GPL IN THE WORLD OF CONTAINERS

David Levine
Vice President and Assistant General Counsel

Richard Fontana
Senior Commercial Counsel
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GPL and Copyleft Basics
Copyleft Scope: Single Container Image

Does the combination of GPL and non-GPL software in a single container image create a single program or a derivative work and, therefore, implicate GPL copyleft?
Copyleft Scope: Single Container Image

Proprietary

GPL

ISV Layer

Base Layer

RHEL Host OS, Shared Services

HARDWARE, VIRT, CLOUD
Copyleft Scope: Single Container Image

- Base layers of images contain GPL-licensed code
- Upper layers contain proprietary ISV app
- GPLv2: mere aggregation clause; GPLv3 "Aggregate"
- Assembly of software into container images does not raise any special GPL copyleft scope issue
  - Container image format uses established packaging (tar format)
  - Share characteristics with RPMs, VM images
  - No basis for analyzing container images differently from past Linux stack distribution media for purposes of GPL copyleft scope
Copyleft Scope: Multiple Containers

Can software in one container fall within GPL copyleft scope of software in another container?
Copyleft Scope: Multiple Containers

Proprietary → ISV Layer → Base Layer → RHEL Host OS, Shared Services → HARDWARE, VIRT, CLOUD

GPL → ISV Layer → Base Layer → RHEL Host OS, Shared Services → HARDWARE, VIRT, CLOUD
Copyleft Scope: Multiple Containers

- While decomposition into multiple containers is not itself a guarantee, containerization makes technical boundaries between components more apparent and provides a strong indication of 'separateness'.
  - Software in separate containers runs in separate processes, and a process boundary is an indicator of GPL copyleft scope.
  - FSF contrasts:
    - software linked and running in a shared address space (in same copyleft scope)
    - communicating over Unix pipes (separate from a copyleft perspective)
  - Multi-container applications: more like pipes - separate
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