redhat.

A Practical Introduction to Docker with Red Hat

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05/01/2014

Agenda

- What is Docker
- Why Docker Matters
- How Docker Works
- How to Use Docker
- Q&A
- Conclusion

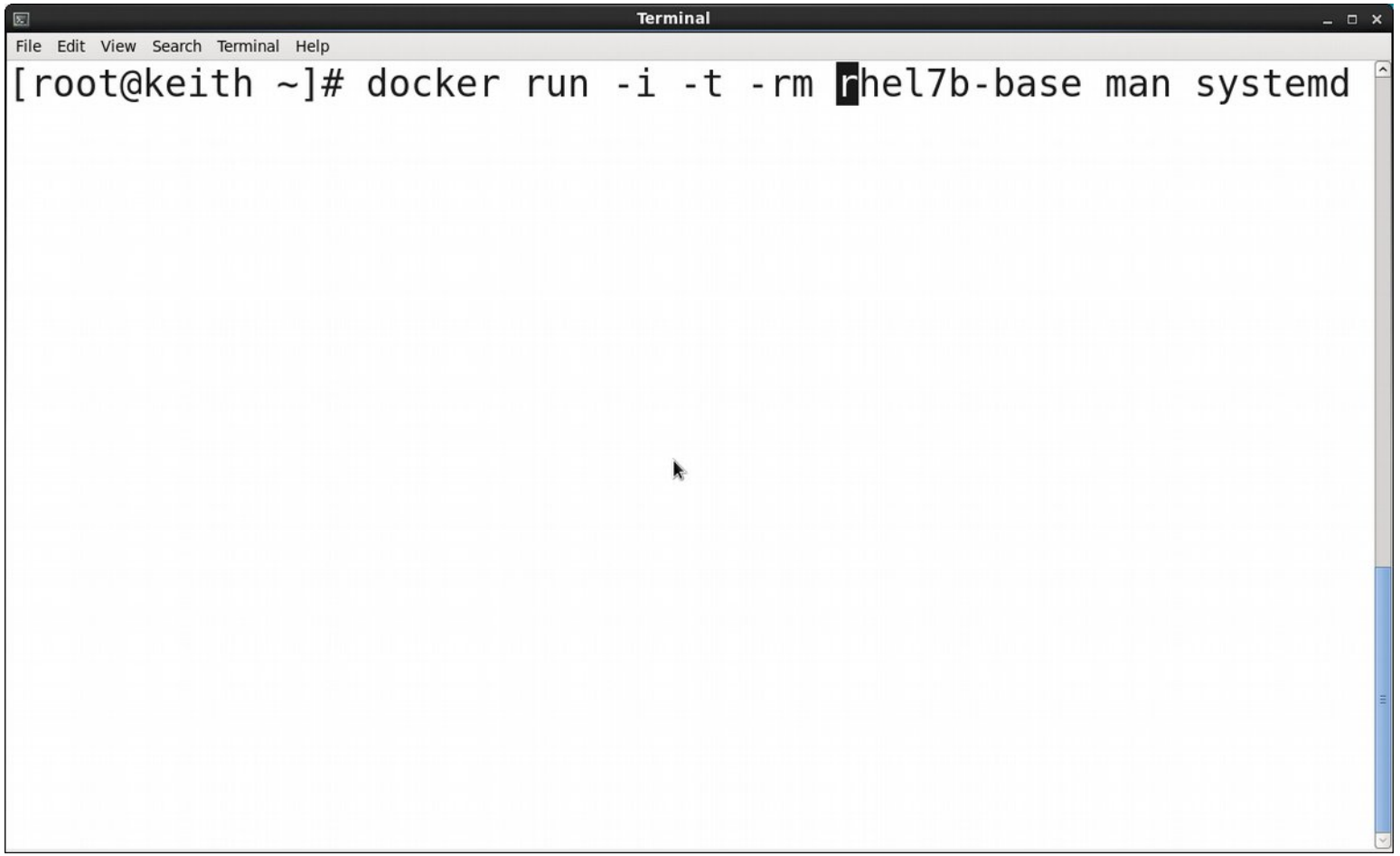
What is Docker

What is Docker

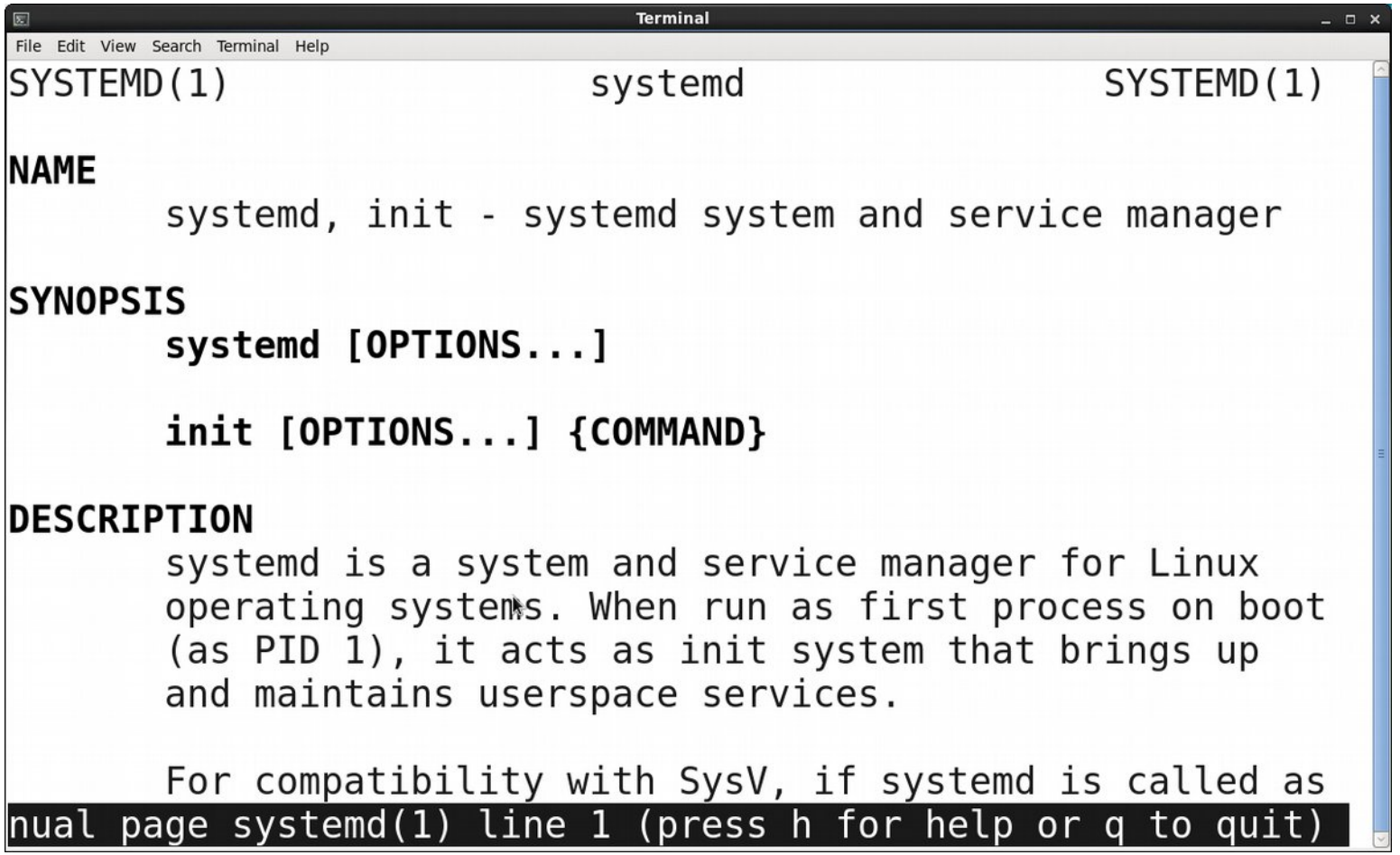
- User Space Tools
- Linux Containers
- Branch and Commit File System

Why Docker Matters

Easier Testing



Easier Testing



Easier Testing

- See the man page from RHEL7
- Verify the command line options of a program
- Test the functionality of a specific version of software
- Scratch pad that is NOT my system
- Need a single daemon running
  - and I don't care what distribution of Linux it runs

How Docker Works (On RHEL)

