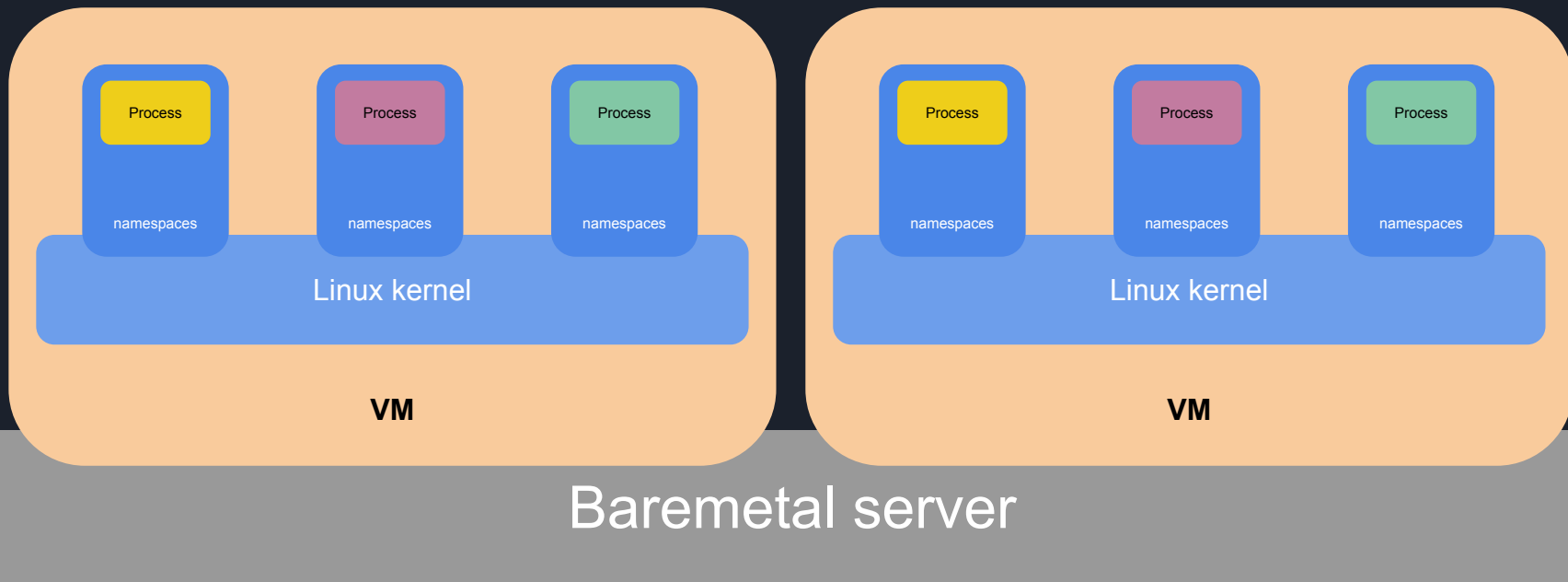


Software is not enough !



