Mitesh Soni

Video 5.6 Creating a Docker Image from Dockerfile



In this Video, we are going to take a look at...

- Learning to create a sample image file
- Building a Docker image using a Dockerfile
- Creating an image with Java 8 and Tomcat 9
- Running the Dockerfile and build an image out of it



user@localhost:/home/user

File Edit View Search Terminal Help

[root@localhost user]# docker build .

0:27 /5:16

Continue >

IMAGE ID

0584b3d2cf6d

ebb17717bed4

ebb17717bed4

f753707788c5

c54a2cc56cbb

ocal	host	Desktop:	# doc	ker	images

[root@lo REPOSITORY TAG

docker.io/centos

File Edit View Search Terminal Help

docker.io/tomcat

8.0 docker.io/tomcat latest

docker.io/ubuntu latest

docker.io/hello-world latest

[root@localhost Desktop]# docker build

docker: "build" requires 1 argument.

See '/usr/bin/docker-current build --help'.

docker build [OPTIONS] PATH | URL | -Usage:

Build an image from a Dockerfile

[root@localhost Desktop]# docker build .

unable to prepare context: unable to evaluate symlinks in Dockerfile path: lstat /home/user/Deskt

op/Dockerfile: no such file or directory

[root@localhost Desktop]# docker build .

Sending build context to Docker daemon 351.5 MB

1 ×

CREATED

12 days ago

2 weeks ago

355.4 MB 355.4 MB

SIZE

2 weeks ago 4 weeks ago

4 months ago

127.1 MB

196.5 MB

1.848 kB

user@localhost:/home/user/Desktop

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[root@localhost Desktop]# docker build .

Sending build context to Docker daemon 1.186 GB

Step 1 : FROM centos

Trying to pull repository docker.io/library/centos ...

latest: Pulling from docker.io/library/centos

Digest: sha256:b2f9d1c0ff5f87a4743104d099a3d561002ac500db1b9bfa02a783a46e0d366c

Status: Downloaded newer image for docker.io/centos:latest

---> 0584b3d2cf6d

Step 2 : MAINTAINER packt<videotesting@packtpub.com>

---> Running in 67b8fc645101

---> b831aa2c43a4

Removing intermediate container 67b8fc645101

Successfully built b831aa2c43a4

[root@localhost Desktop]# docker images

user@localhost:/home/user/Desktop

File Edit View Search Terminal Help

Sending build context to Docker daemon 1.186 GB

Step 1 : FROM centos

Trying to pull repository docker.io/library/centos ...

latest: Pulling from docker.io/library/centos

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- ---> Running in 67b8fc645101
- ---> b831aa2c43a4

Removing intermediate container 67b8fc645101

Successfully built b831aa2c43a4

[root@localhost Desktop]#

[root@localhost Desktop # docker images

REPOSITORY	TÁG	IMAGE ID	CREATED	SIZE
<none></none>	<none></none>	b831aa2c43a4	41 seconds ago	196.5 MB
docker.io/centos	7	0584b3d2cf6d	12 days ago	196.5 MB
docker.io/centos	latest	0584b3d2cf6d	12 days ago	196.5 MB
docker.io/tomcat	8.0	ebb17717bed4	2 weeks ago	355.4 MB
docker.io/tomcat	latest	ebb17717bed4	2 weeks ago	355.4 MB
docker.io/ubuntu	latest	f753707788c5	4 weeks ago	127.1 MB
docker in/hello-world	latest	c54a2cc56cbb	4 months ago	1 848 kB



Trying to pull repository docker.io/library/centos ...

latest: Pulling from docker.io/library/centos

Digest: sha256:b2f9d1c0ff5f87a4743104d099a3d561002ac500db1b9bfa02a783a46e0d366c

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---> Running in 67b8fc645101

