



KubeCon



CloudNativeCon

Europe 2022

WELCOME TO VALENCIA





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containerd: Introduction and project update

Phil Estes, Amazon
Derek McGowan, Apple



ANNUAL SURVEY 2021

CNCF is also starting to see organizations move up the stack – adopting less mature projects to tackle challenges including monitoring and communications.



CLOUD NATIVE PROJECT ADOPTION
IS GROWING YEAR-ON-YEAR

500% 

39% 

53% 

43% 

Kubernetes 1.24: Stargazer

Tuesday, May 03, 2022

Dockershim Removed from kubelet

After its deprecation in v1.20, the dockershim component has been removed from the kubelet in Kubernetes v1.24. From v1.24 onwards, you will need to either use one of the other [supported runtimes](#) (such as containerd or CRI-O) or use cri-dockerd if you are relying on Docker Engine as your container runtime. For more information about ensuring your cluster is ready for this removal, please see [this guide](#).

nerdctl: Docker-compatible CLI for containerd

`nerdctl` is a Docker-compatible CLI for [containerd](#).

- ✓ Same UI/UX as `docker`
- ✓ Supports Docker Compose (`nerdctl compose up`)

Don't miss other containerd talks



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Thursday, May 19

15:25 CEST

Running Containerd and k3s on MacOS - Akihiro Suda, NTT Corporation & Jan Dubois, SUSE

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Keep Calm and Containerd On! - Anusha Ragunathan, Intuit Inc

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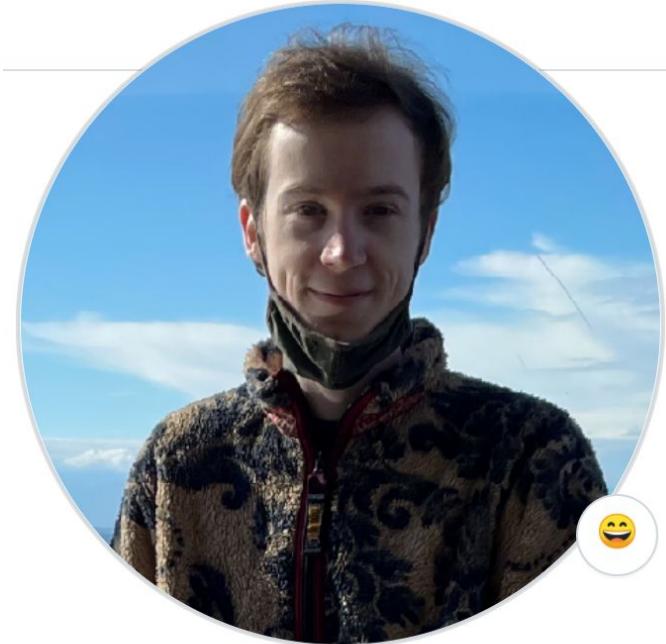
New maintainers since last Kubecon



Mike Zappa
MikeZappa87



Kazuyoshi Kato
kzys



Danny Canter
dcantah

Documentation improvements

Work in progress, need contribution



Frequently Asked!

Registry Configuration - Introduction

New and additional registry hosts config support has been implemented in containerd v1.5 for the `ctr` client (the containerd tool for admins/developers), containerd image service clients, and CRI clients such as `kubectl` and `crlctl`.

Setup a Local Mirror for Docker

```
server = "https://registry-1.docker.io"      # Exclude this to not use upstream

[host."https://public-mirror.example.com"]
    capabilities = ["pull"]                  # Requires less trust, won't resolve tag to digest from this host
[host."https://docker-mirror.internal"]
    capabilities = ["pull", "resolve"]
    ca = "docker-mirror.crt"                # Or absolute path /etc/containerd/certs.d/docker.io/docker-mirror.crt
```

Source: [docs/hosts.md](#)

Supported releases

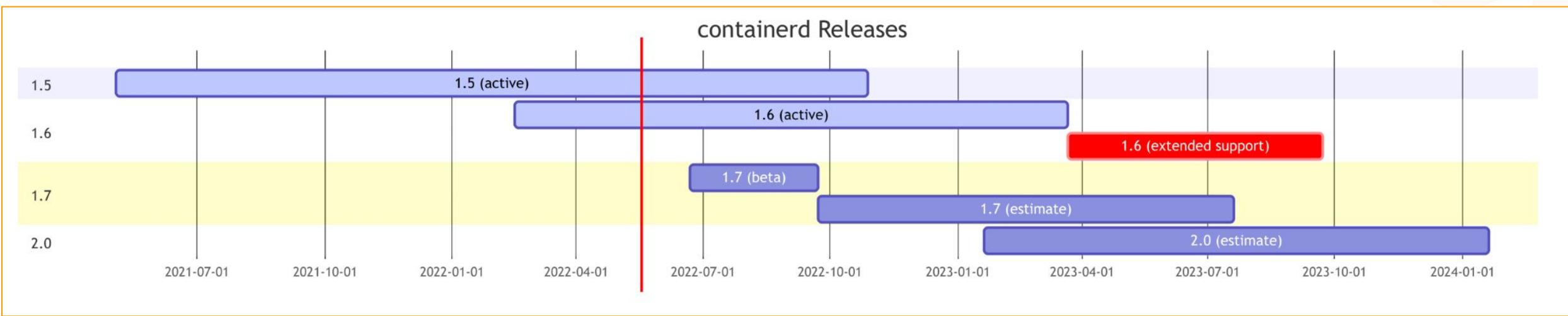


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1.4	End of Life	August 17, 2020	March 3, 2022
1.5	Active	May 3, 2021	October 28, 2022
1.6	Active	February 15, 2022	max(February 15, 2023 or release of 1.7.0 + 6 months)
1.7	Next	TBD	TBD

Source: RELEASES.md

Supported Kubernetes versions



Kubernetes Support

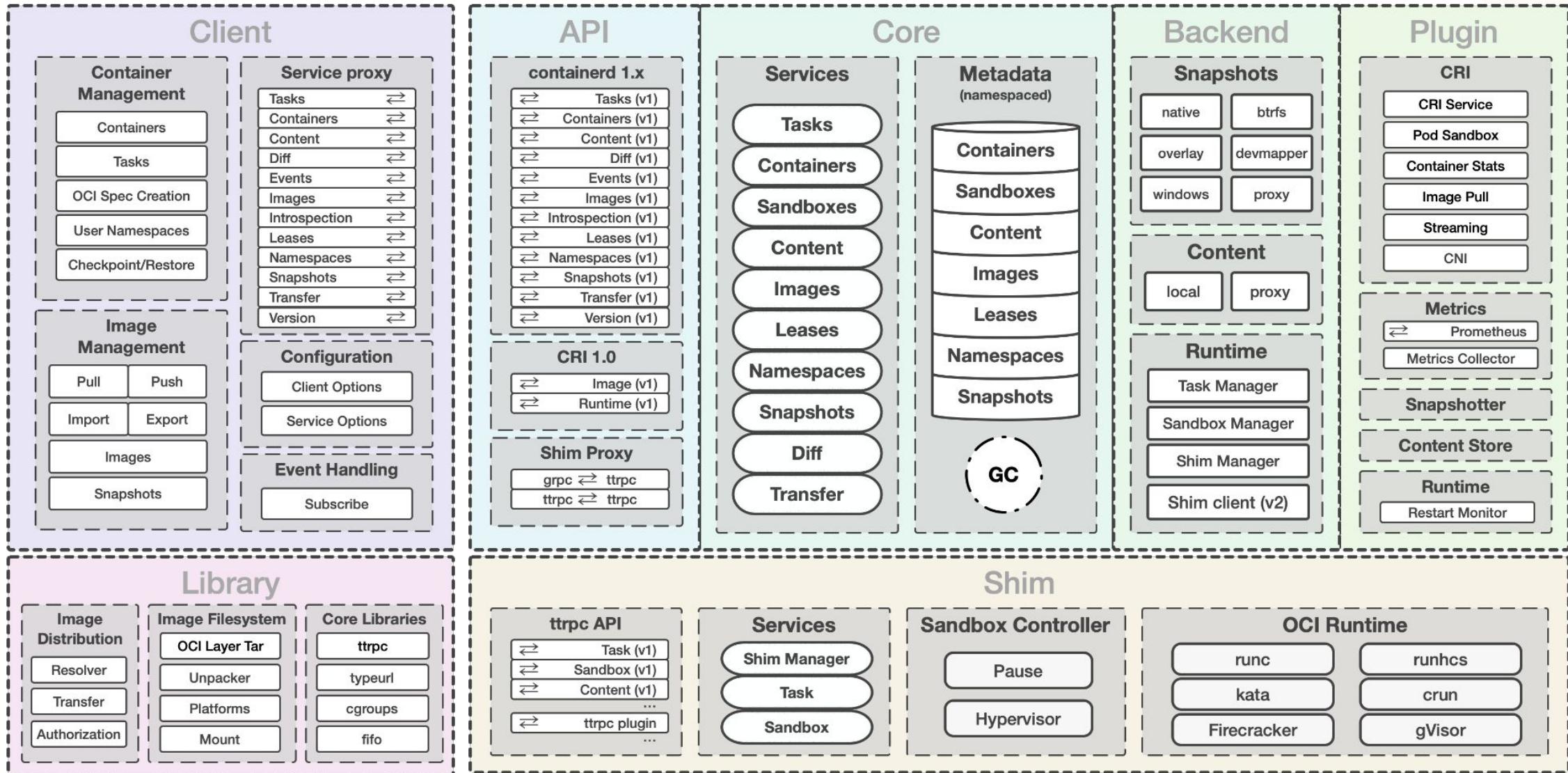
The Kubernetes version matrix represents the versions of containerd which are recommended for a Kubernetes release. Any actively supported version of containerd may receive patches to fix bugs encountered in any version of Kubernetes, however, our recommendation is based on which versions have been the most thoroughly tested. See the [Kubernetes test grid](#) for the list of actively tested versions. Kubernetes only supports n-3 minor release versions and containerd will ensure there is always a supported version of containerd for every supported version of Kubernetes.