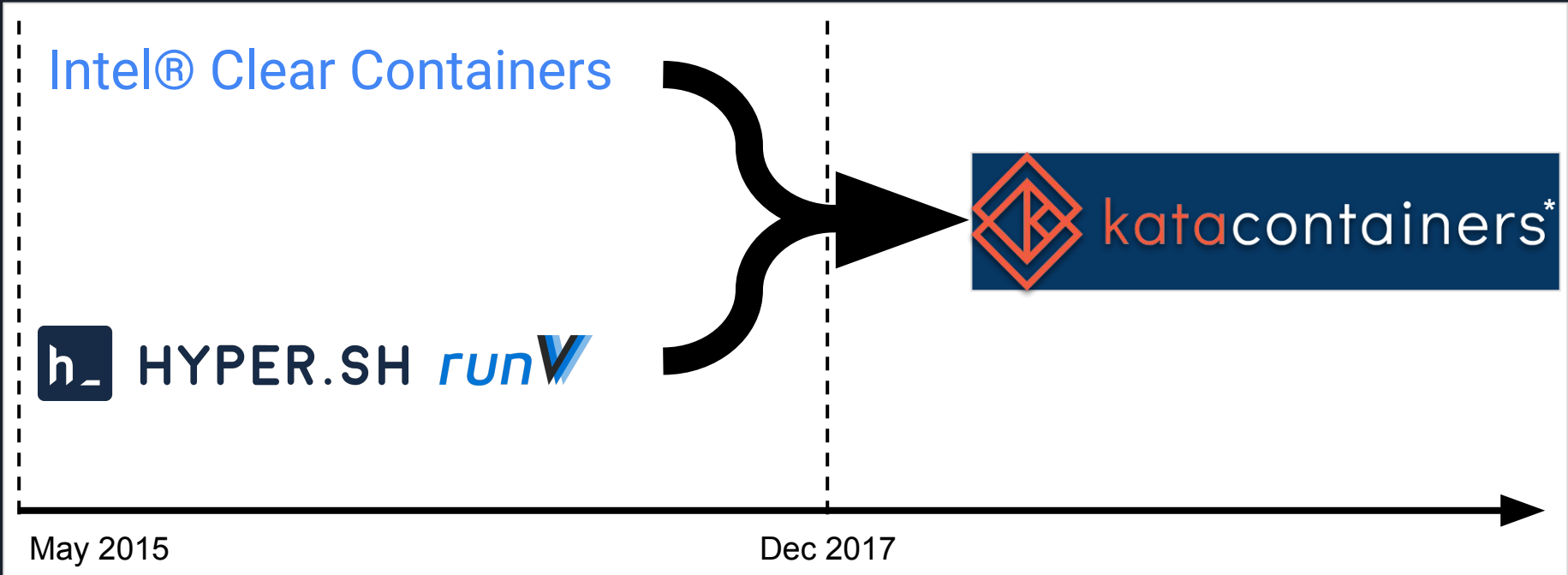


Manual isolation

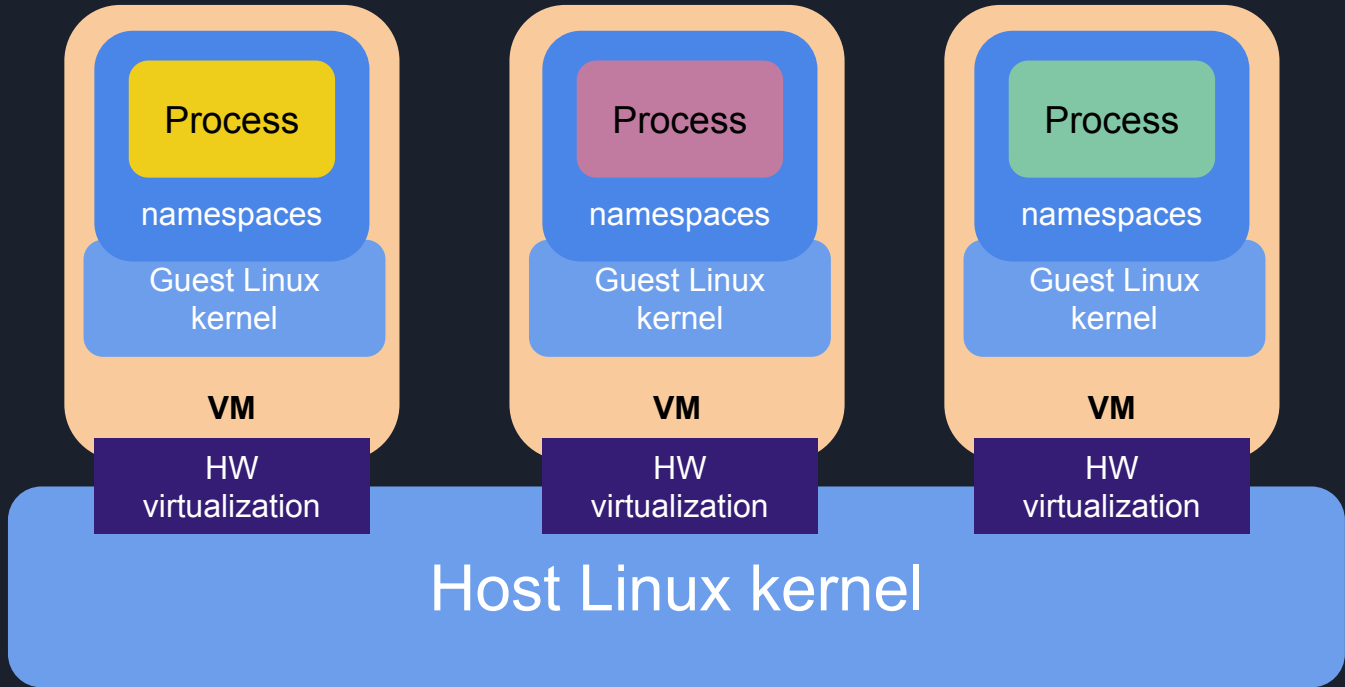


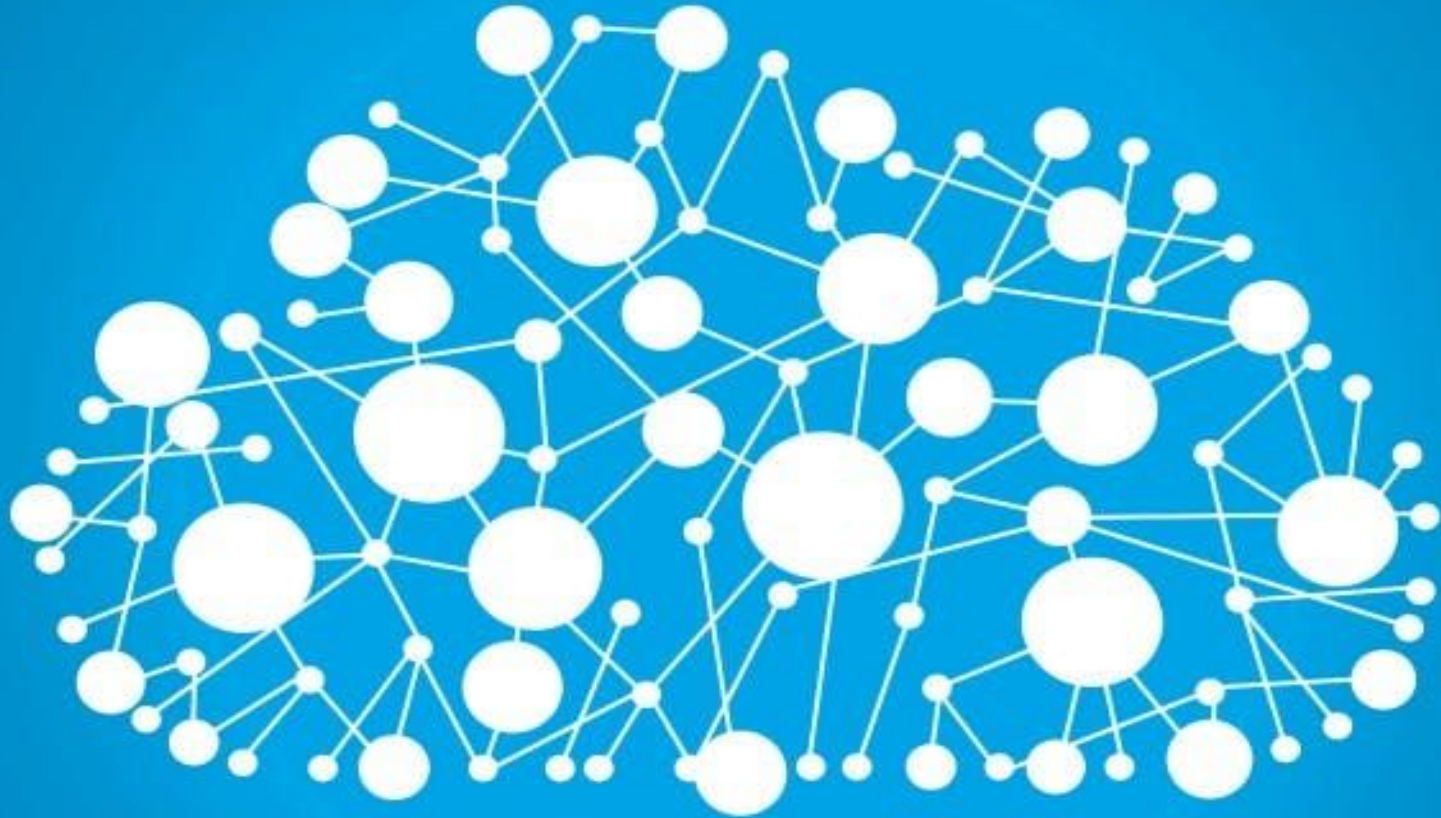


Kata Containers legacy

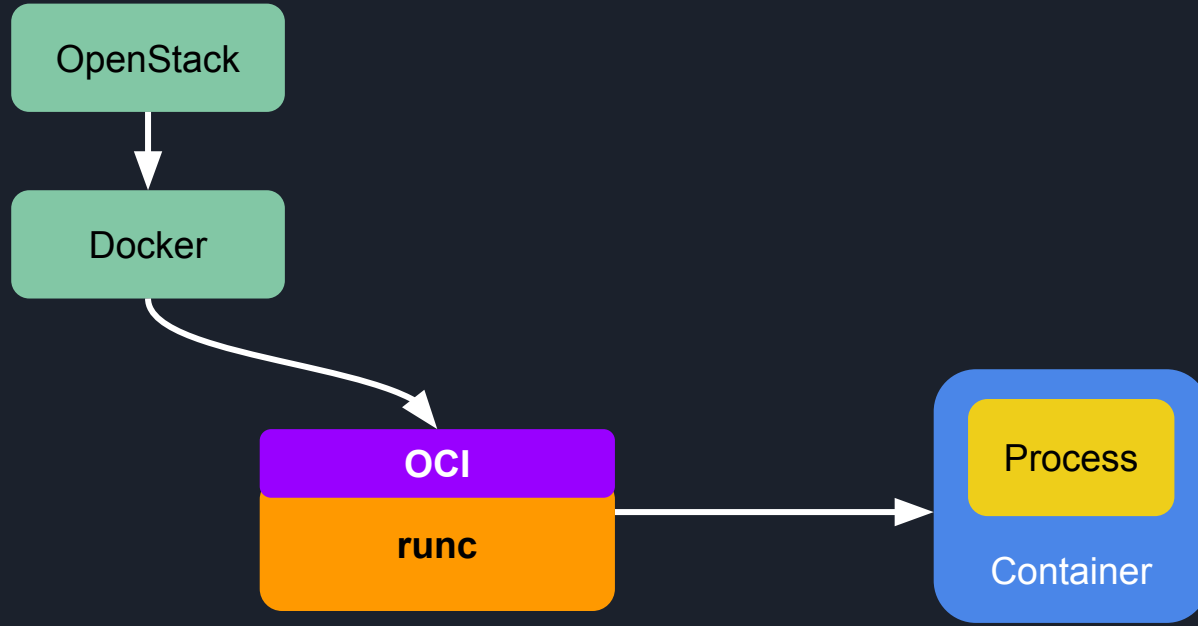


Kata Containers 101

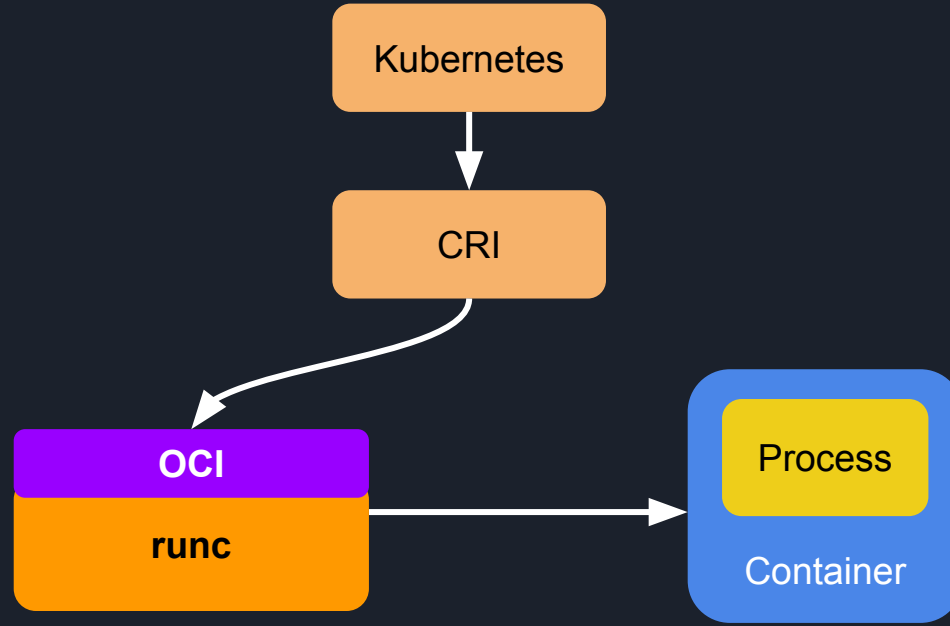




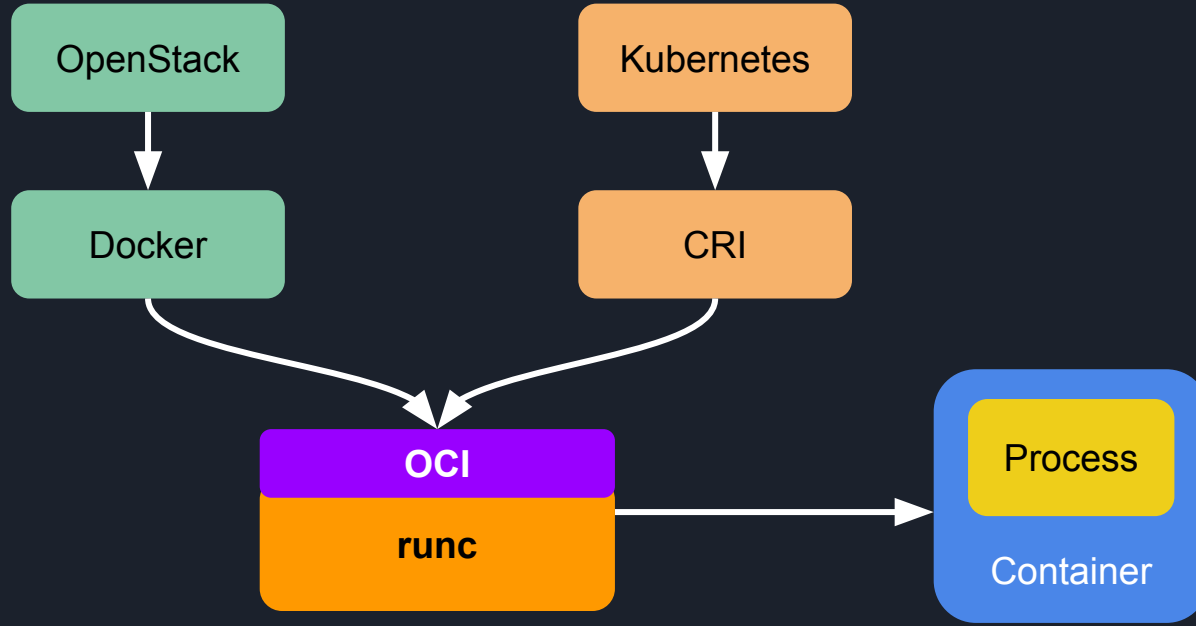
Container ecosystem



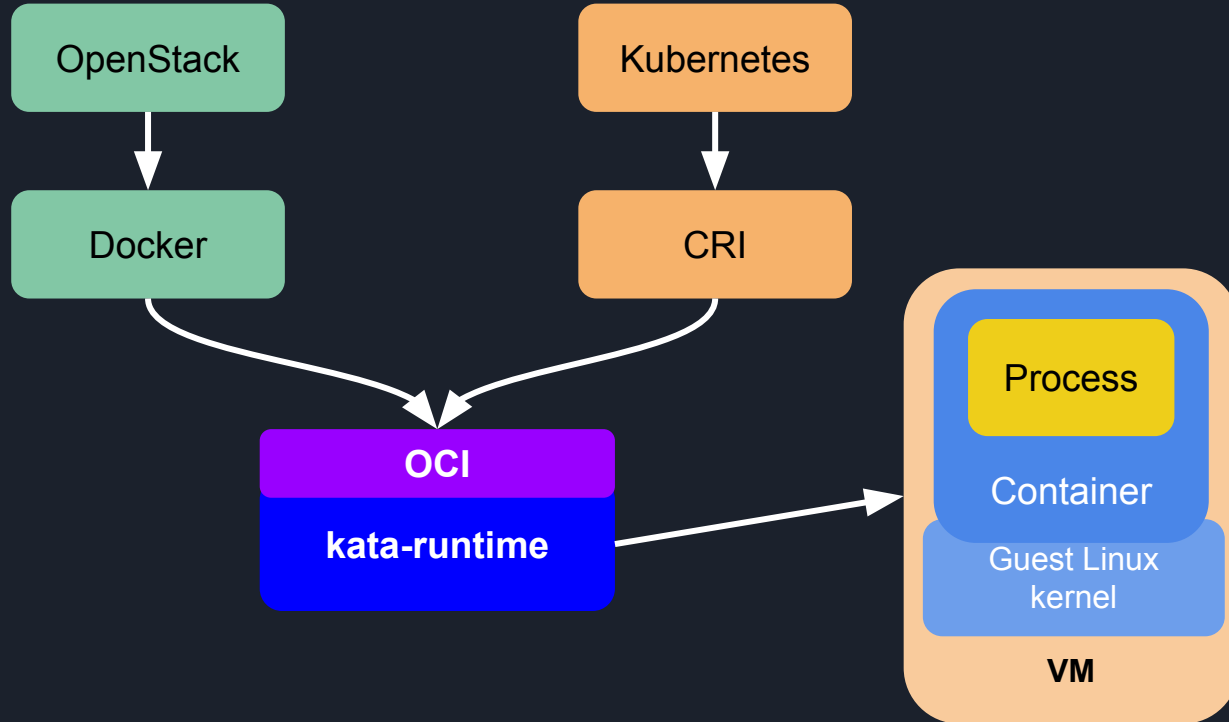
Container ecosystem



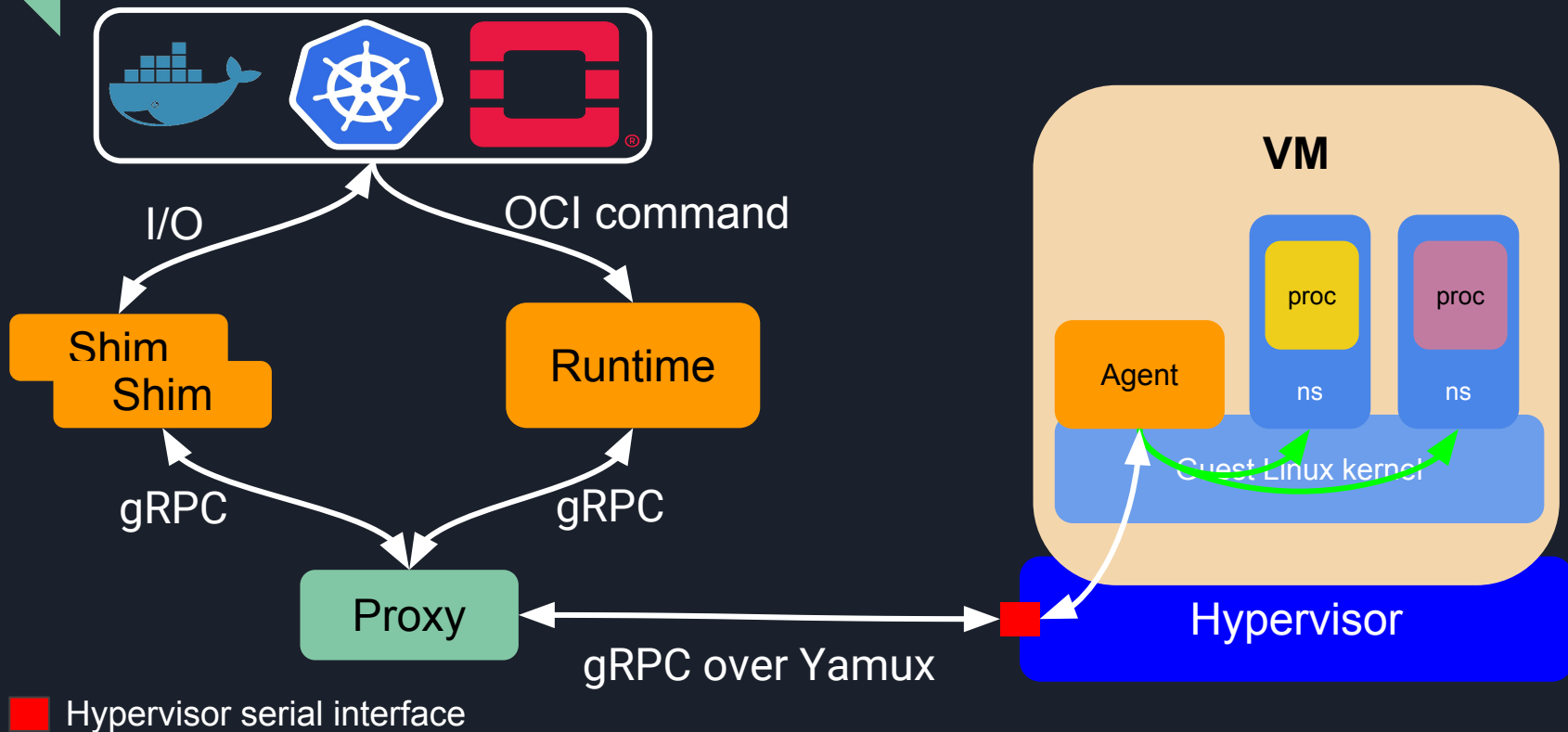
Container ecosystem



