Replacing Docker With Podman

By Dan Walsh @rhatdan
dnf install -y podman
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alias docker=podman
Questions

Blog: https://podman.io/blogs

Github:

- https://github.com/projectatomic/libpod (podman)
- https://github.com/containers/storage
- https://github.com/containers/image
- https://github.com/containers/buildah

IRC: freenode: #podman
Site: https://cri-o.io
Alan Moran on Twitter: "I completely forgot that ~2 months ago I set up "alias docker='podman'" and it has been a dream. #nobigfatdaemons @projectatomic"
Please Stand
Please read out loud all text in RED
I Promise
To say
Make a copy
Rather than
Make a Xerox
I Promise
To say Tissue Rather than Kleenex
I Promise
To say Container Registries rather than Docker registries
I Promise
To say Container Images rather than Docker images
I Promise
To say Containers
Or OCI Containers
Rather than Docker Containers
Sit Down
What do you need to run a container`

- Standard Definition of what makes up a container image.
  - OCI Image Bundle Definition
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  - Container Networking Interface
- Tool to monitor container
  - Conmon
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# podman images

... 

https://github.com/projectatomic/libpod
Pod architecture (runc)

Pod
(ipc, net, pid namespaces, cgroups)

container

Container A (runc)  Container B (runc)

Infra Container
DEMO

#nobigfatdaemons
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- https://github.com/containers/skopeo
Proper Integration with Systemd

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- Socket Activation
Remote API for Podman

- Added Varlink support
- Socket activation of podman system service with varlink

[Unit]
Description=Podman Remote API Service
Requires=io.podman.socket
After=io.podman.socket
Documentation=man:podman-varlink(1)

[Service]
Type=simple
ExecStart=/usr/bin/podman varlink unix:/run/podman/io.podman

[Install]
WantedBy=multi-user.target
Also=io.podman.socket
Python Bindings

```python
python3 -c "import podman; import json; c=podman.Client();print(json.dumps(c.system.info(), indent=4))"
```

```json
[
  {
    "mem_free": 5796605952,
    "mem_total": 16679206912,
    "swap_free": 0,
    "swap_total": 0,
    "arch": "amd64",
    "cpus": 4,
    "hostname": "localhost.localdomain",
    "kernel": "4.18.9-200.fc28.x86_64",
    "os": "linux",
    "uptime": "11h 2m 32.25s (Approximately 0.46 days)"
  },
  ...
]```
Remote API Support

`podman-remote` - program used for running remote podman commands.
Cockpit support

https://github.com/cockpit-project/cockpit-podman
What we don’t do

- Autostart, autorestart
  - Systemd should be handling this
- Swarm
  - We support Kubernetes container orchestrator
- Notary
  - We do support simple signing, but would look at PRs for Notary support
- HealthChecks
  - We are looking into this, perhaps systemd support? Sidecar container in pod?
- Docker API - We have no plans to support this, but we do have Varlink
- Docker volumes
  - Support for file volumes
  - Docker volumes is on the roadmap