---> b831aa2c43a4

Removing intermediate container 67b8fc645101

Successfully built b831aa2c43a4

[root@localhost Desktop]# docker images

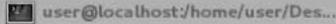
REPOSITORY	TAG	IMAGE ID	CREATED	SIZE
<none></none>	<none></none>	b831aa2c43a4	41 seconds ago	196.5 MB
docker.io/centos	7	0584b3d2cf6d	12 days ago	196.5 MB
docker.io/centos	latest	0584b3d2cf6d	12 days ago	196.5 MB
docker.io/tomcat	8.0	ebb17717bed4	2 weeks ago	355.4 MB
docker.io/tomcat	latest	ebb17717bed4	2 weeks ago	355.4 MB
docker.io/ubuntu	latest	f753707788c5	4 weeks ago	127.1 MB
docker.io/hello-world	latest	c54a2cc56cbb	4 months ago	1.848 kB

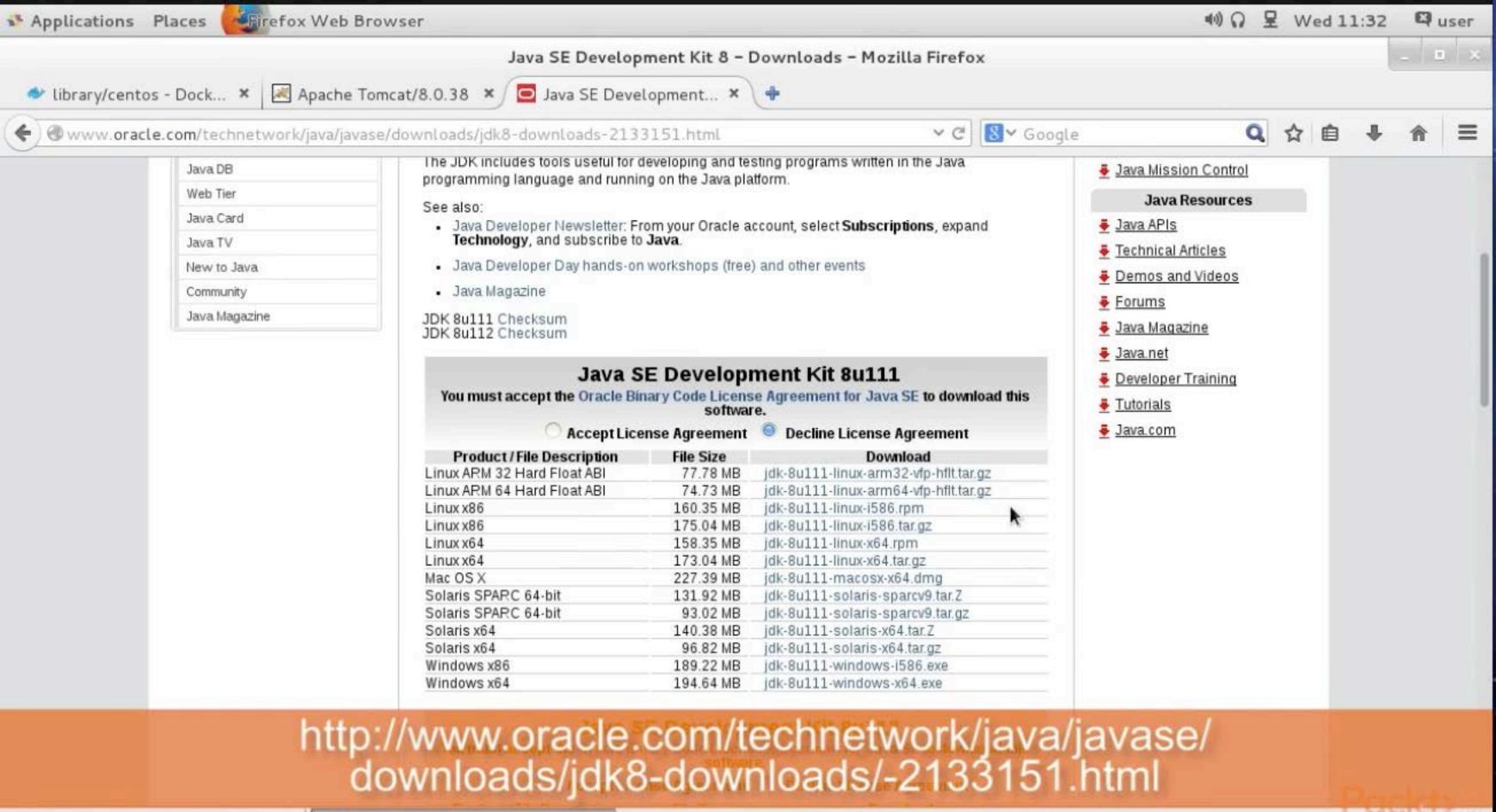
[root@localhost Desktop]# uname -m

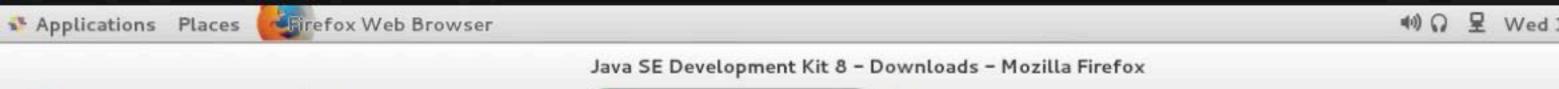
x86 64

[root@localhost Desktop]#



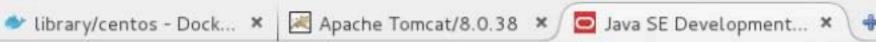




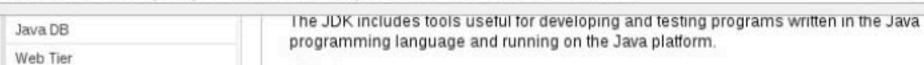




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http://www.oracle.com/technetwork/java/javase/downloads/jdk8-downloads/-2133151.html