Seamless integration

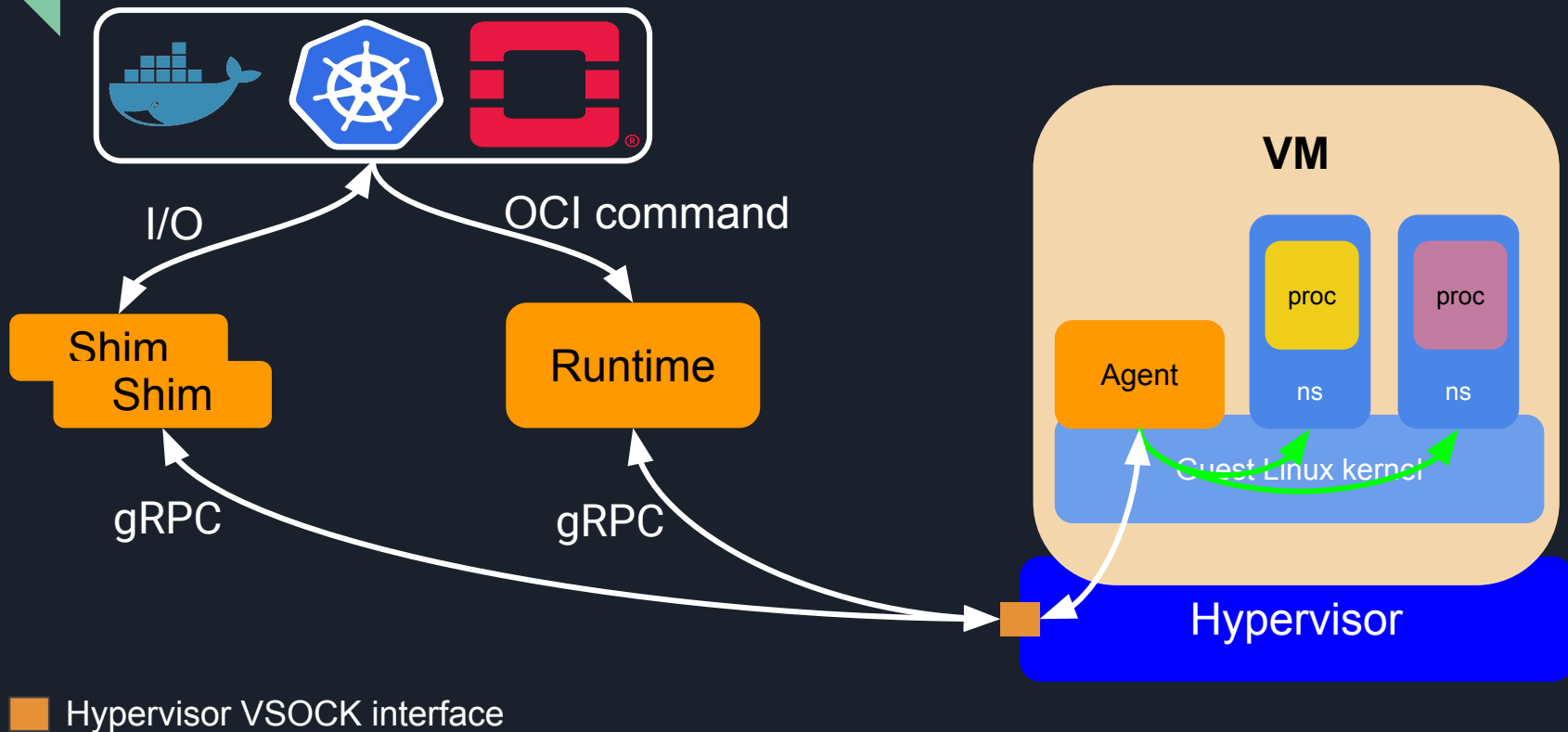


Architecture



S I M P L I F Y

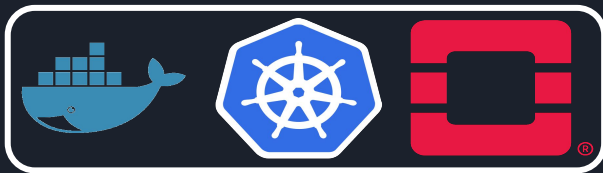
Architecture over VSOCK



OCI lifecycle



OCI Lifecycle - run



kata-runtime run

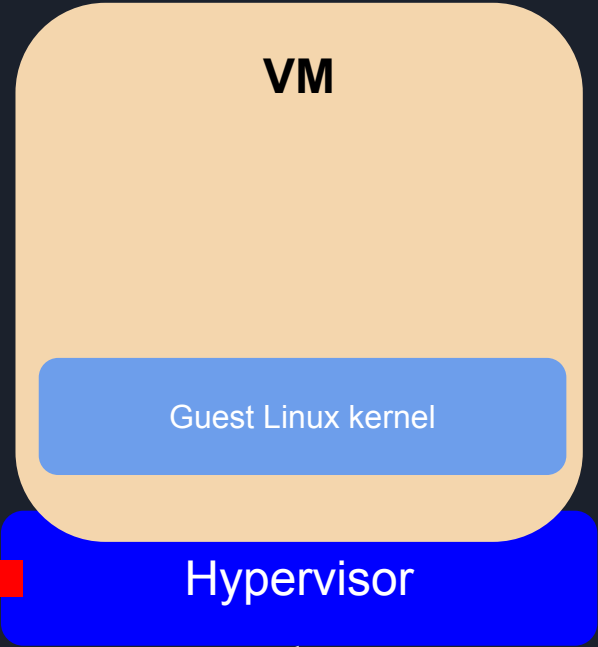
Runtime

OCI Lifecycle - run



Runtime

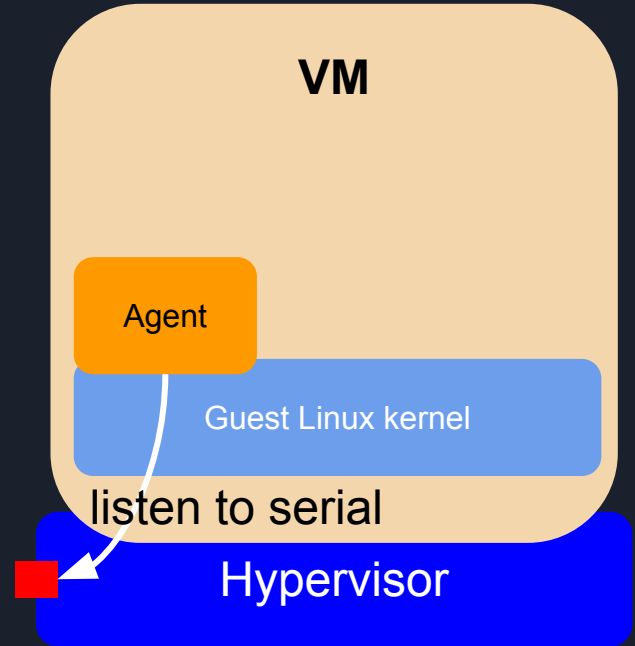
Start VM



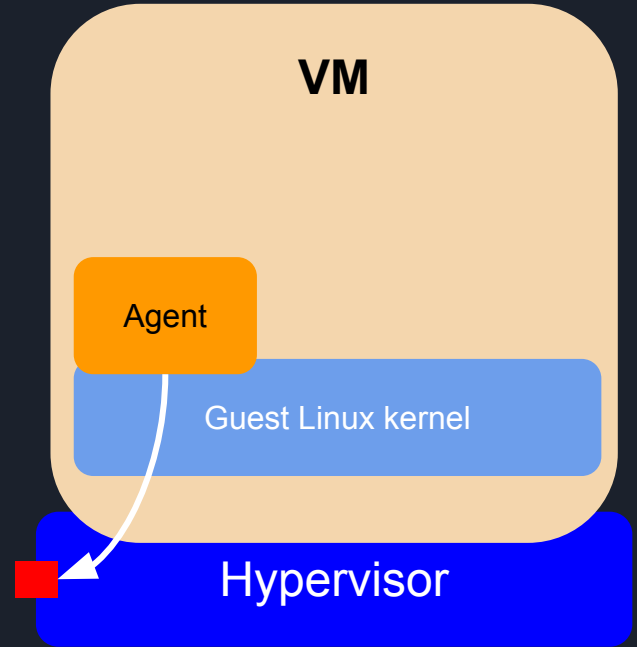
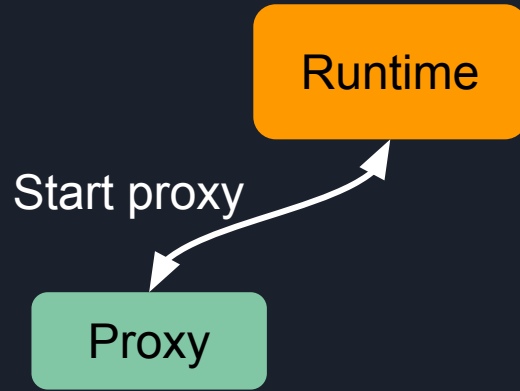
OCI Lifecycle - run