Kubernetes Version	containerd Version	CRI Version
1.20	1.5	v1alpha2
1.21	1.5	v1alpha2
1.22	1.5.5+	v1alpha2
1.23	1.6.0+, 1.5.8+	v1, v1alpha2
1.24	1.6.4+, 1.5.11+	v1, v1alpha2

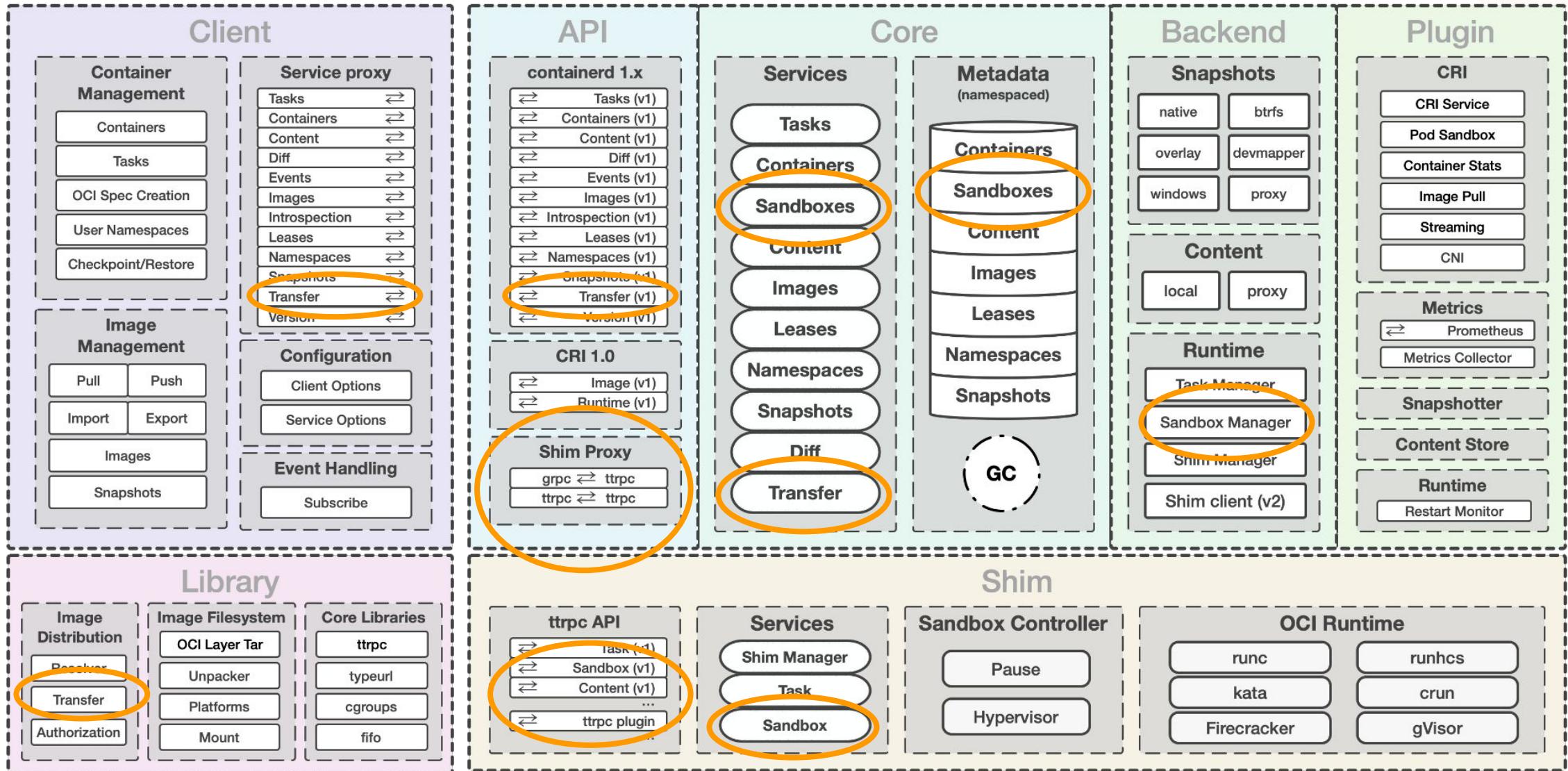
Features Being Worked On

- **Sandbox Service and API**
- **Image Transfer Service**
- **containerd API <-> shim API proxy**
- **NRIv2 using ttrpc**
- **(preview) Network Service**
- **(preview) Run Service**
- **(preview) CRI plugin v2**