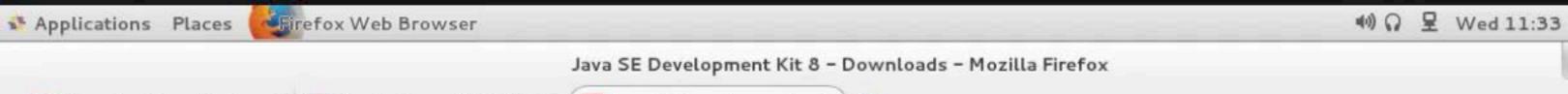
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New to Java

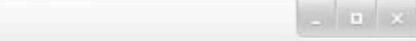
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Community

Java TV



Java SE Development... ×



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The JDK includes tools useful for developing and testing programs written in the Java programming language and running on the Java platform.

See also:

Apache Tomcat/8.0.38 ×

www.oracle.com/technetwork/java/javase/downloads/jdk8-downloads-2133151.html

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Windows x86	189.22 MB	jdk-8u111-windows-i586.exe
Windows x64	194.64 MB	jdk-8u111-windows-x64.exe

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Java APIs

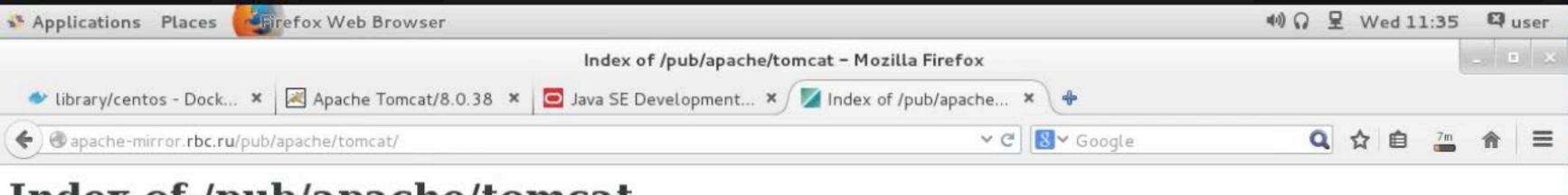
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- Developer Training
- Tutorials
- Java.com

http://www.oracle.com/technetwork/java/javase/downloads/jdk8-downloads/-2133151.html

