



### An industry-standard container runtime

- CNCF Graduated since 2019
- Adopted by well-known enterprise Kubernetes services and distributions
- Designed to be pluggable to support cutting-edge features (remote snapshotters, WASM runtimes, ...)

## **Snapshotter plugins**



Regular snapshotters: overlayfs, btrfs, zfs, devmapper, ...

"Remote" snapshotters support pulling image contents on demand to shorten the container startup time

- stargz: Forward compatible with OCI v1 tar.gz images
- nydus: Uses an alternate image format
- overlaybd: Uses block devices as container images

### **Runtime plugins**





runj: FreeBSD jail

• runwasi: WASM

kata: VM

• runsc (gvisor): ptrace sandbox, etc.



#### nerdctl: contaiNERD CTL

- Same UI/UX as the docker CLI (including Compose)
- Made for facilitating new experiments in the containerd platform (e.g., stargz, fast rootless)
- Useful for debugging Kubernetes nodes too

\$ nerdctl run hello-world
\$ nerdctl compose up

# Updates in v1.7 (March 2023)

Sandbox API for "pauseless" pods



Transfer API for pulling/pushing images on the daemon side

Extended NRI API for plugging extensions into OCI runtimes
 (NRI = Node Resource Interface)

User namespace support for Kubernetes

## Roadmap to v2.0



 The focus will be on cleaning up deprecated features (runtime v1 API, aufs snapshotter, config v1, ...)

Improvements for Transfer API, UserNS, etc.

Planned to be highly compatible with v1.x

## Join the community!



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• GitHub: <a href="https://github.com/containerd">https://github.com/containerd</a>

Slack: <a href="https://slack.cncf.io/">https://slack.cncf.io/</a>
 (Channels: #containerd #containerd-dev)

Twitter: @containerd