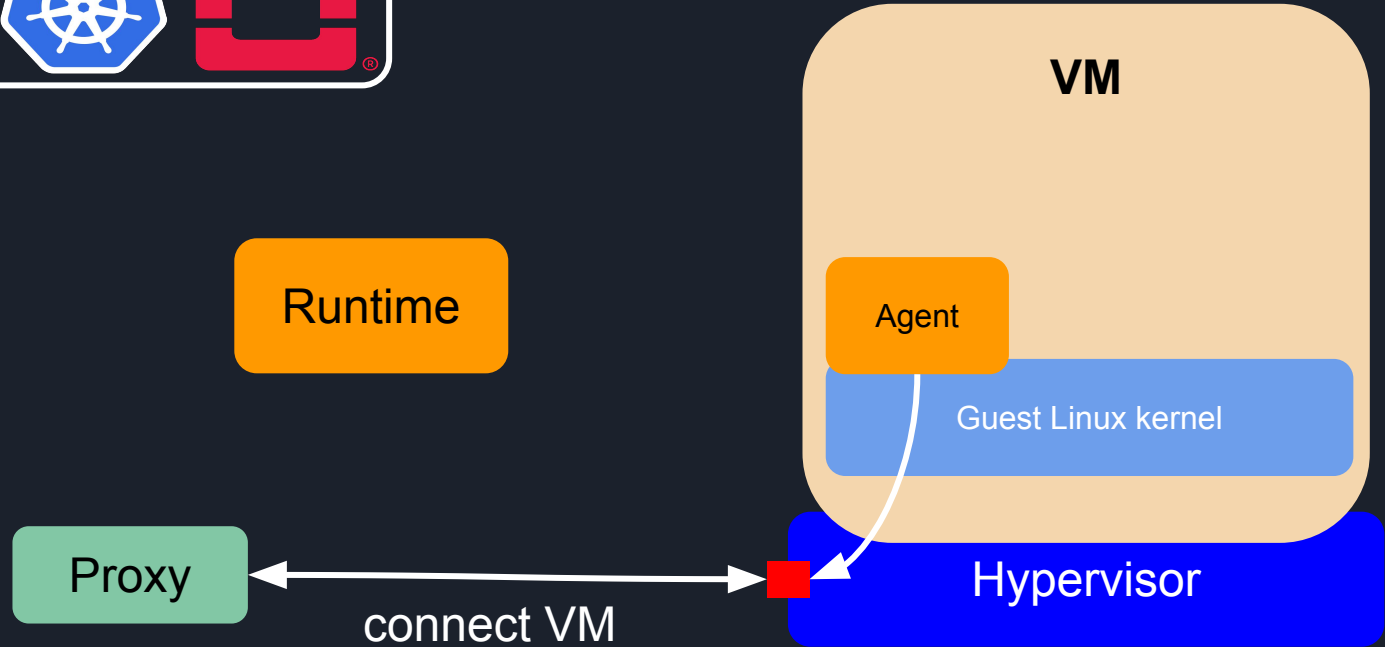
Runtime



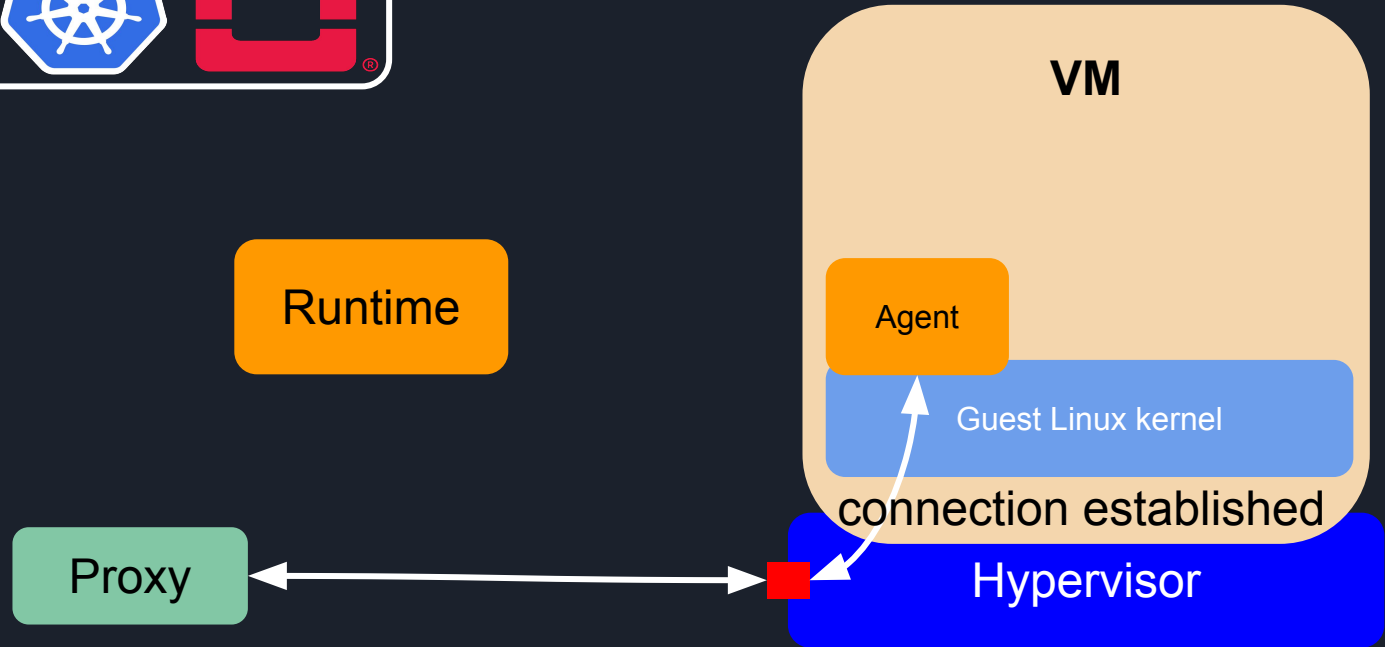
OCI Lifecycle - run



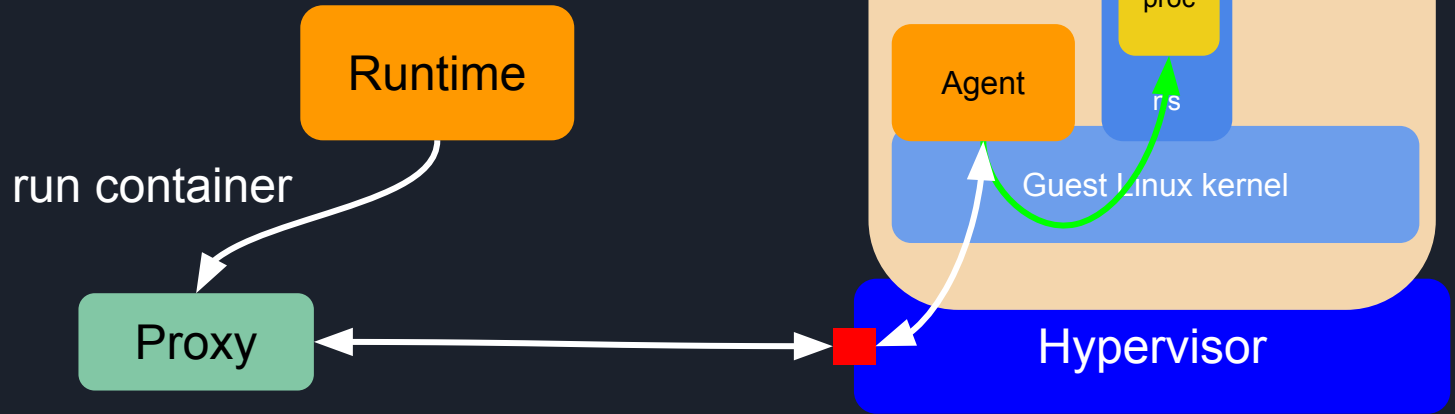
OCI Lifecycle - run



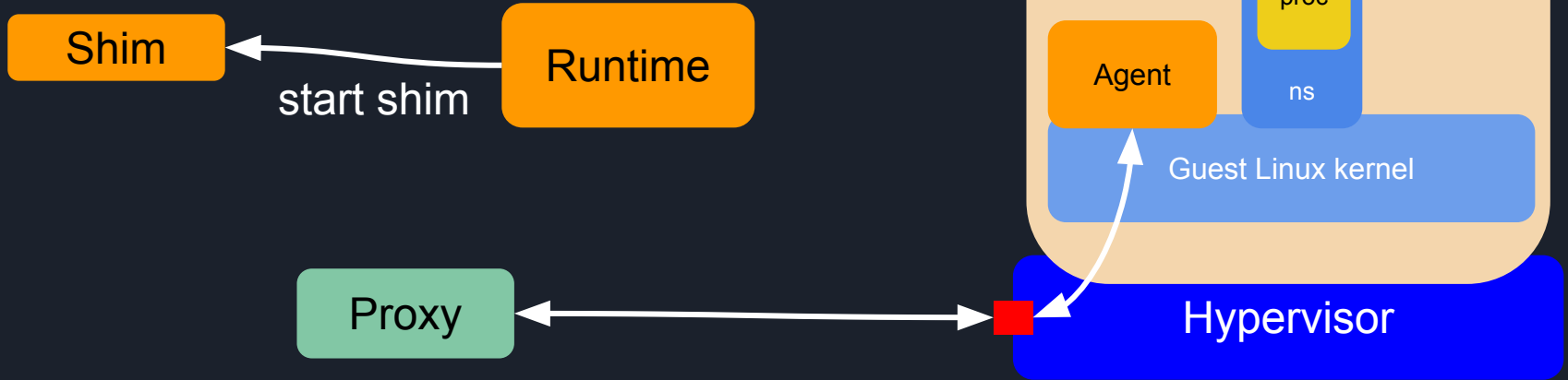
OCI Lifecycle - run



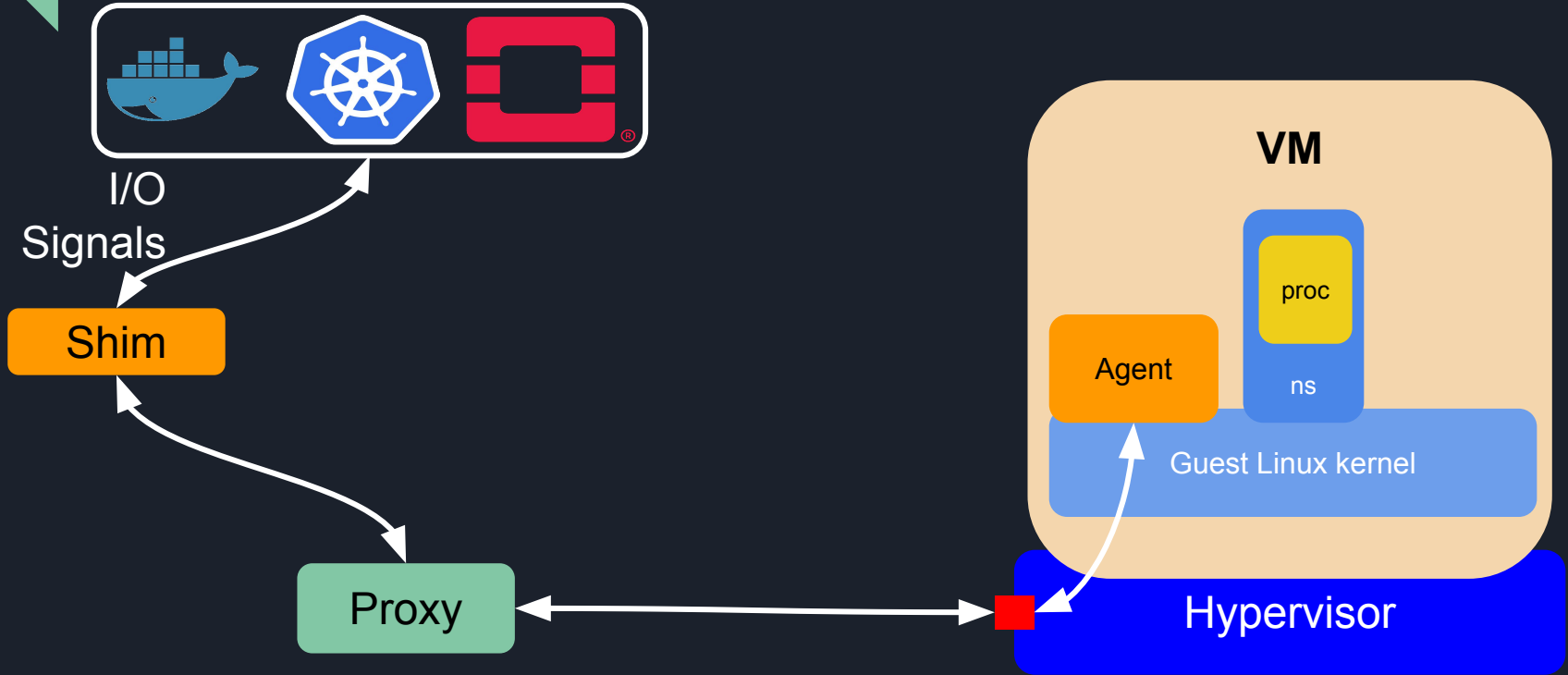
OCI Lifecycle - run



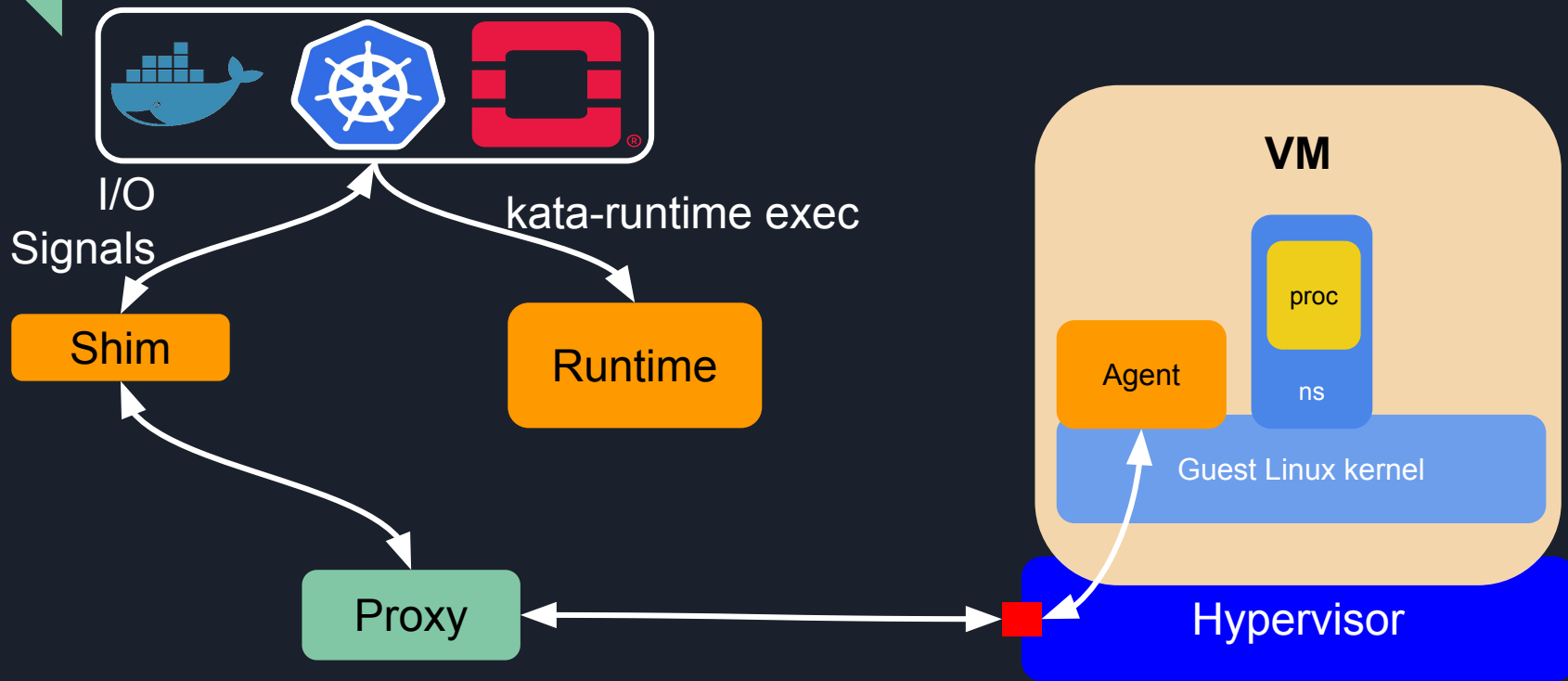
OCI Lifecycle - run



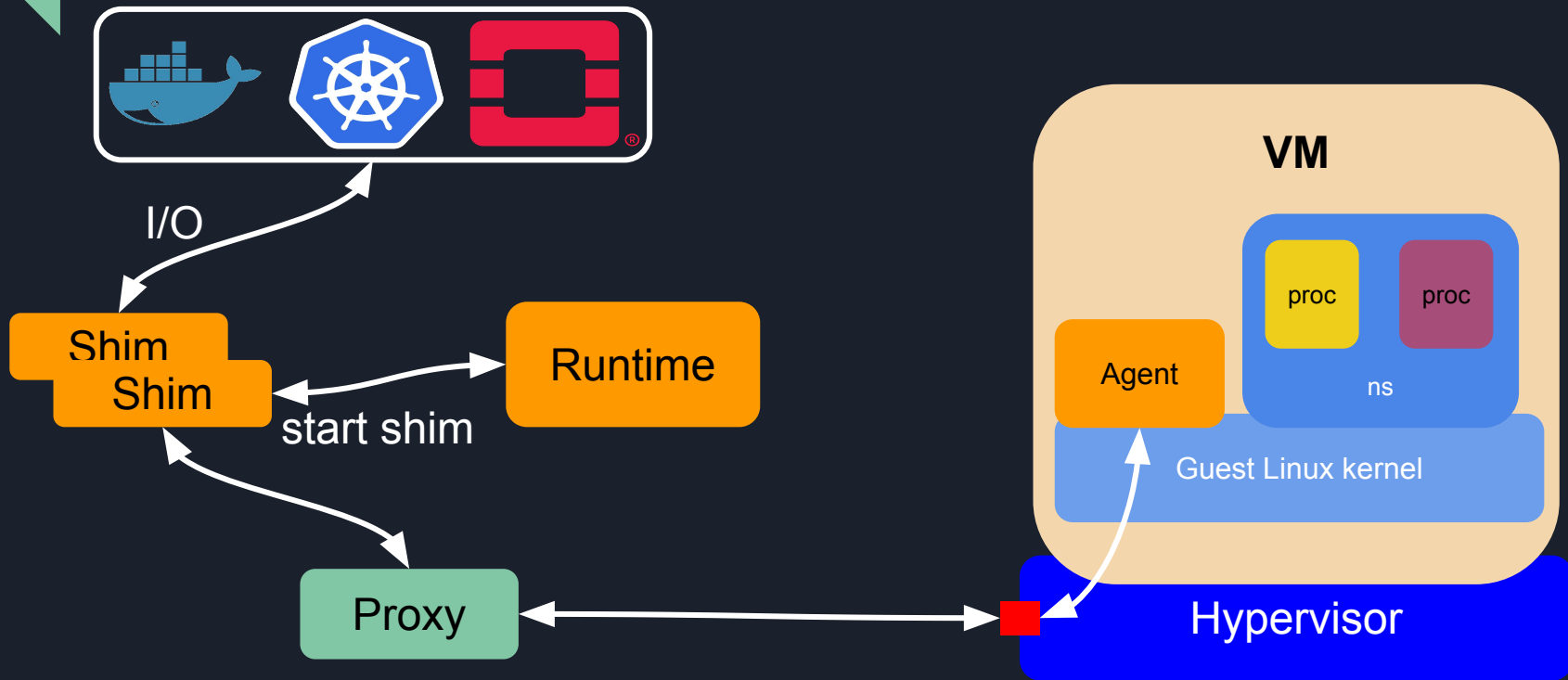