library/centos - Dock... ×

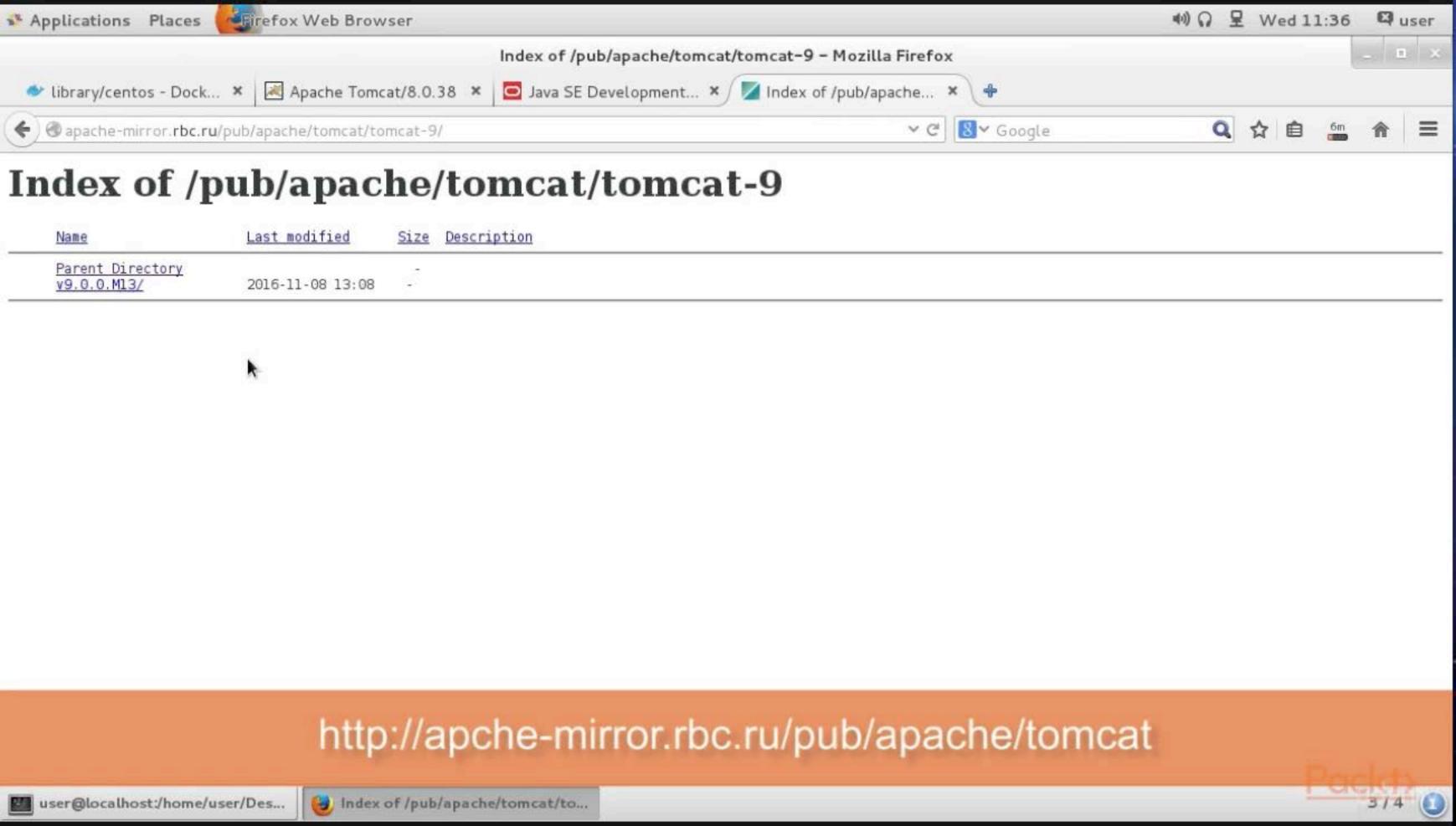


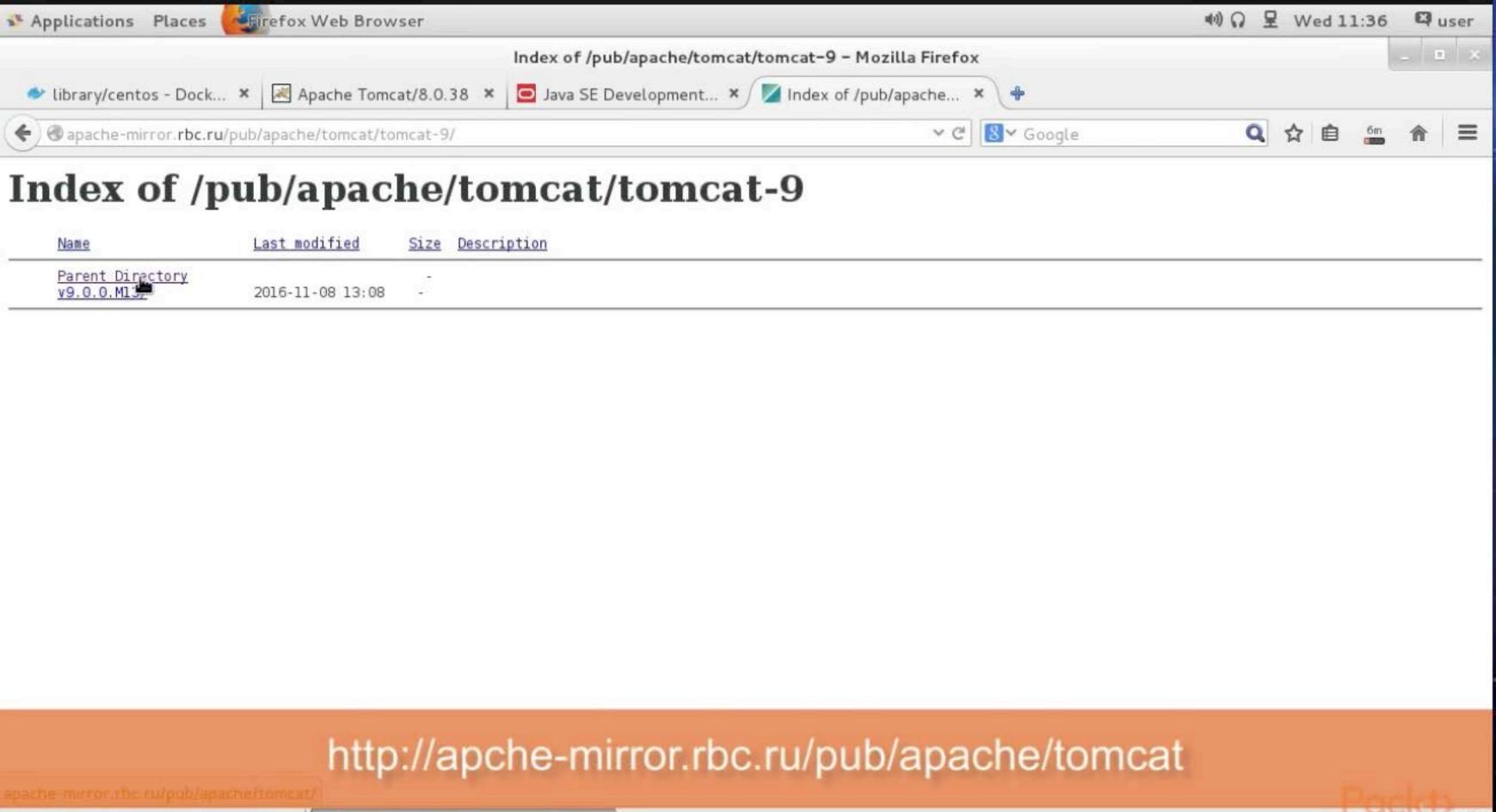
Index of /pub/apache/tomcat

Name	<u>Last modified</u>	Size	Description
Parent Directory		27	
maven-plugin/	2015-10-14 19:24	-	
taglibs/	2015-10-14 19:24		
taglibs/ tomcat-6/	2016-11-15 09:16	*	
tomcat-7/	2016-11-15 14:39	(*)	
tomcat-8/	2016-11-15 15:33	57.	
tomcat-9/	2016-11-10 14:28	-	
tomcat-connectors/	2015-10-14 19:24		

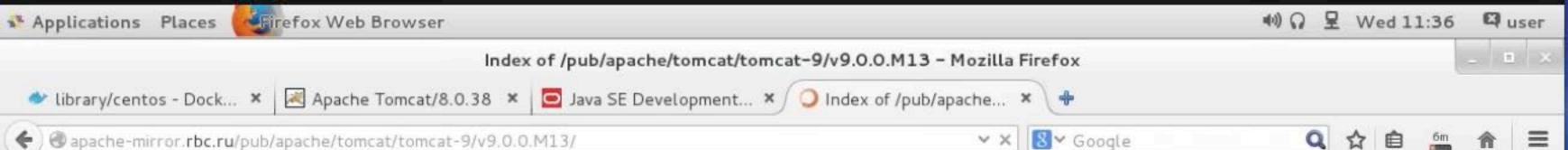








Index of /pub/apache/tomcat/to...