containerd 1.7 architecture



What's new in 1.7



containerd client

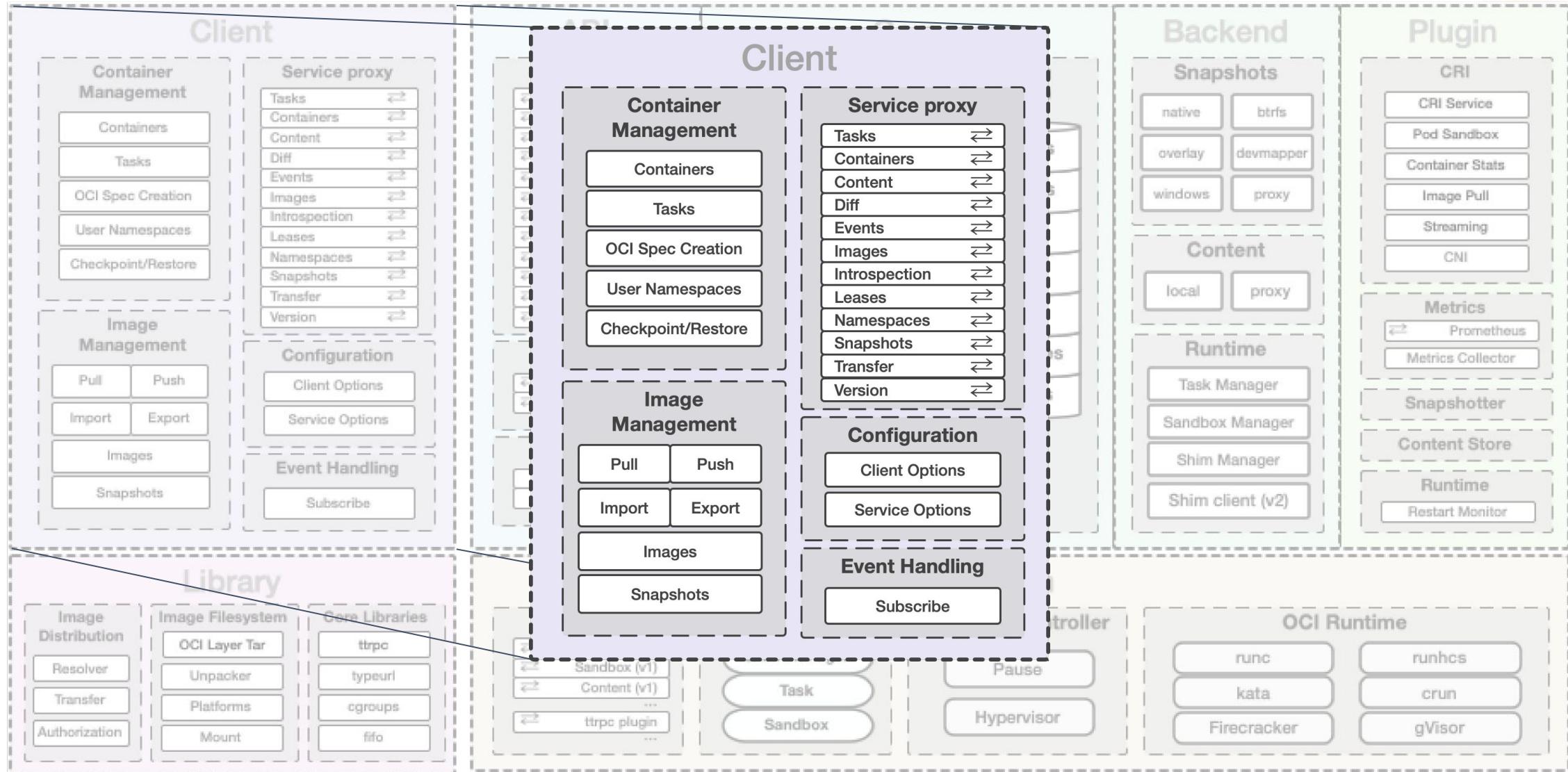


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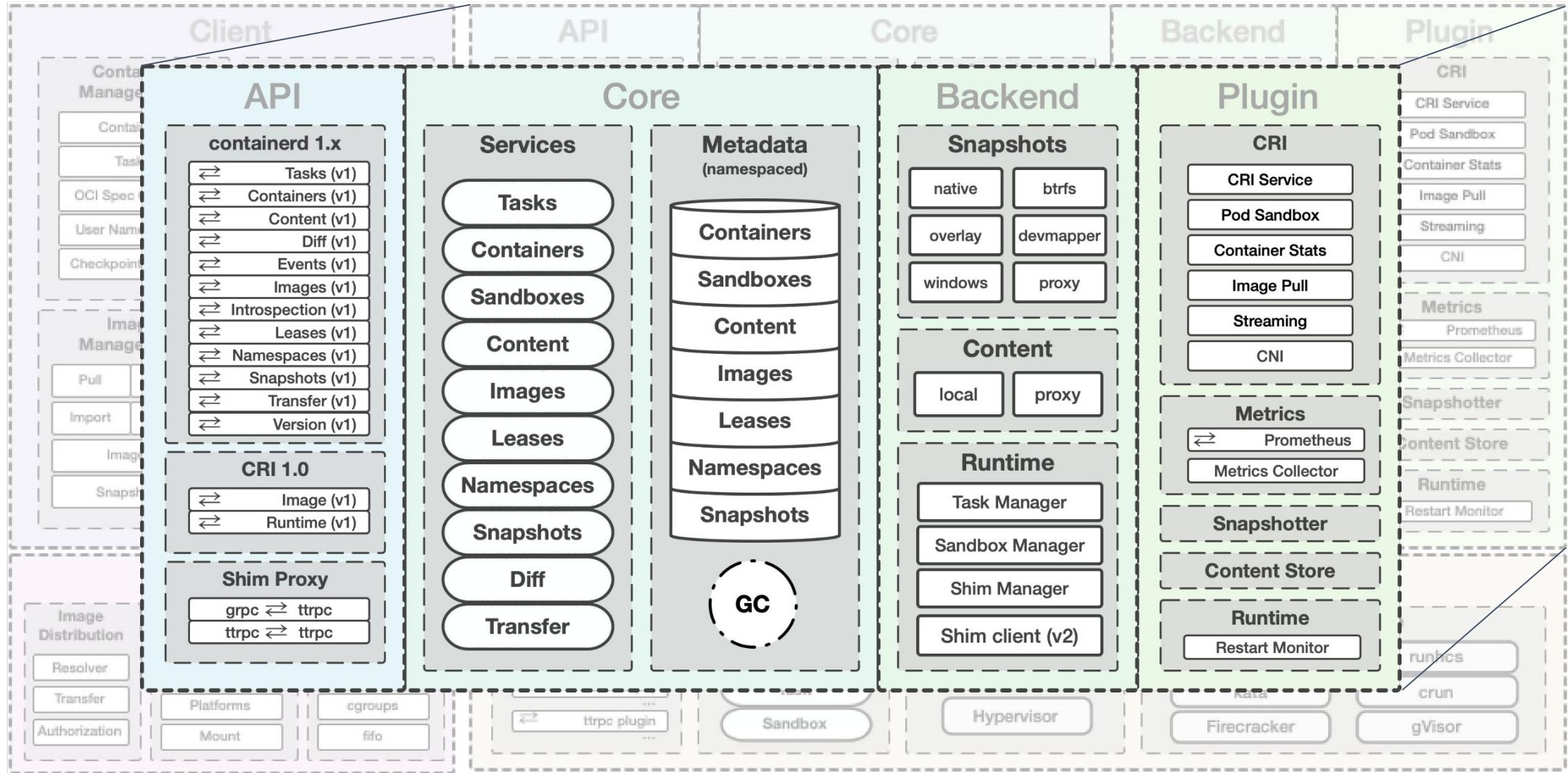


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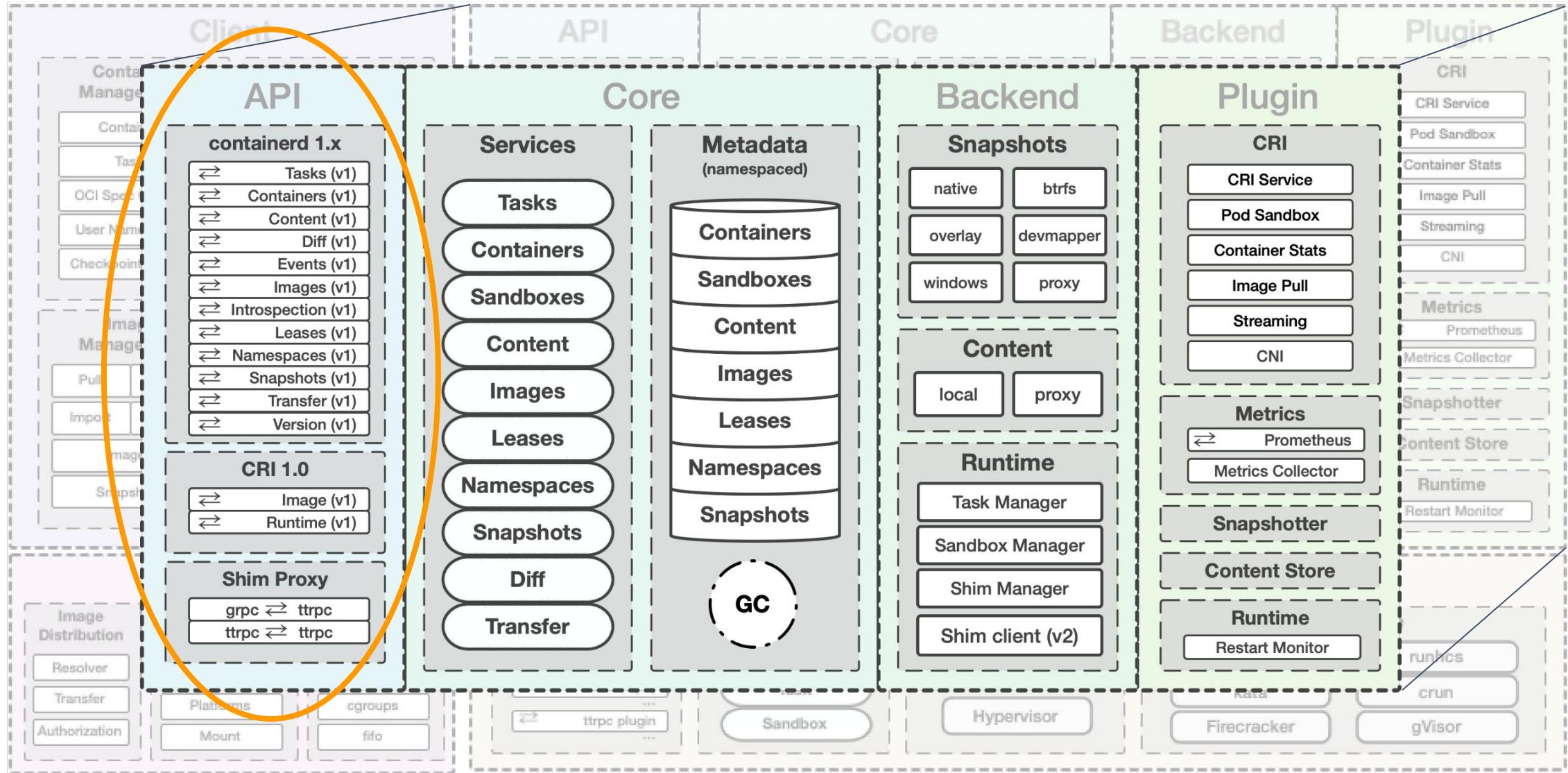
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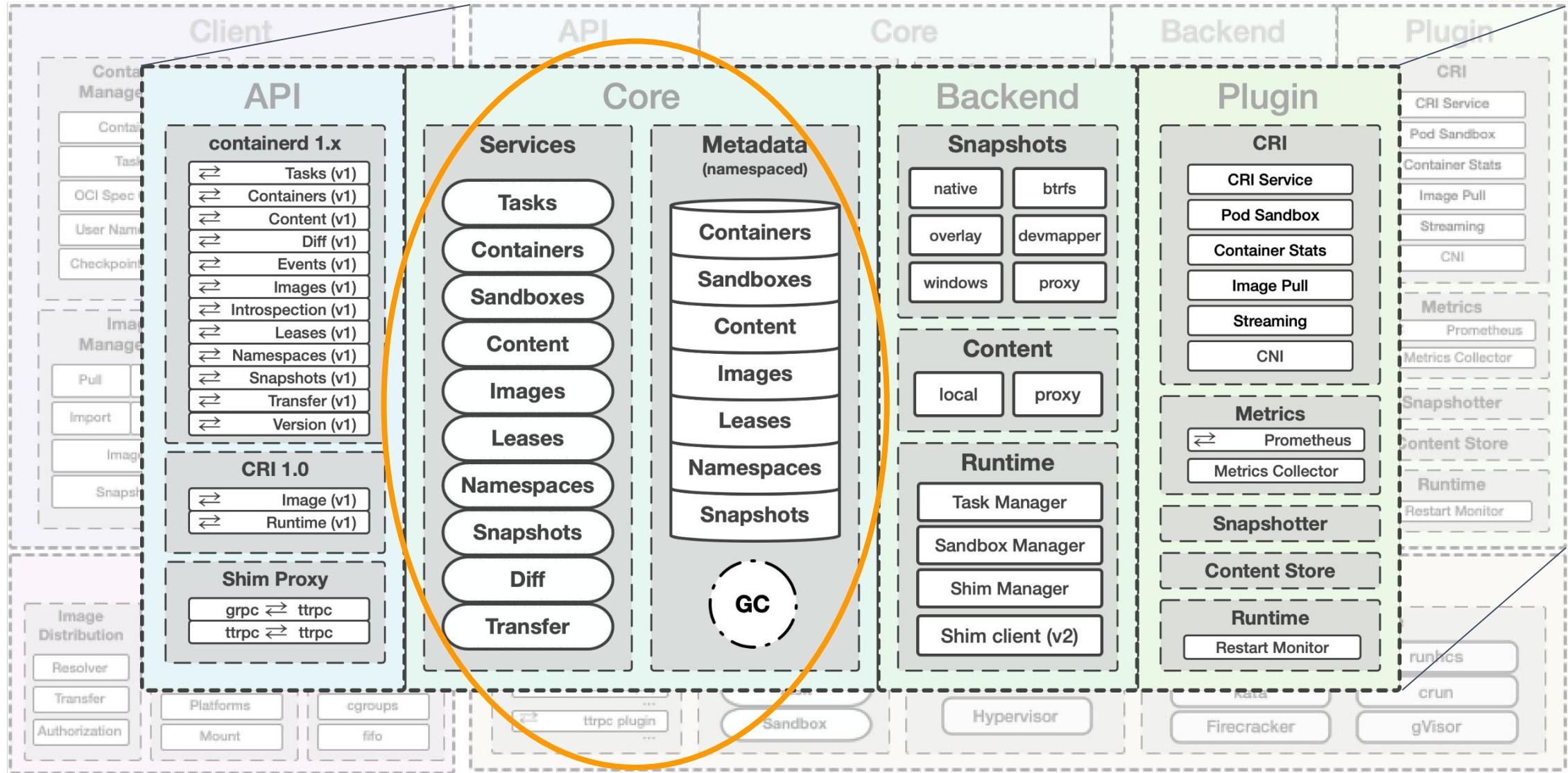
containerd the daemon