OCI Lifecycle - run



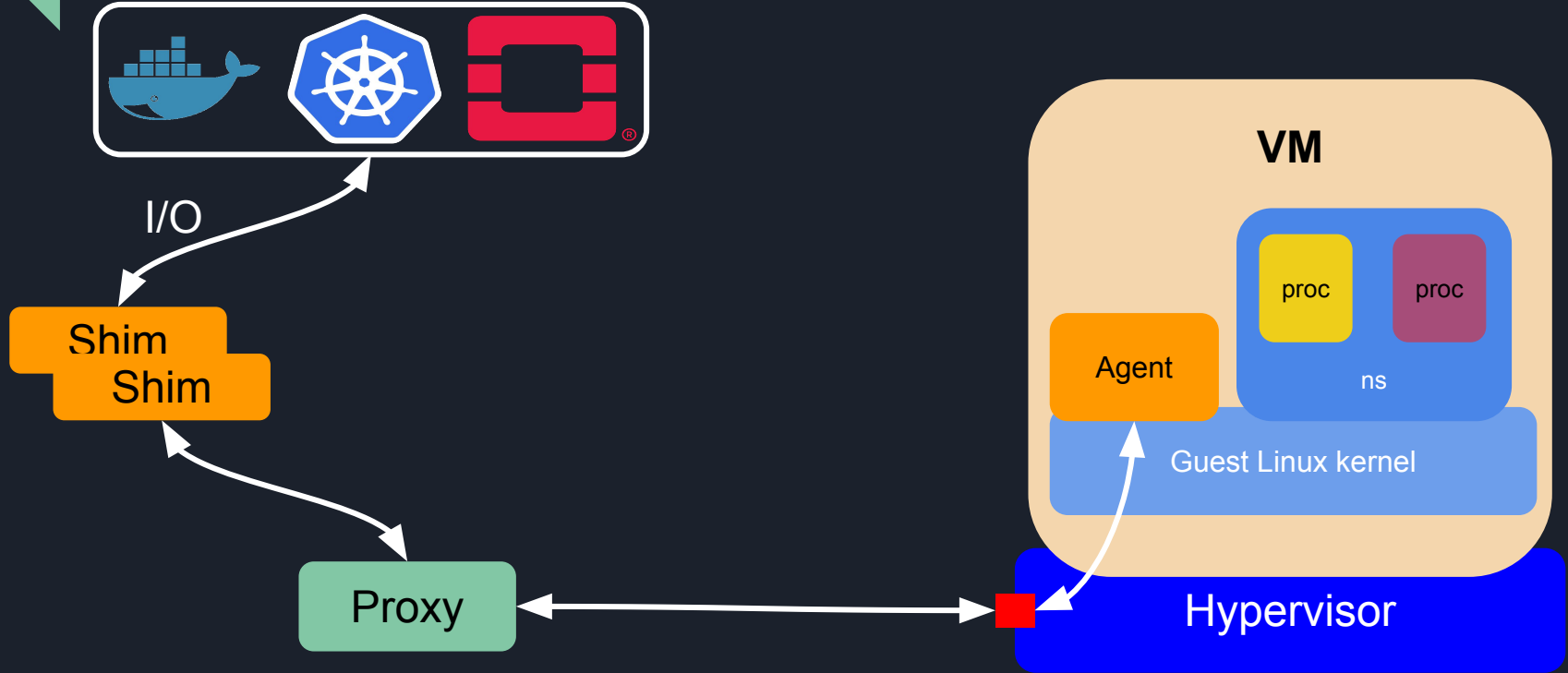
OCI Lifecycle - exec



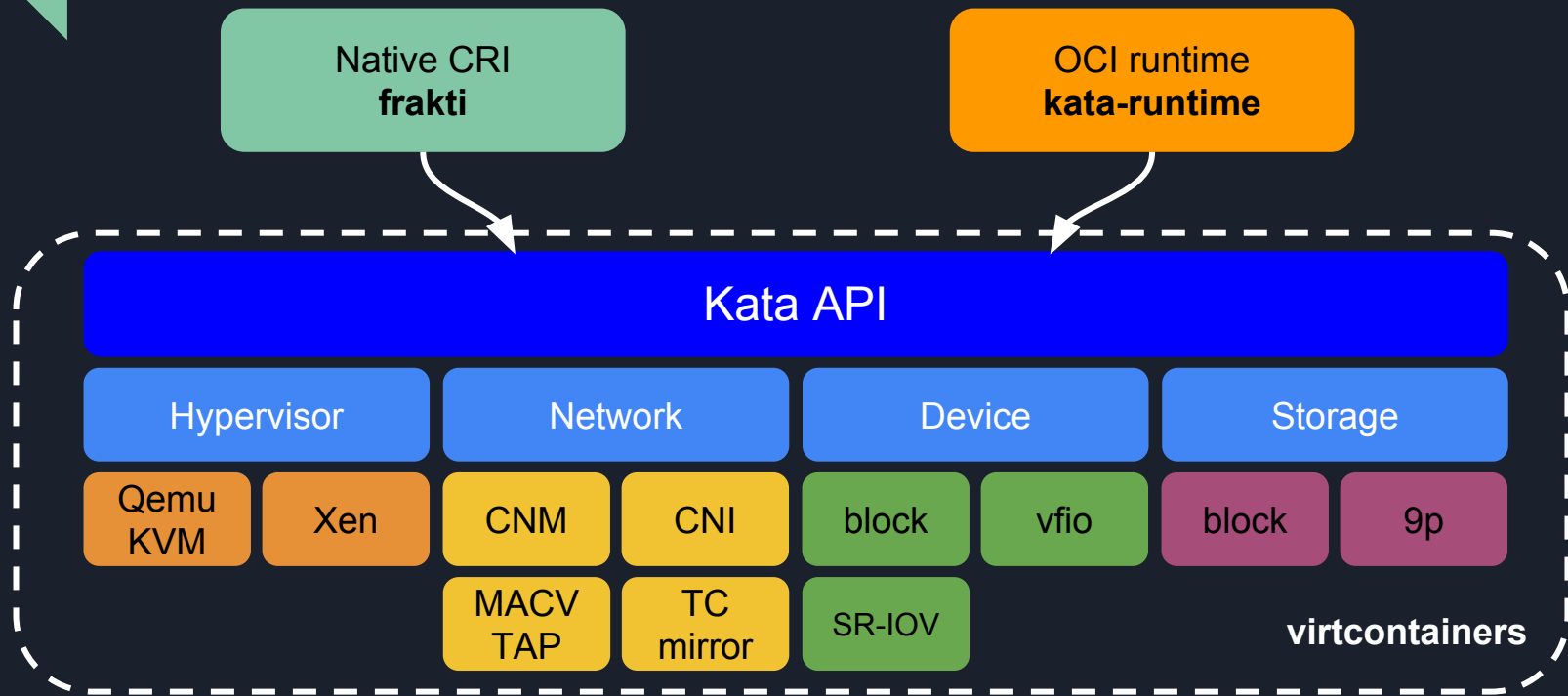
OCI Lifecycle - exec

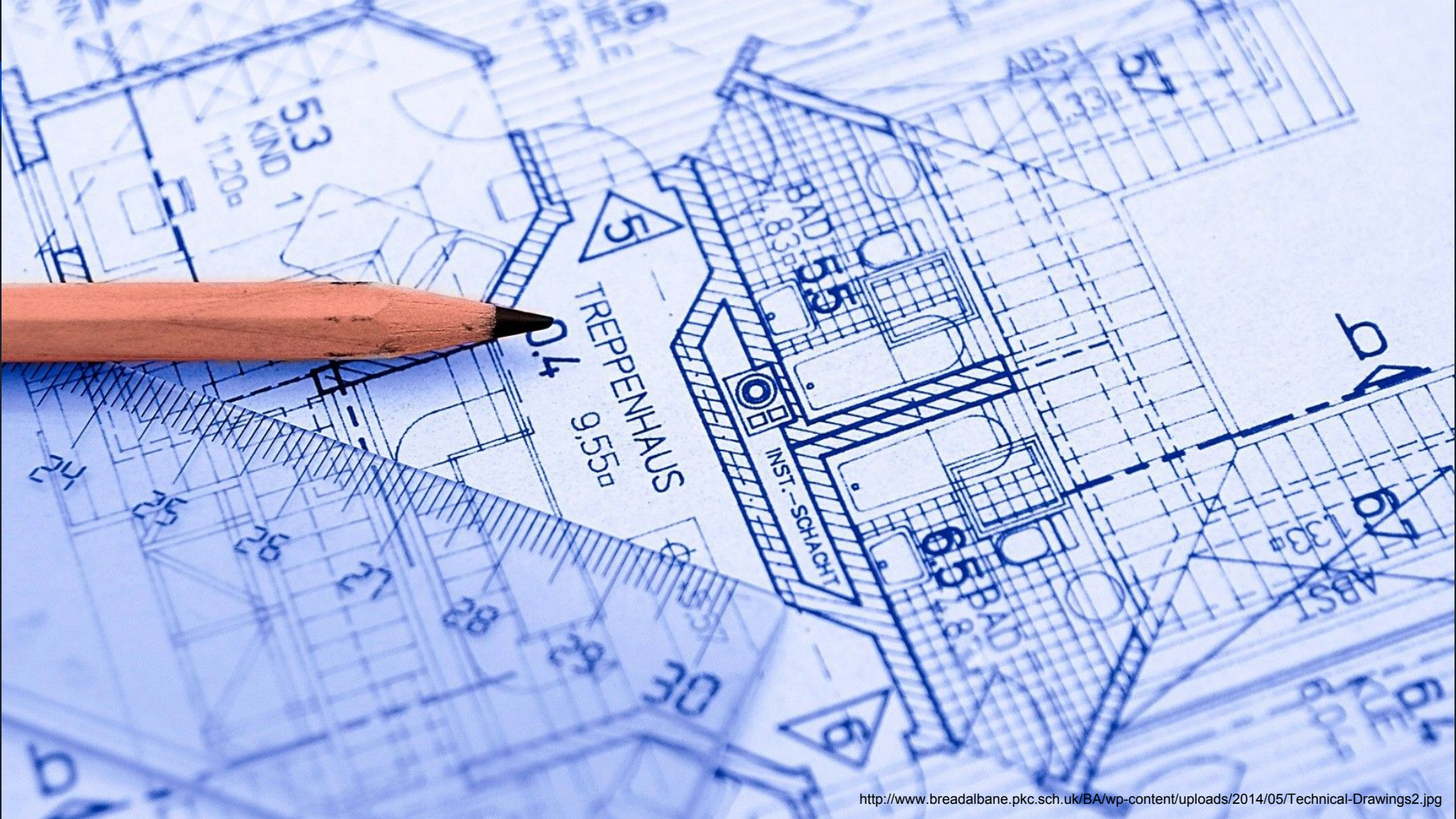


OCI Lifecycle - exec

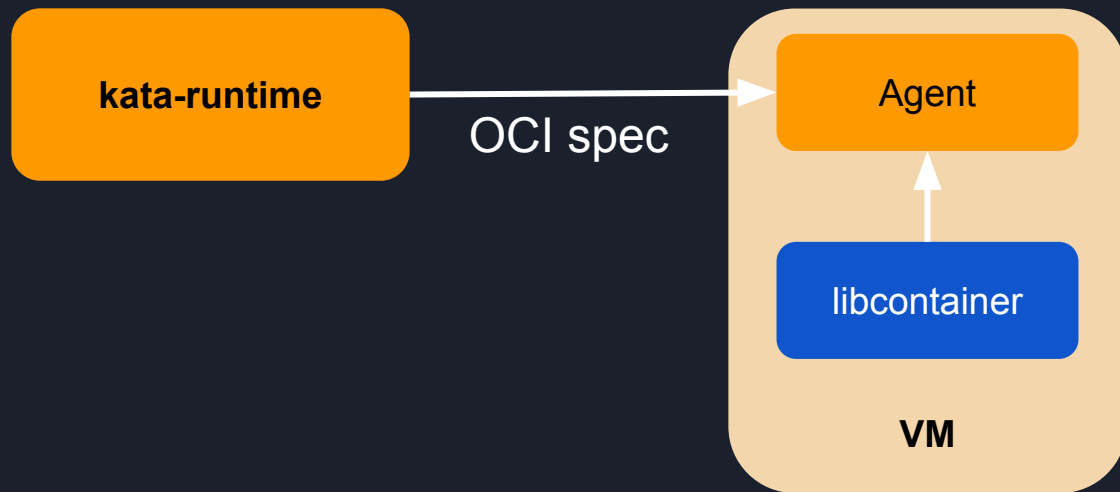


More than just OCI

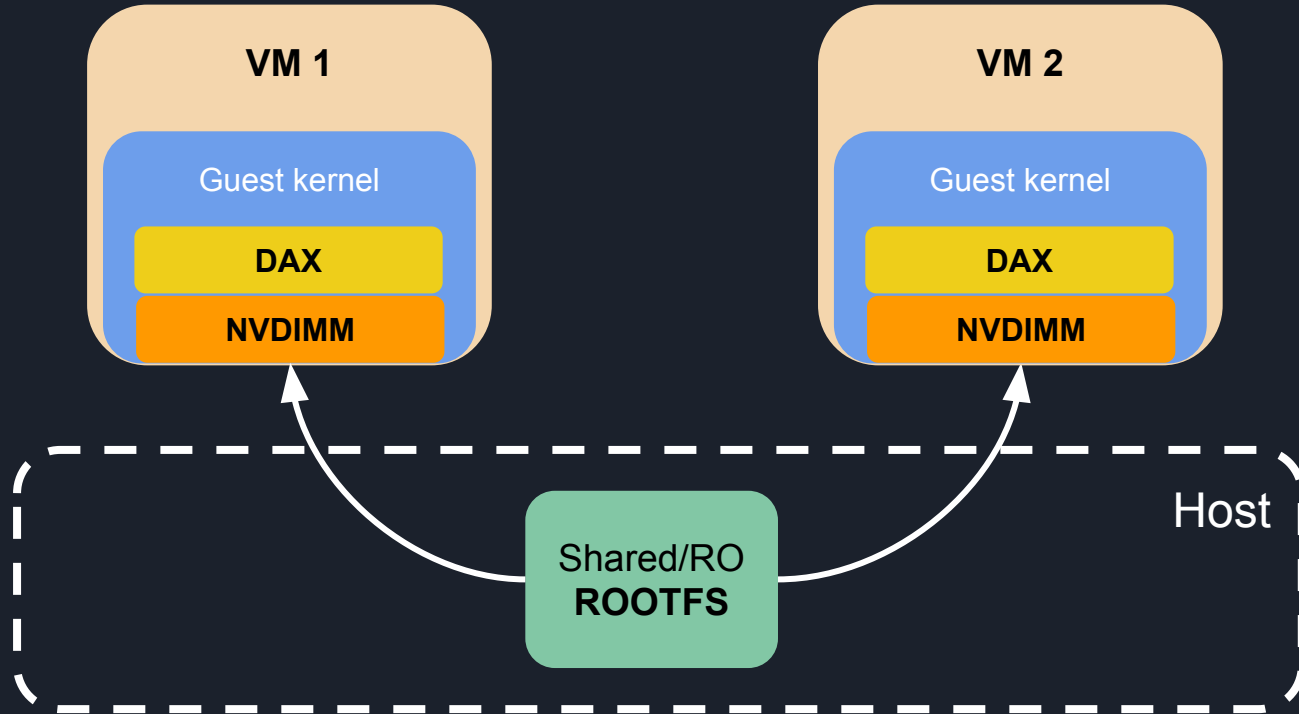




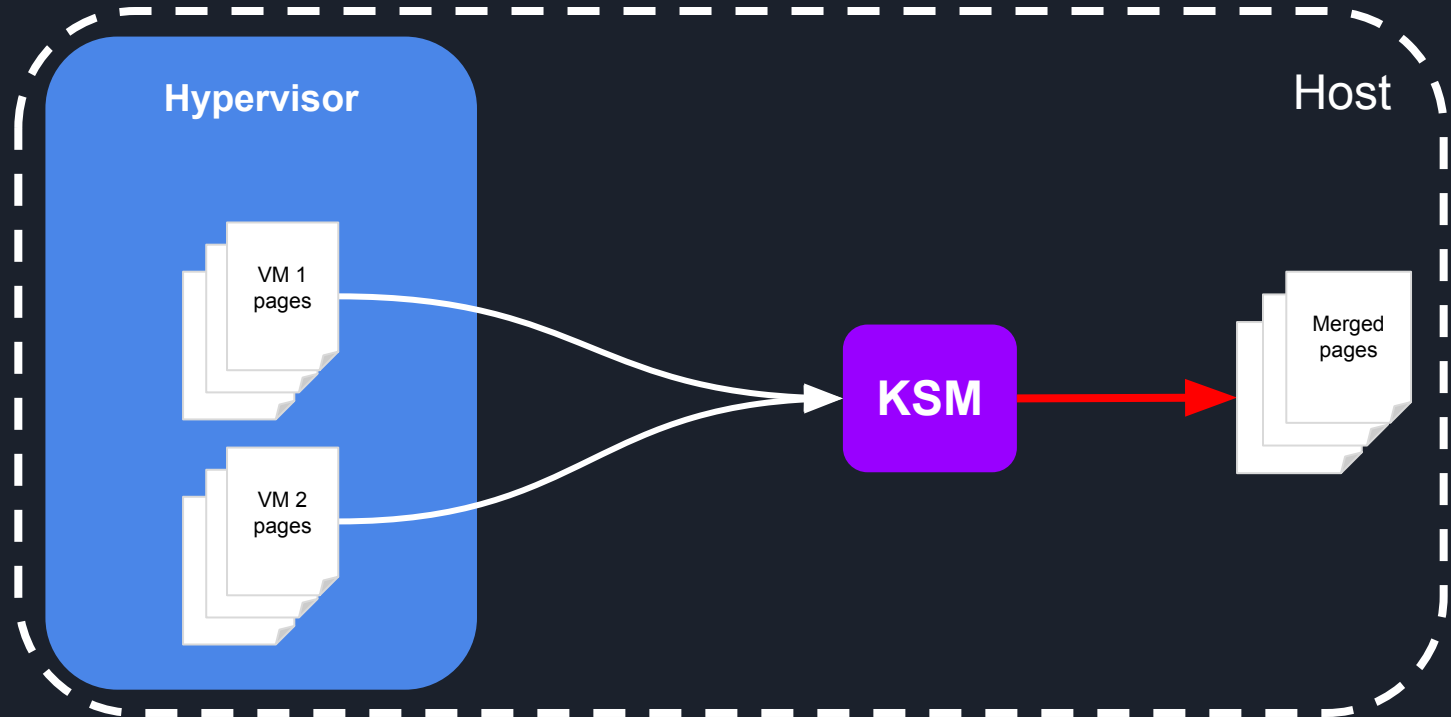
OCI compatibility