Index of /pub/apache/tomcat/tomcat-9/v9.0.0.M13

Name	Last modified	Size	Description
Parent Directory	2016-11-08 13:08	-	
src/	2016-11-08 13:07	2	
RELEASE-NOTES	2016-11-04 00:27		Apache Tomcat 9.0.0.M13

Apache Tomcat 9.0.0.M13

Useful references:

- Release notes, with important information about known issues
- Changelog

NOTE: The tar files in this distribution use GNU tar extensions, and must be untarred with a GNU compatible version of tar. The version of tar on Solaris and Mac OS X will not work with these files.

Tomcat 9.0 requires Java SE 8 or later. Read the RELEASE-NOTES and the RUNNING.txt file in the distribution for more details.

Packaging Details (or "What Should I Download?")

bin/

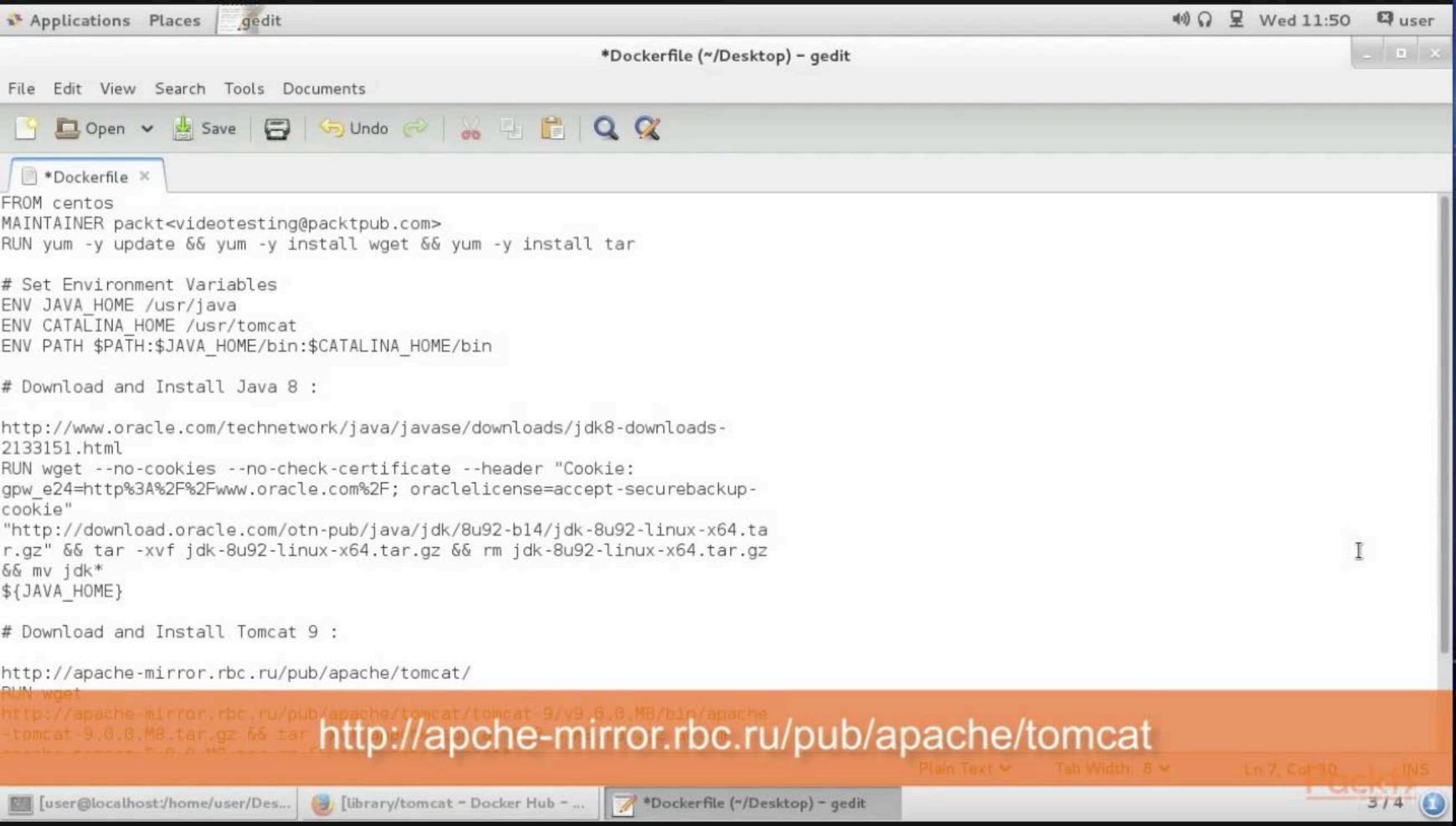
apache-tomcat-[version].zip or .tar.gz

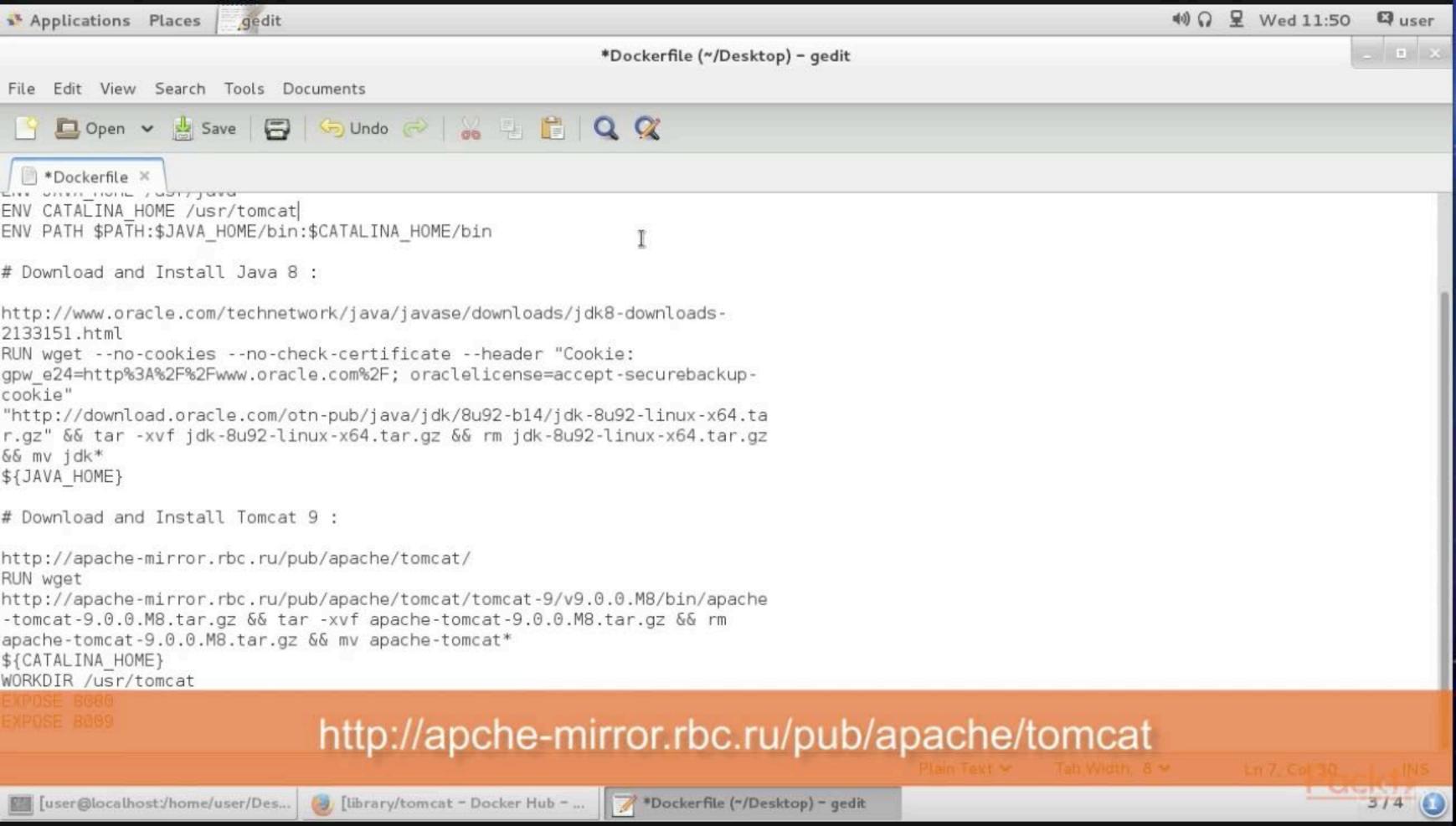
Base distribution. These distributions do not include the Windows service wrapper nor the compiled APR/native library for Windows