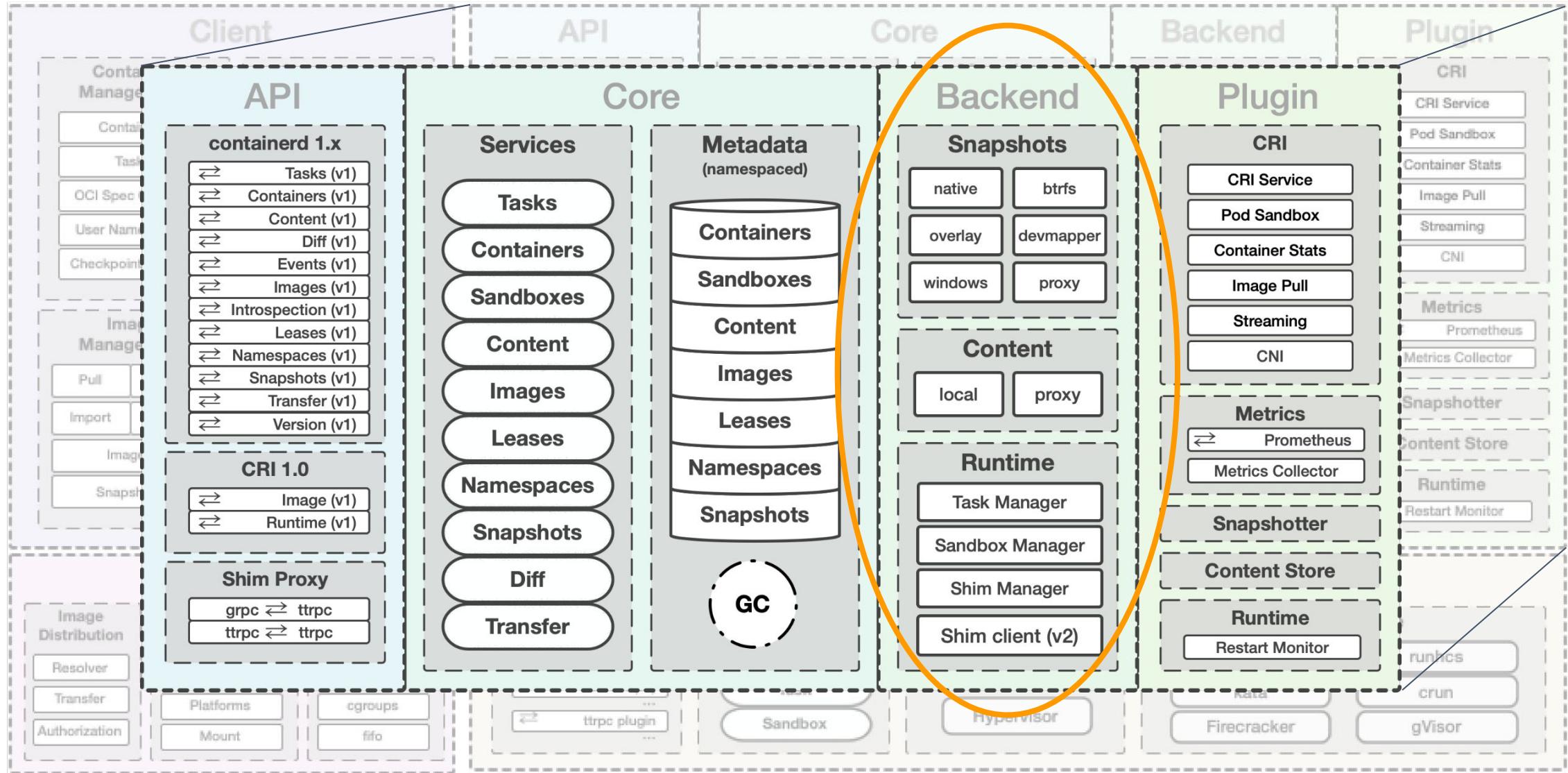
containerd the daemon: API



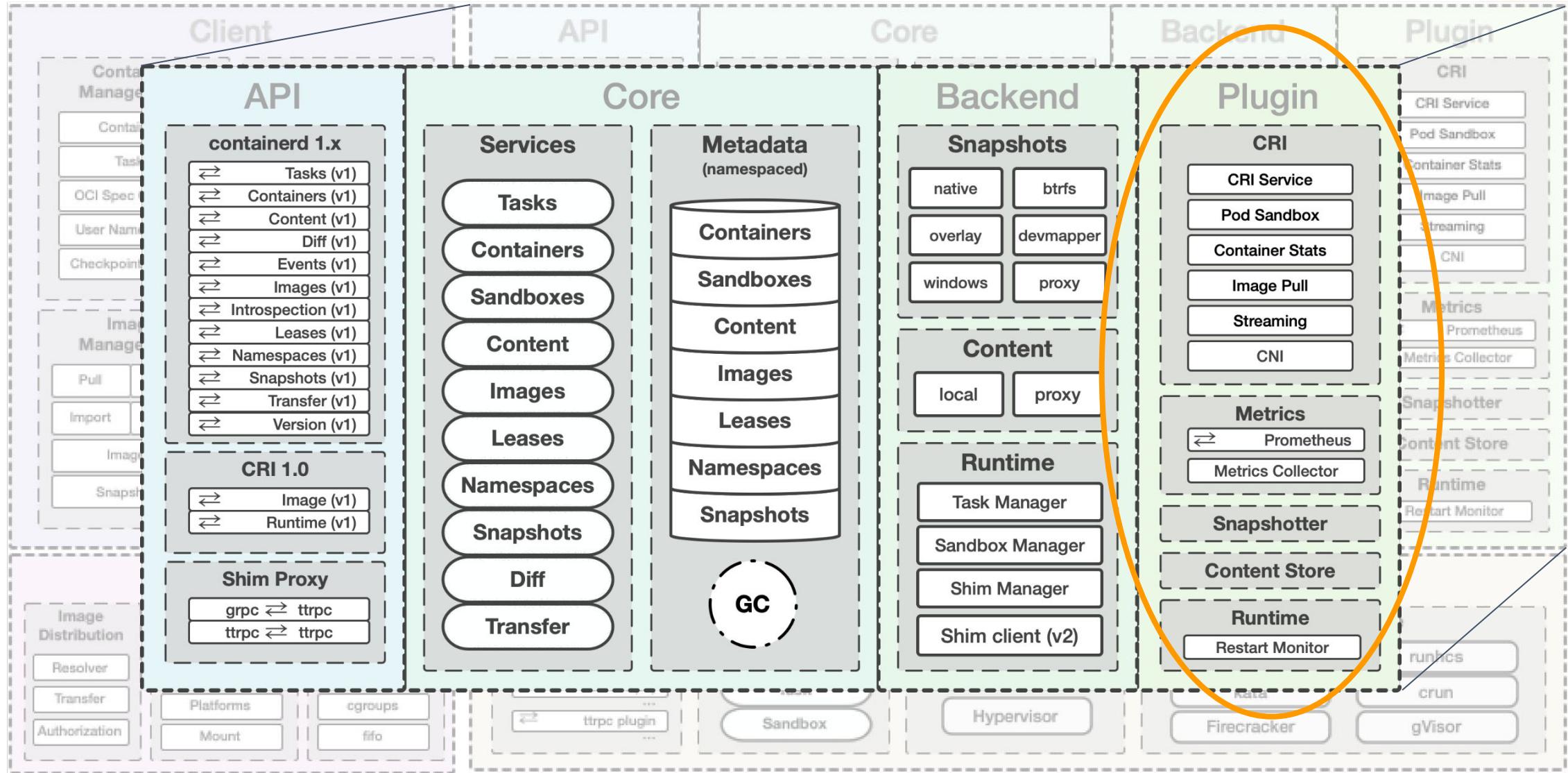
containerd the daemon: Core



containerd the daemon: Backend