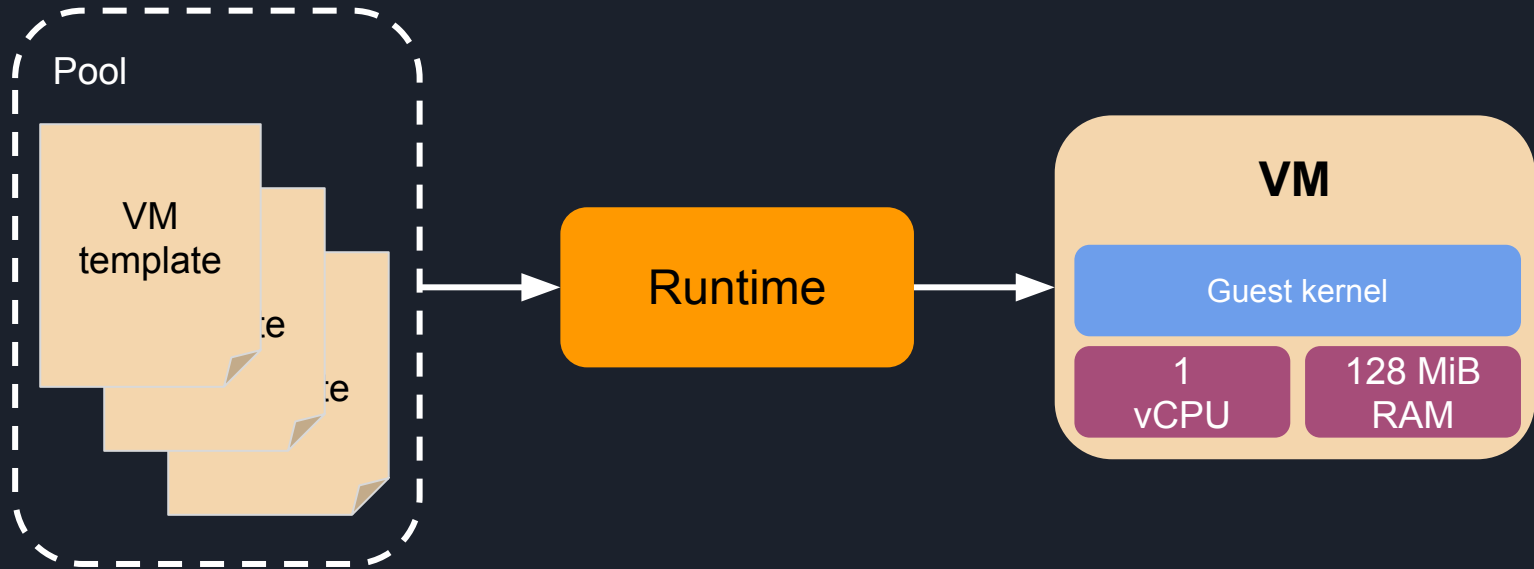
Lightweight VM - NVDIMM/DAX



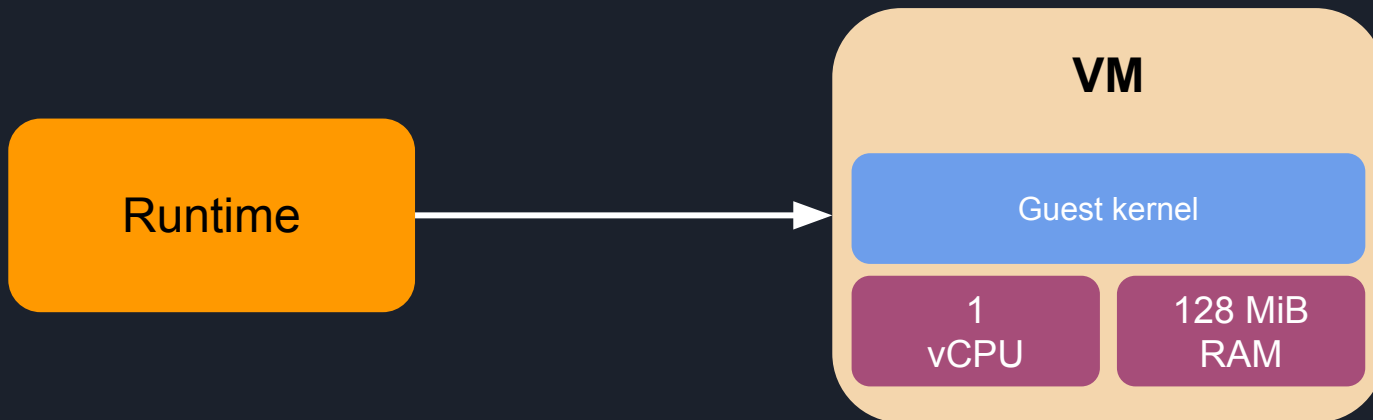
Lightweight VM - KSM



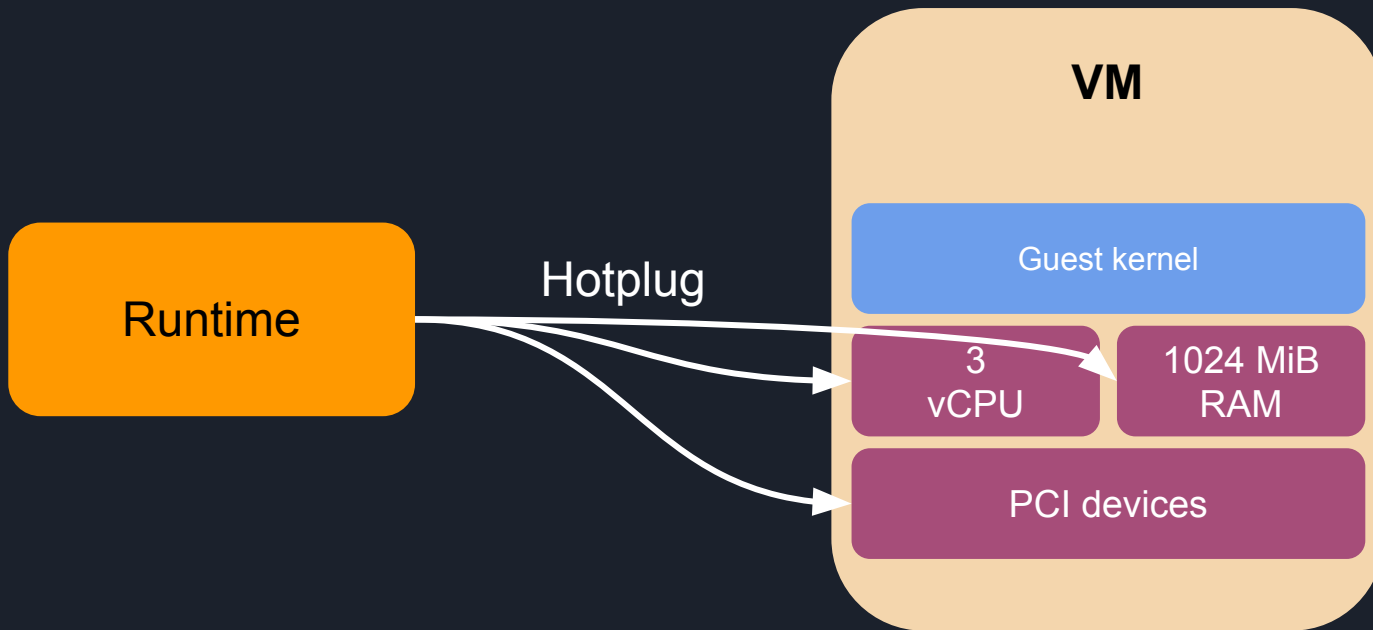
Fast VM - Templating



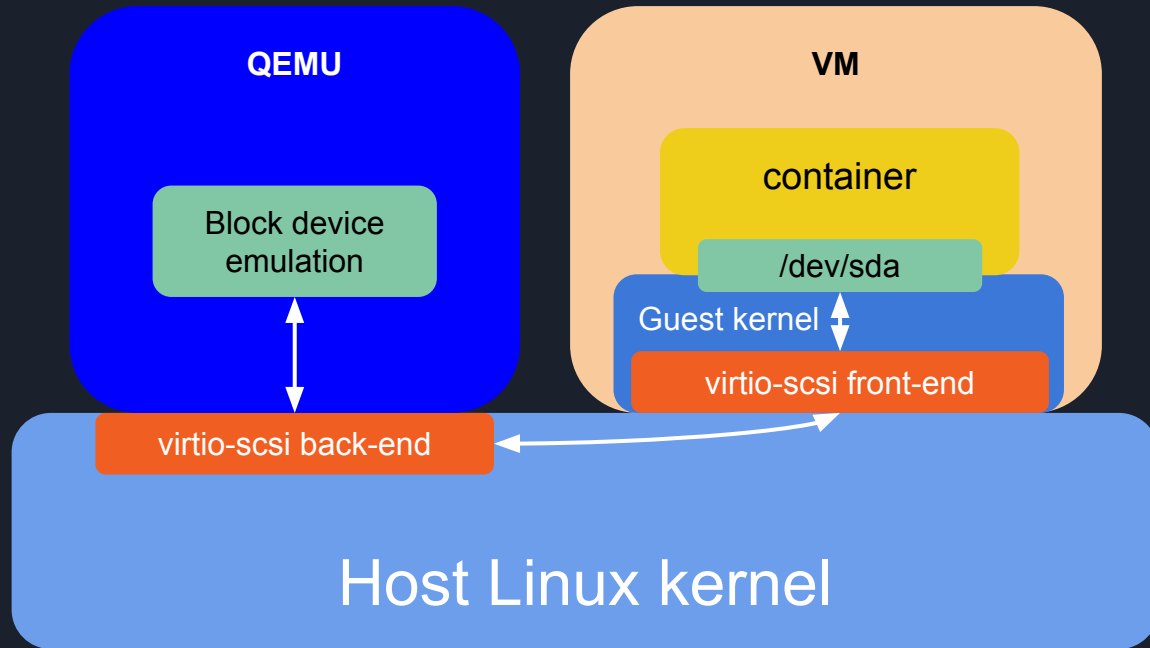
Fast VM - Hotplug



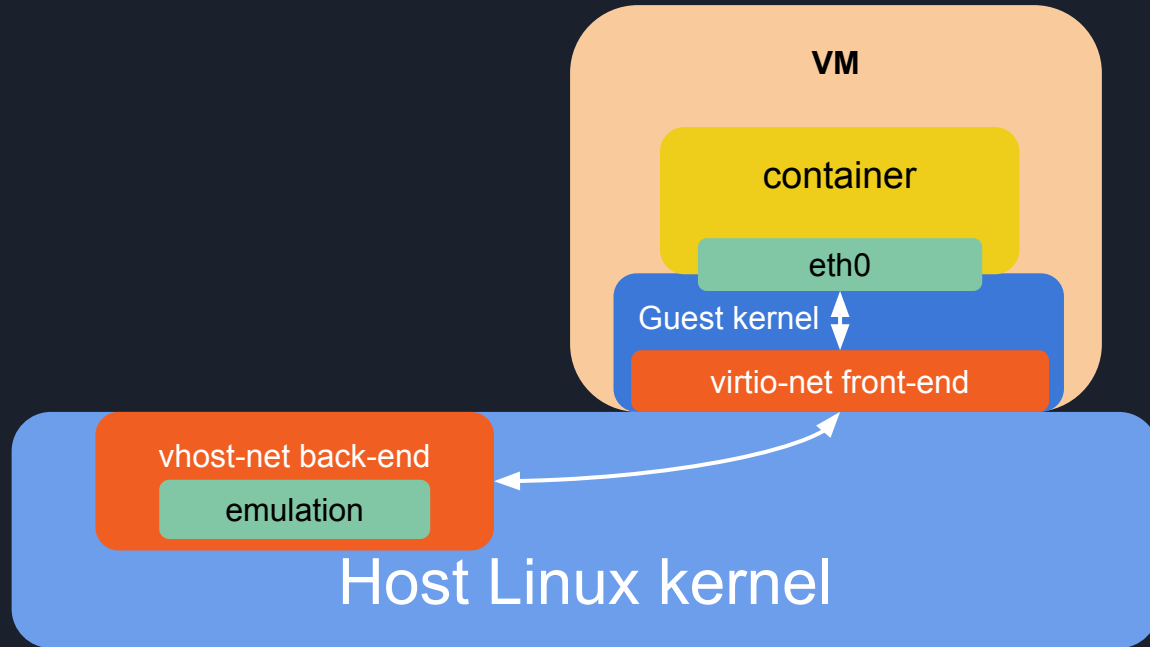
Fast VM - Hotplug



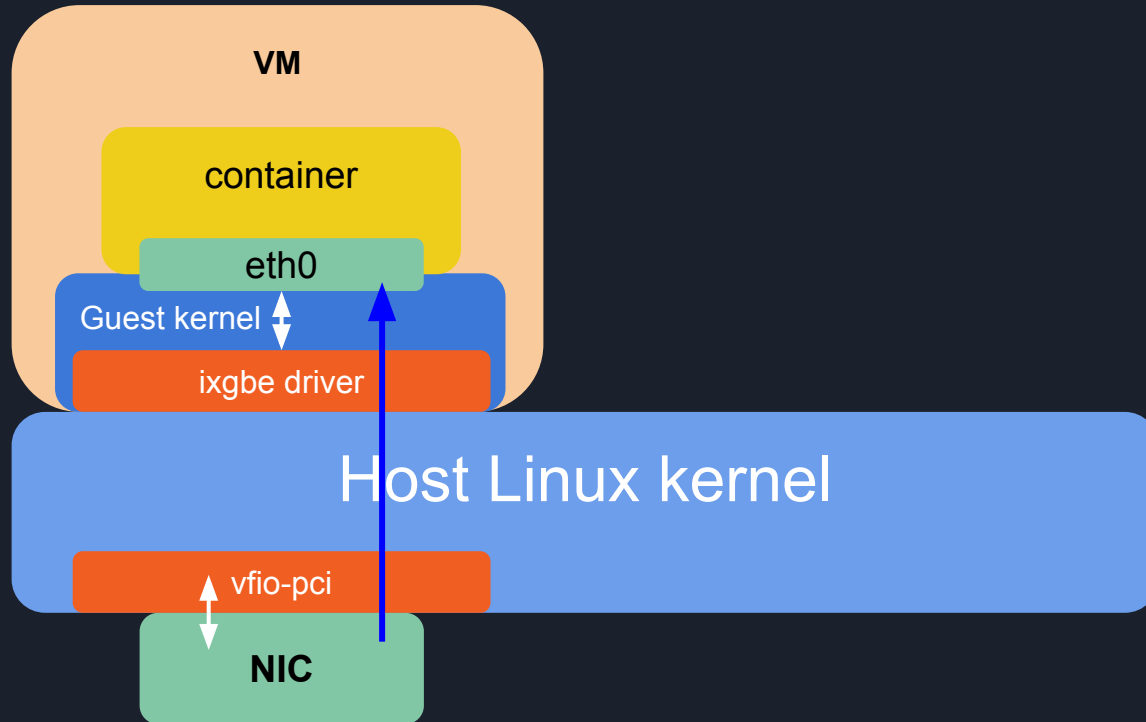
Devices - virtio



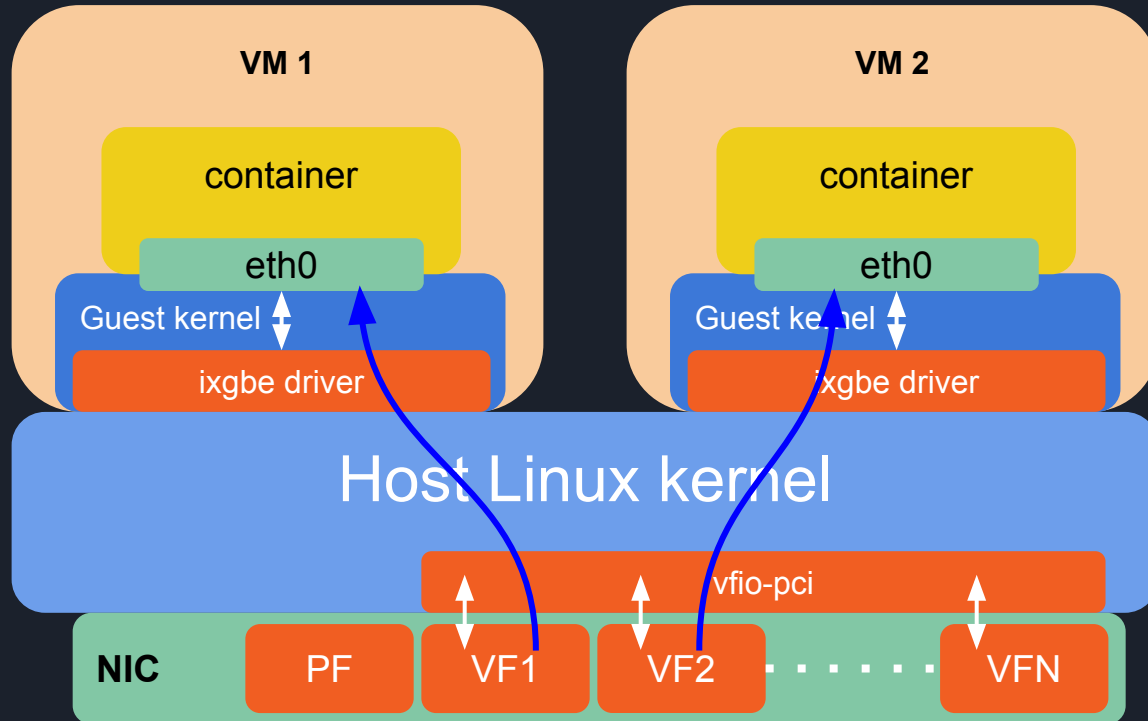
