

Atomic

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F/OSS

OpenStack

Containers (Docker, OpenShift/Kubernetes)

Fedora (Mentor)

Tinkerer

...



Containers... right?



Containers

- Process isolation
 - ps
 - who



Containers

... as the 'Delivery Unit'



What happens

image is pulled from a registry

composed

- base
- application



Dockerfile

```
FROM fedora:24  
RUN dnf install -y rust  
VOLUME [...]  
CMD [...]
```



Project Atomic



Umbrella project

related to efforts around developing,
building, running, and managing containers



Project Atomic

- Atomic Host
- Atomic App
- Atomic Registry
- ...
 - Cockpit
 - Commissaire



Atomic Host

- Not a new distribution



Provides

- Streamlined host based on CentOS or Fedora
- Docker
- Kubernetes
- rpm-ostree
- ...



Containers

- Minimal container OS
 - Comparable to CoreOS, Photon OS

“But I can already run
containers on my OS?”



Deployment

- Deployment scenario
 - cloud image
 - baremetal

“How do I maintain my host?”



Immutable

Filesystem not writable



Immutable

Can't install packages



Immutable

Except for

- /etc
- /var
- /home → /var/home



rpm-ostree

- Utilizes ostree
 - Developed for GNOME
- “git for operating systems”
 - Bootable
 - Immutable
 - Versioned filesystem tree



rpm-ostree

- Uses RPM packages to compose an 'image'
- Allows for easy
 - Update
 - Rollback



Update

- Configuration is 3-way merged → /etc
- Data is unchanged → /var
 - Containers, etc



Atomic Host

seamless updates

```
$ rpm-ostree upgrade
```

```
$ rpm-ostree rollback
```



- Remote configuration
 - ssh
 - Ansible (reproducible)



Demo



Customization

What if an essential component is missing?

Customization

Further information

<https://projectatomic.io>

<https://gitlab.com/gbraad/byo-atomic>

<https://gbraad.gitbooks.io/knowledge-base/content/technology/atomic.html>



Get involved, Join Fedora

<http://join.fedoraproject.org>



Stay in touch

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Q & A

