



YVR18-314

Containers in Embedded

an open discussion



About us



About me

- Embedded Software Engineer
 - BSP Team for Toradex Computer on Modules
- Working on U-Boot/Kernel
- OpenEmbedded BSP
- Project lead in new BSP offerings with Container support
- Otherwise not Container Native :-)

About you

Container in Embedded advantages

- High level application distribution
- Lightweight compartmentalization
 - Resource allocation
 - Security benefits
- Interoperable applications
- Independently updateable

Container Runtime

- OCI Runtime Specification
 - Docker (runc)
 - rkt
 -
- systemd-nspawn
- LXC/LXD

- System vs. Application Container

Container Images

- Using Linux Distributions
 - Docker Hub
 - Import tarballs directly
- Cross compile using OpenEmbedded
 - No native container image support (OCI Image Format)
 - Import tarballs directly

Developing using Containers

- Using Linux Distributions
 - Native on target
 - Native using Qemu User-mode emulation (e.g. on x86)
- Cross Compile using OpenEmbedded
 - SDK
- Container aware build systems/IDE



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