Devices - virtio



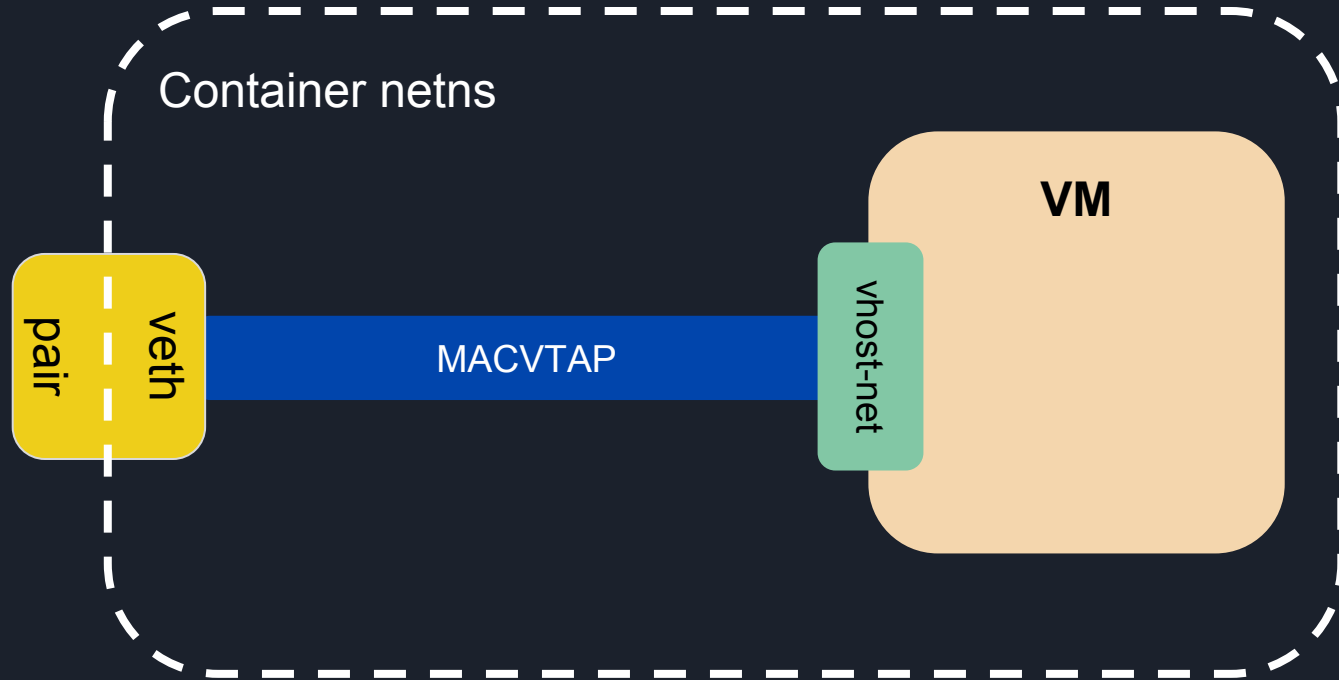
Devices - HW passthrough



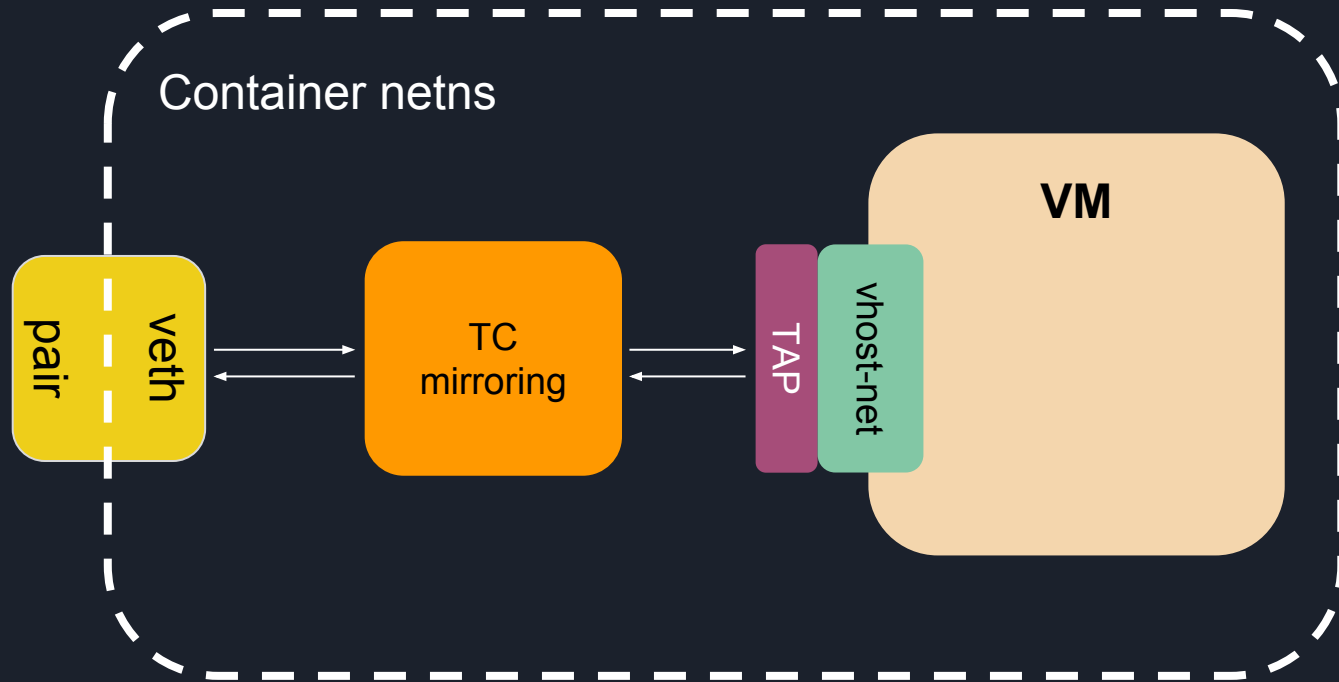
Devices - SR-IOV bonus



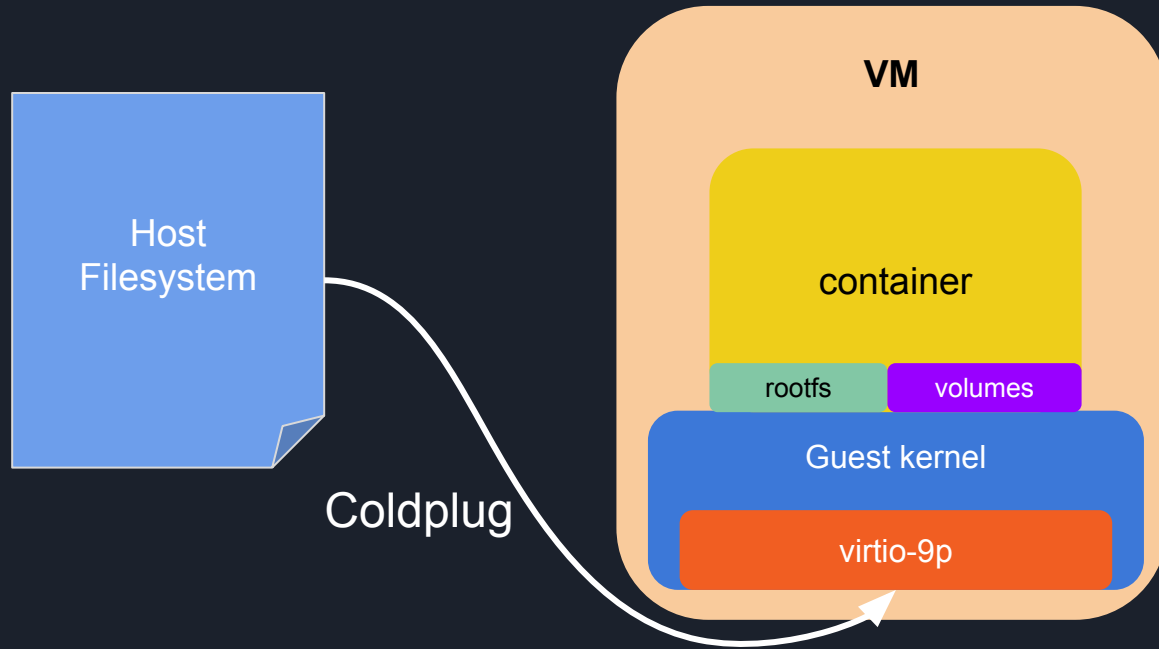
Network - Macvtap



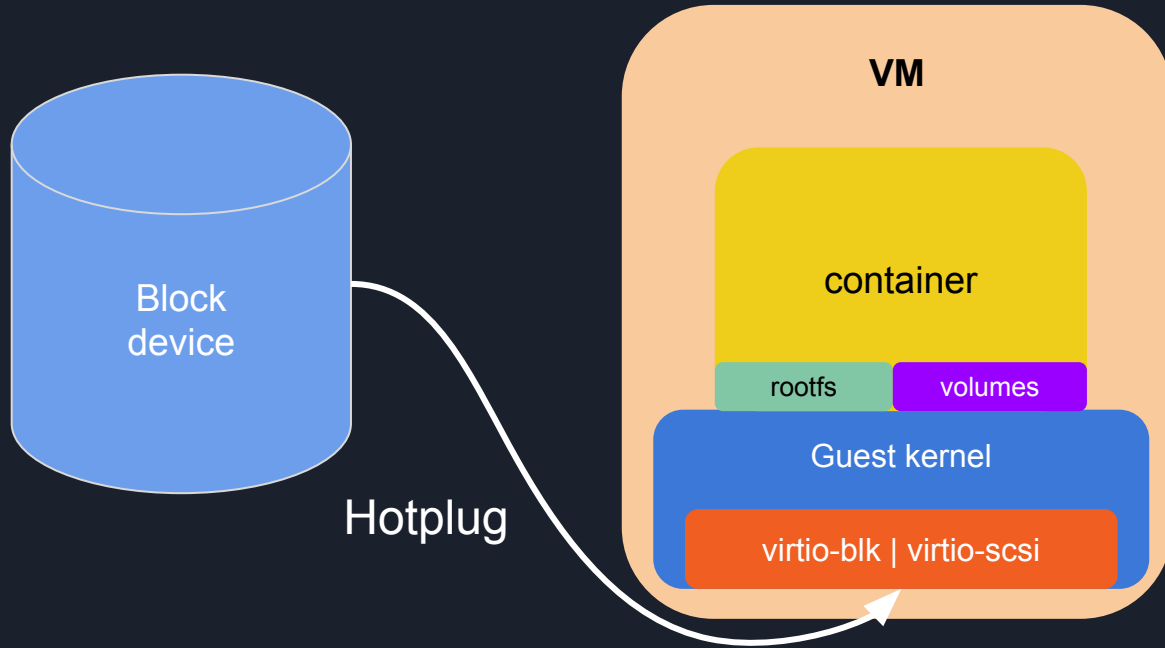
Network - Traffic control



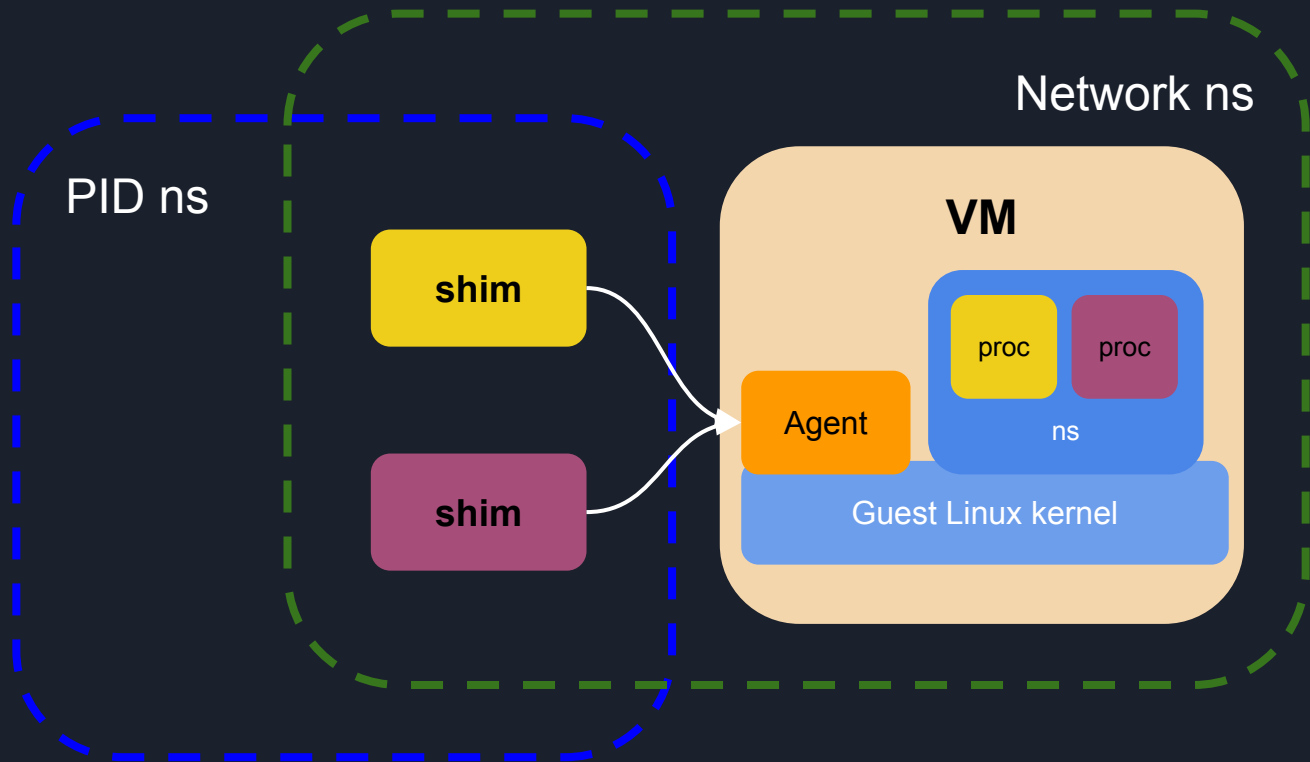
Storage - 9p



Storage - blk

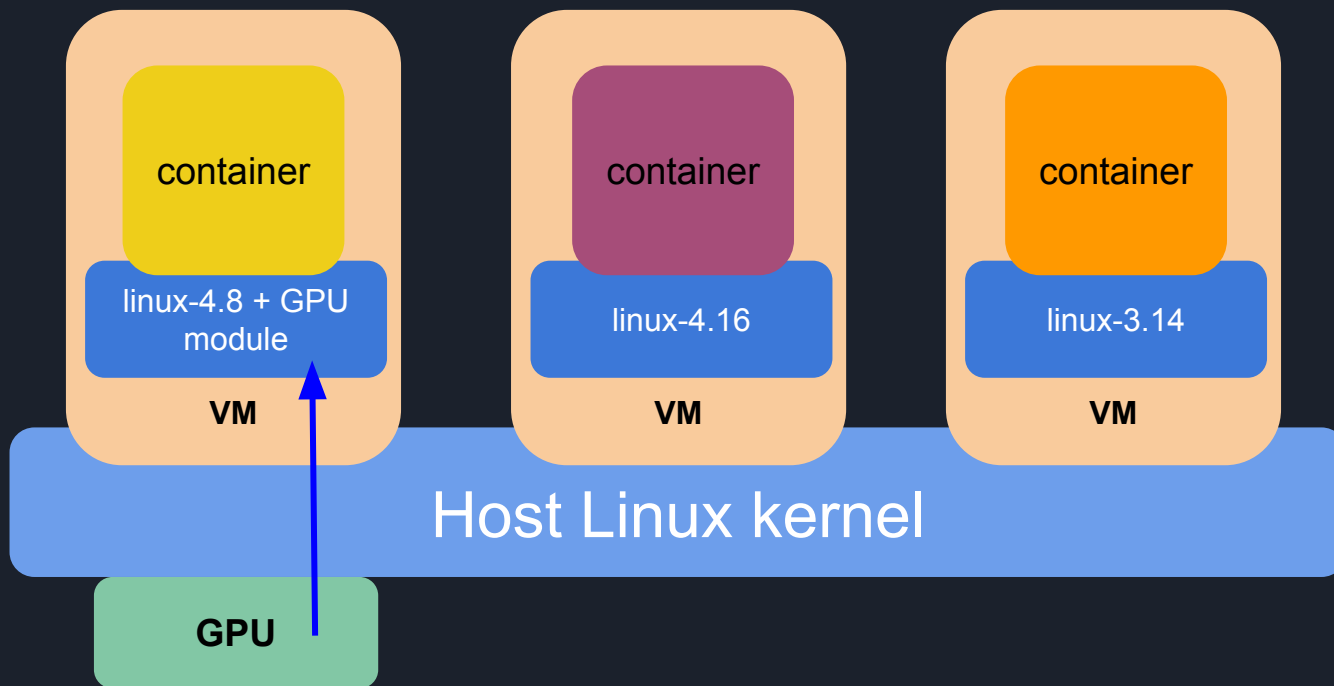


Host namespaces





Multi OS





Time to wrap up !





Time to wrap up !





Time to wrap up !





Play & contribute !

Sources: <https://github.com/kata-containers/runtime>

Get started:

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

Slack: katacontainers.slack.com

IRC: [#kata-dev@freenode](https://freenode.net/#kata-dev)

Mailing list: kata-dev@lists.katacontainers.io