containerd the daemon: Plugin



containerd shims

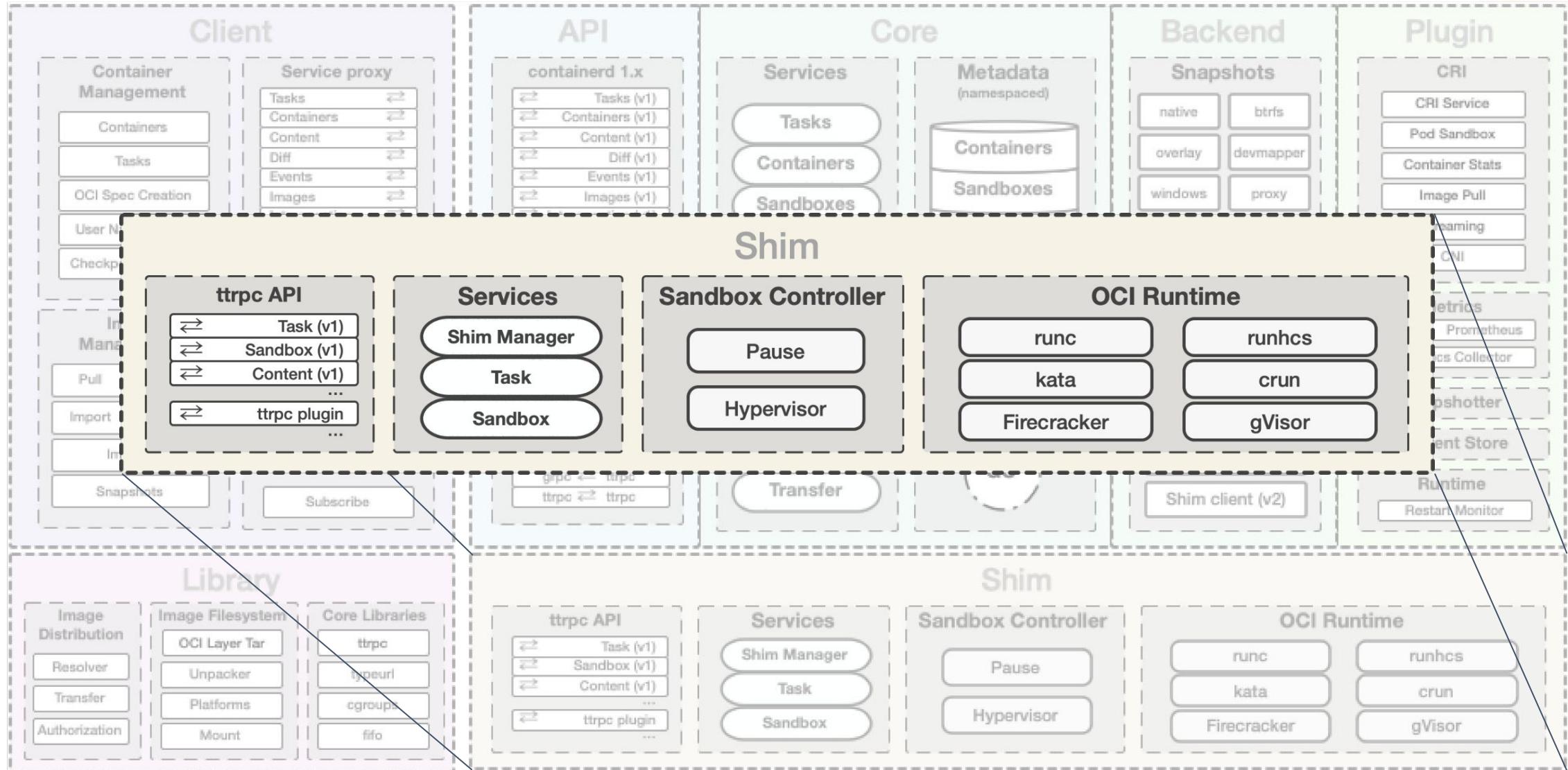


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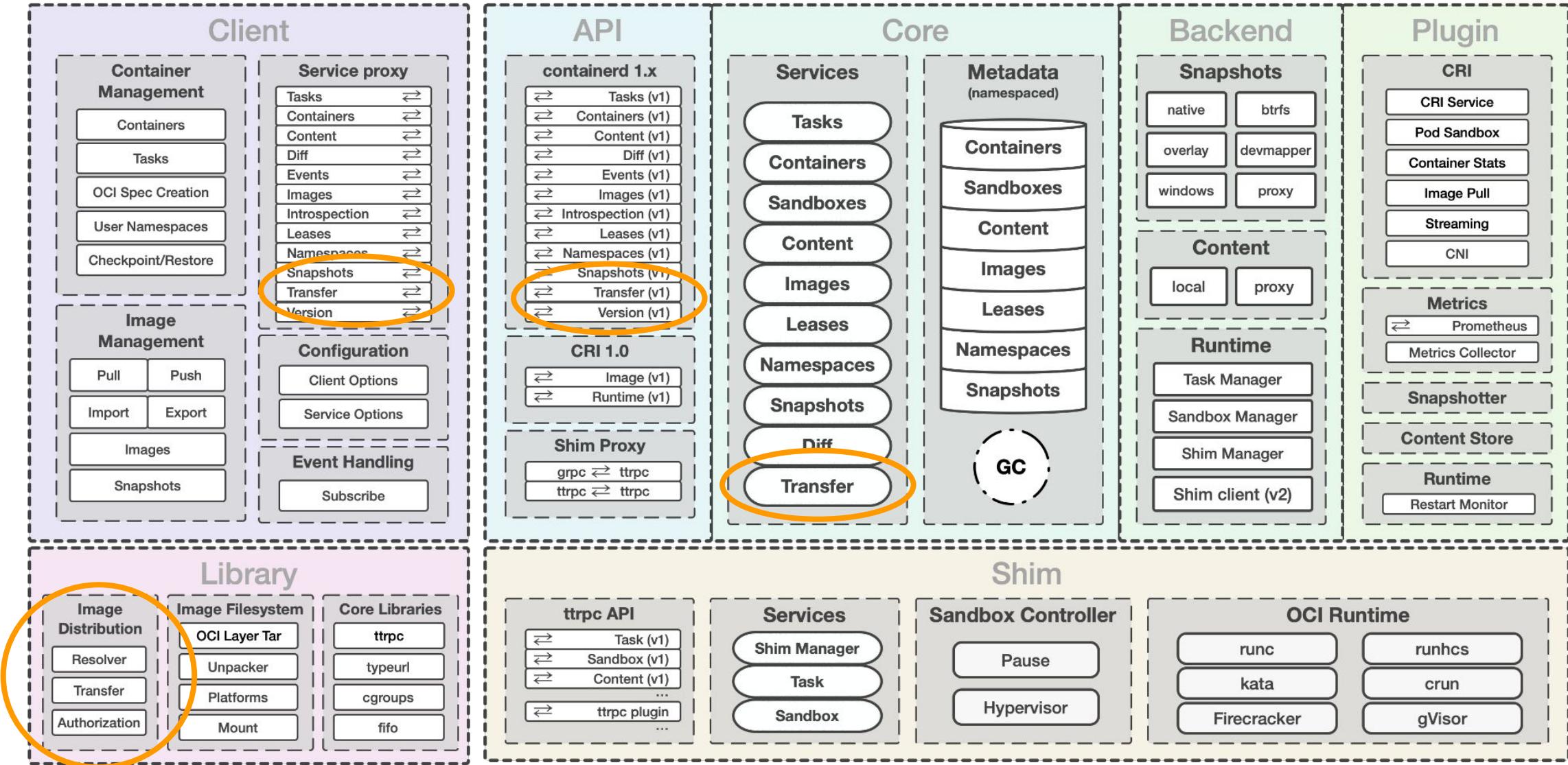