How Docker Works

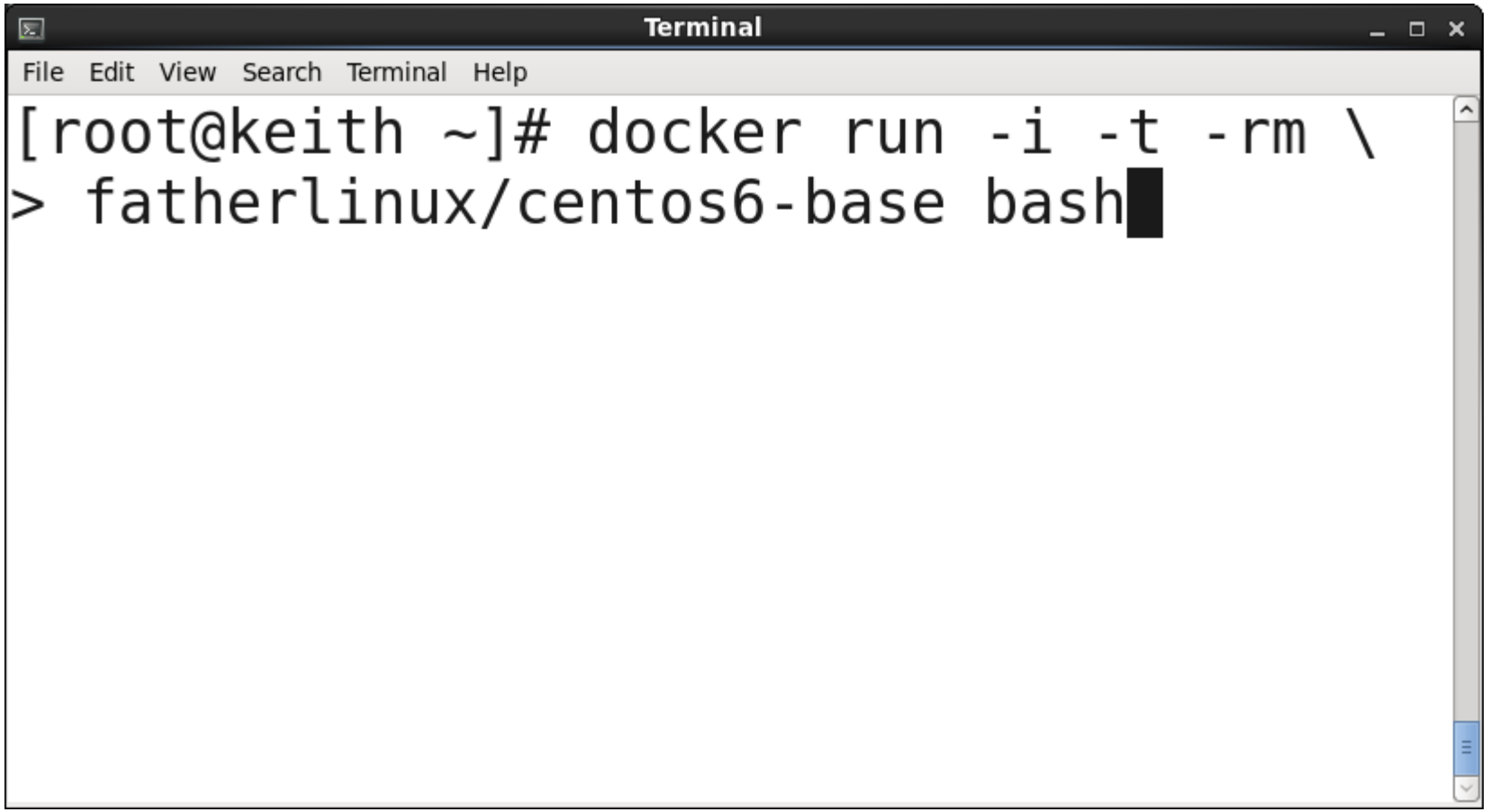
- Process isolation
  - Cgroups
  - LXC instead of KVM
- Layered file system
  - Device Mapper: Alexander Larson (Red Hatter)
  - Base image
  - Commits
- Network
  - Bridge: docker0
  - Network Address Translation

How Docker Works

- Blueprints
  - Dockerfile blueprints can blue print changes between base image and layers
  - Can be used to create easy to manage core builds
  - Excellent base for application of Puppet modules
- Registry of usable images
  - Ecosystem forming
  - Docker Inc. (*formerly dotCloud*): hosted public registry
  - Quay.io: Private registries for end users
  - Red Hat is embracing in RHEL7, but works in RHEL6

How to Use Docker (on RHEL)

How to Use Docker



How to Use Docker

- Install user space tools from EPEL
- Pulls image from public registry server
- Get started in 5 minutes

Caveats

- Device Mapper driver is new
- There are bugs
  - Containers & Images can't be deleted
  - New container has no network connectivity
- Complicated software such as Satellite 6 can be a challenge

Demo

Question and Answers

Conclusion & Call to Action

- Docker will make your life easier as a:
  - Developer
  - Systems Administrator
  - Architect
  - Consultant
- Infrastructure is hosted at docker.io
  - Also have a competitor at Quay.io
- Dig into: A Practical Introduction to Docker Containers
- RHEL 7: Getting Started Guide