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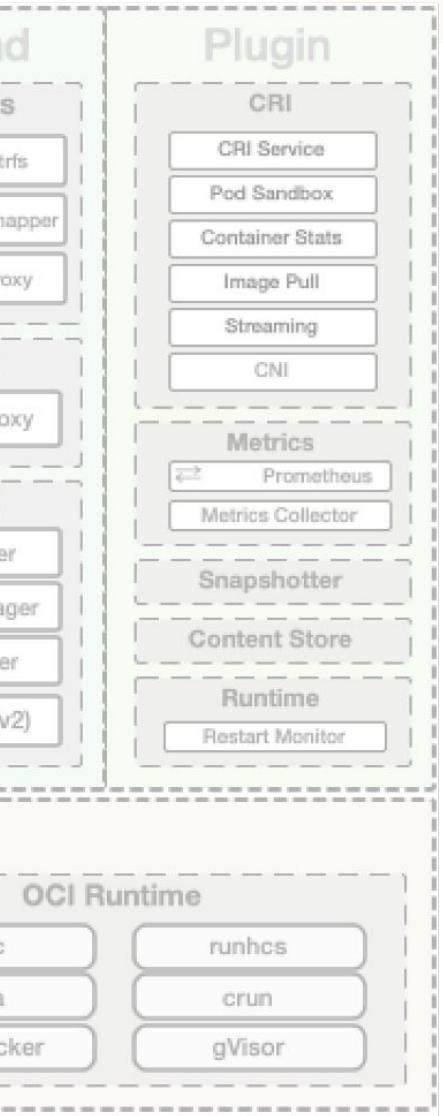
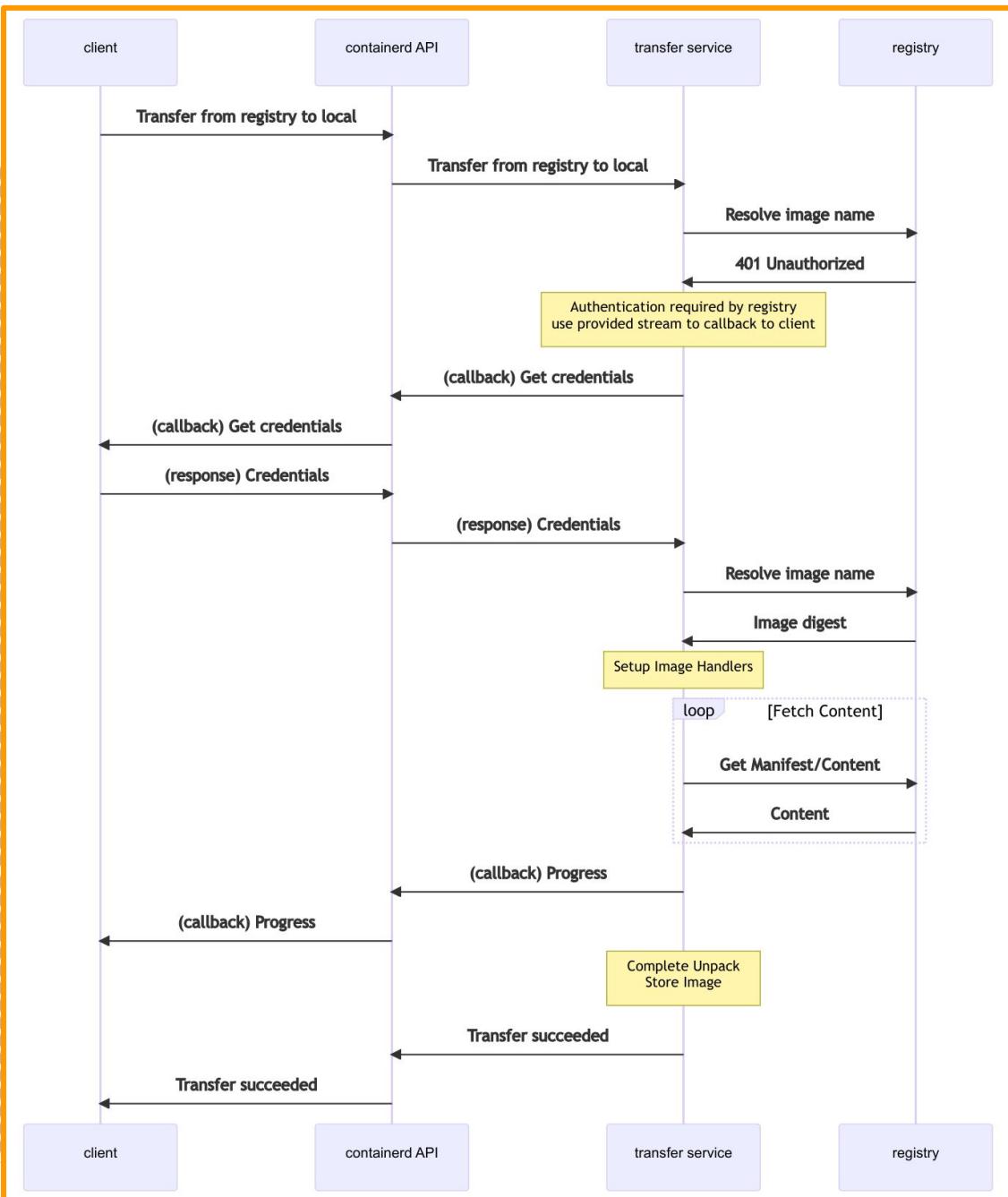
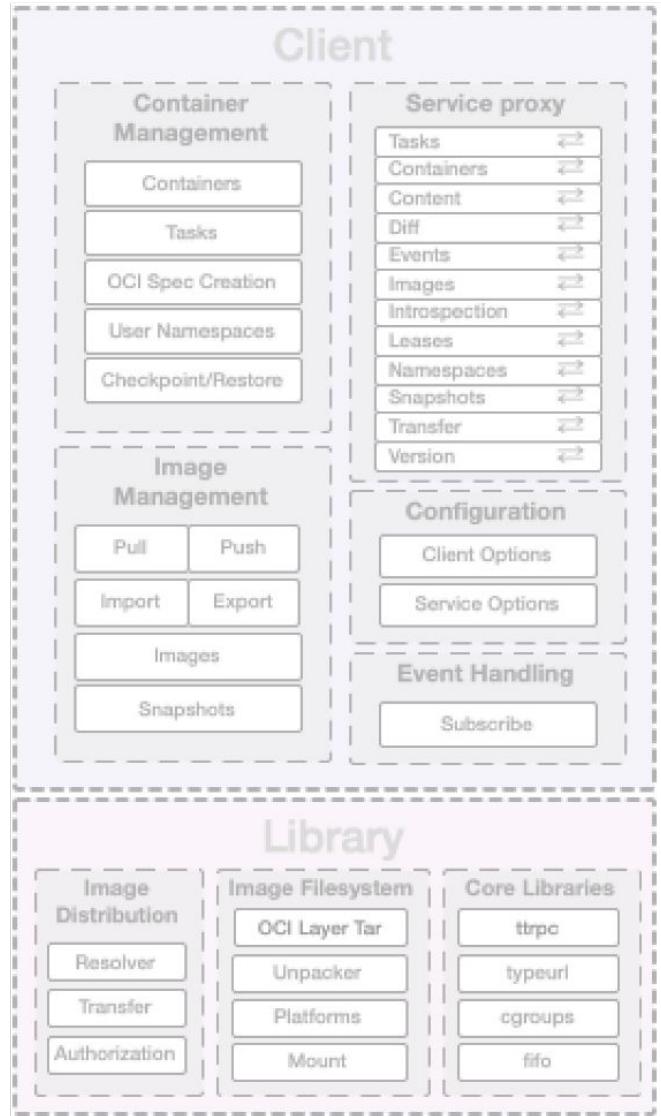
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New Transfer service



New Transfer service



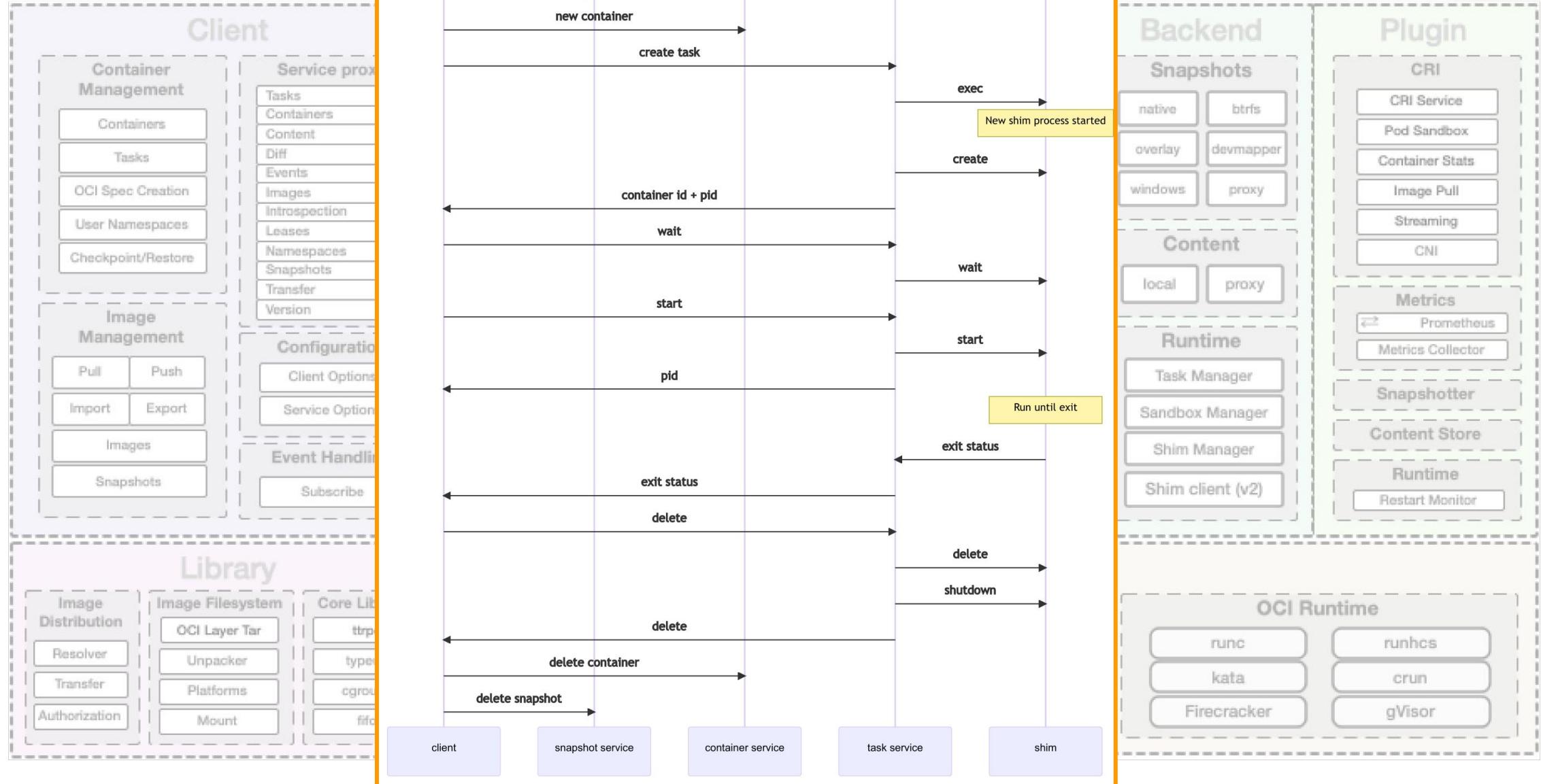


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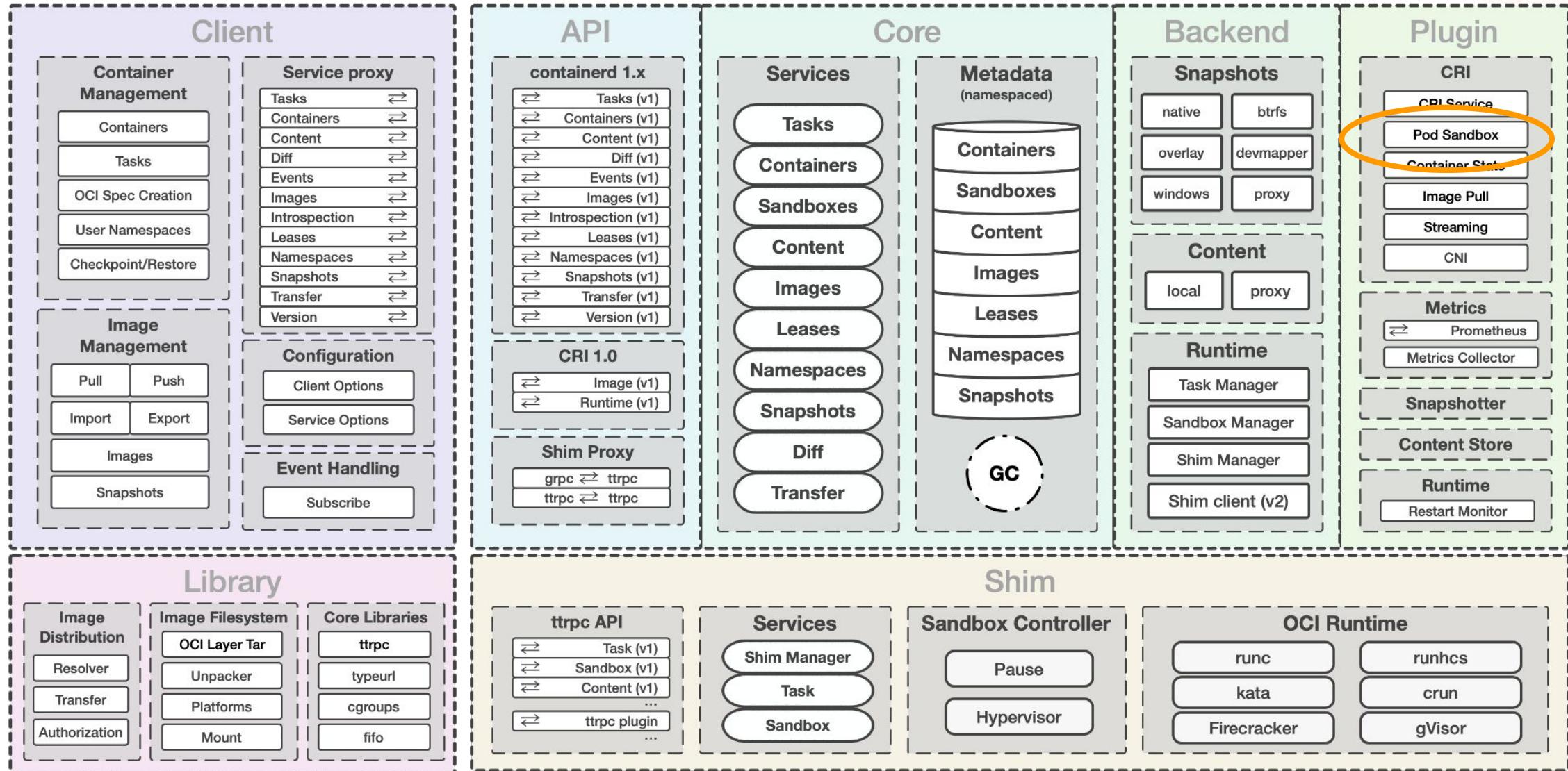
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Container run



Sandbox creation via CRI



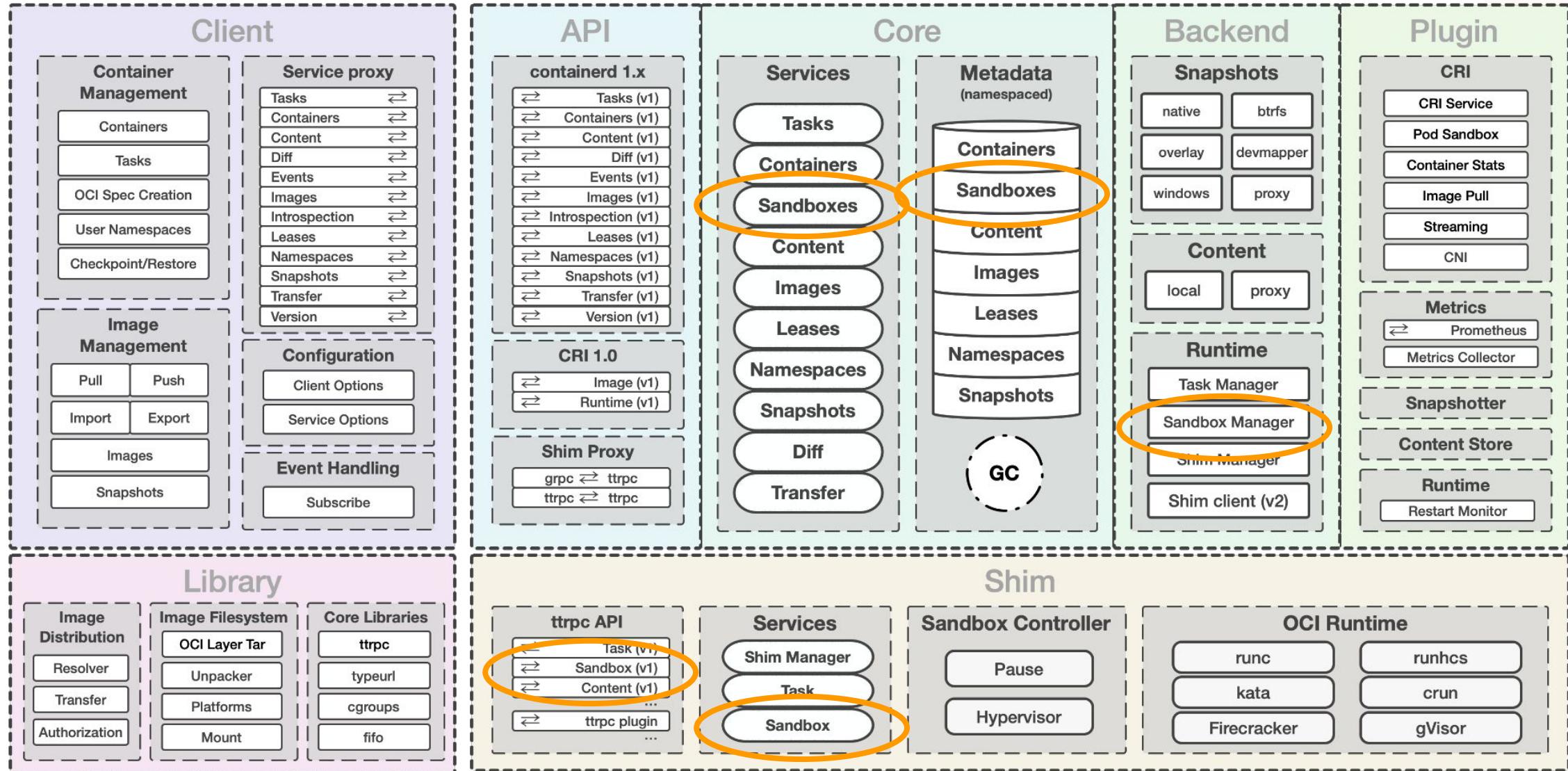


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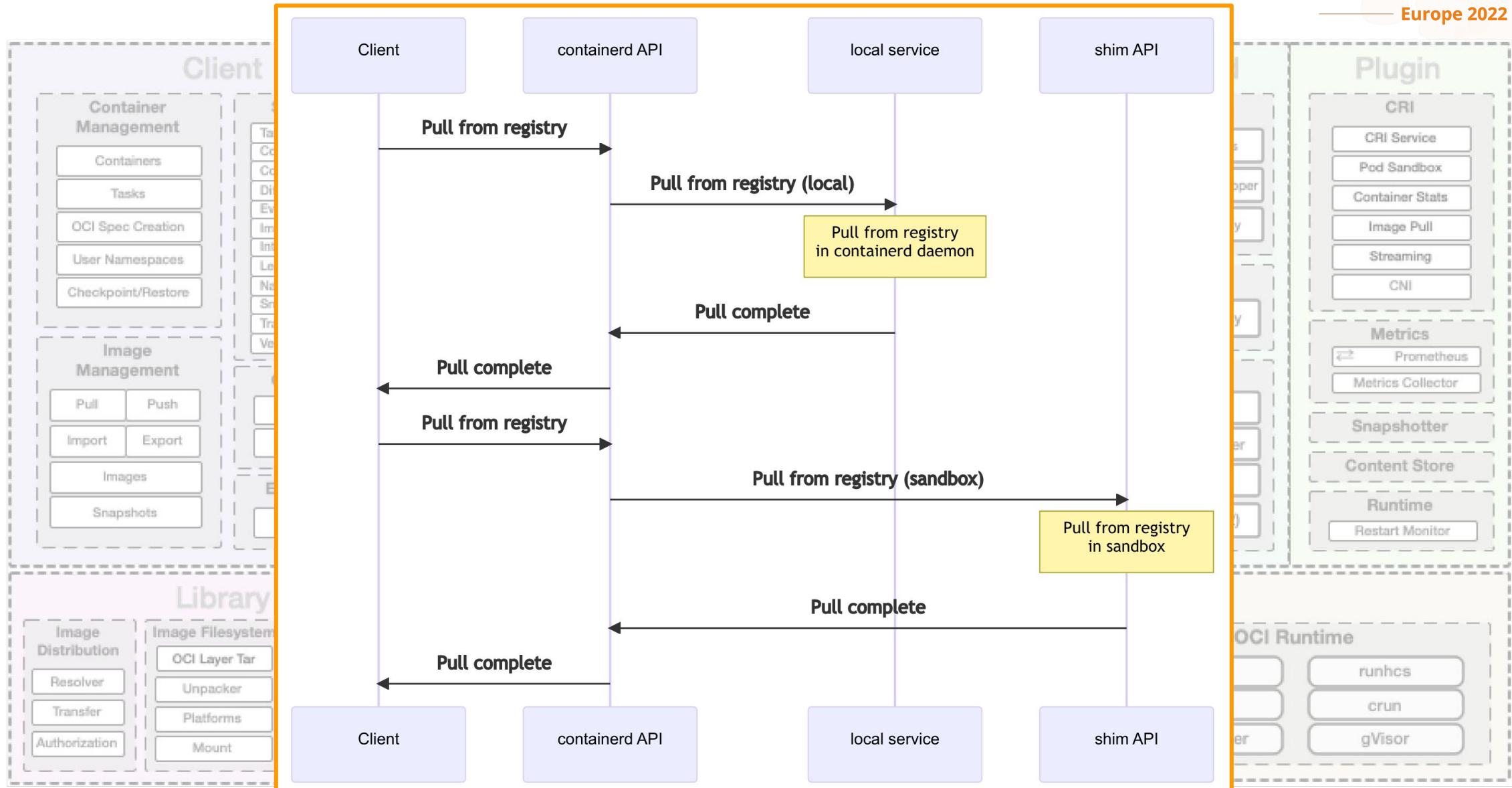
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Sandbox creation via new sandbox service



API to Sandbox proxy



Overview

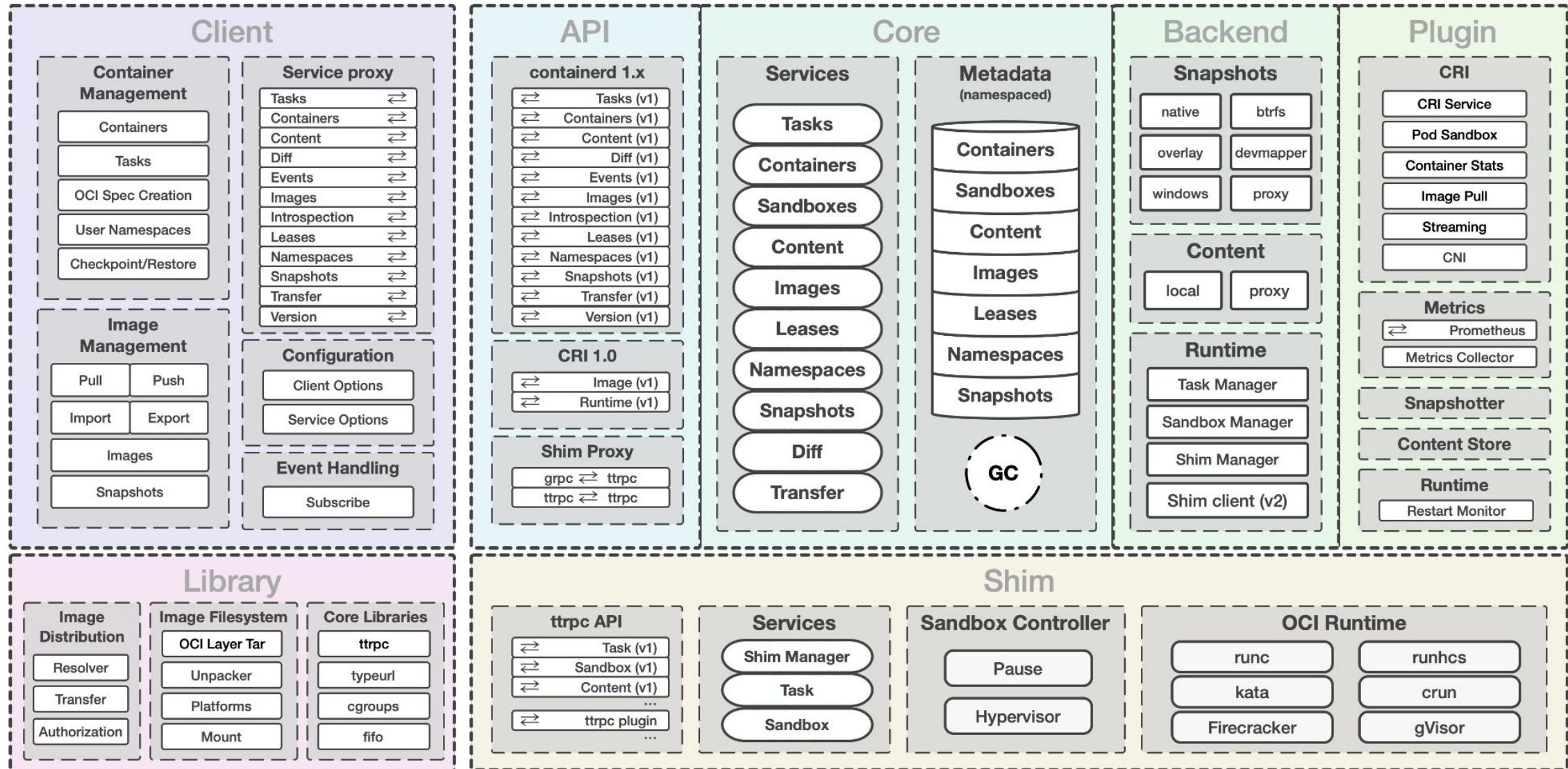


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Thank you



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