http://apche-mirror.rbc.ru/pub/apache/tomcat

22-bit 6.1-bit Windows lost all At facility in the senate that while this distribution includes the Last majority of the base distribution; some of the command-line scripts for launching

manuferring data from apache-mirror rocking union is intended for those users planning to taunch comcar through the windows shortcuts or service





Q user

user@localhost:/home/user/Desktop

File Edit View Search Terminal Help

Trying to pull repository docker.io/library/centos ...

latest: Pulling from docker.io/library/centos

Digest: sha256:b2f9d1c0ff5f87a4743104d099a3d561002ac500db1b9bfa02a783a46e0d366c

Status: Downloaded newer image for docker.io/centos:latest

---> 0584b3d2cf6d

Step 2 : MAINTAINER packt<videotesting@packtpub.com>

---> Running in 67b8fc645101

---> b831aa2c43a4

Removing intermediate container 67b8fc645101

Successfully built b831aa2c43a4

[root@localhost Desktop]# docker images

REPOSITORY	TAG	IMAGE ID	CREATED	SIZE
<none></none>	<none></none>	b831aa2c43a4	41 seconds ago	196.5 MB
docker.io/centos	7	0584b3d2cf6d	12 days ago	196.5 MB
docker.io/centos	latest	0584b3d2cf6d	12 days ago	196.5 MB
docker.io/tomcat	8.0	ebb17717bed4	2 weeks ago	355.4 MB
docker in/tomcat	latest	ebb17717bed4	2 weeks ago	355 / MR

docker.io/ubuntu f753707788c5 4 weeks ago 127.1 MB latest docker.io/hello-world 4 months ago c54a2cc56cbb 1.848 kB latest

[root@localhost Desktop]# uname -m

x86 64

[root@localhost Desktop]# doc

D X

user@localhost:/home/user/Desktop

IMAGE ID

b831aa2c43a4

0584b3d2cf6d

0584b3d2cf6d

ebb17717bed4

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f753707788c5

c54a2cc56cbb

File Edit View Search Terminal Help

- ---> Running in 67b8fc645101
- ---> b831aa2c43a4

docker.io/tomcat

docker.io/tomcat

docker.io/ubuntu

docker.io/hello-world

<none>

Removing intermediate container 67b8fc645101

Successfully built b831aa2c43a4

[root@localhost Desktop]# docker images

REPOSITORY	TAG	

docker.io/centos 7

docker.io/centos latest

8.0

<none>

latest latest

latest

[root@localhost Desktop]# uname -m

x86 64 [root@localhost Desktop]# docker build -t devopstomcat

docker: "build" requires 1 argument.

See '/usr/bin/docker-current build --help'.

Usage: docker build [OPTIONS] PATH | URL | -

Build an image from a Dockerfile [root@localhost Desktop]#



41 seconds ago

2 weeks ago 2 weeks ago

12 days ago

12 days ago

CREATED

4 weeks ago

4 months ago

SIZE 196.5 MB

196.5 MB

196.5 MB 355.4 MB

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1.848 kB

docker.io/tomcat

docker.io/tomcat

docker.io/ubuntu

docker.io/hello-world

SIZE

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user@localhost:/home/user/Desktop

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Rem	oving i	intermed	iat	te container 67b8fc645	101
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[ro	ot@loca	alhost [esk	(top]# docker images	
REP	OSITORY	1		TAG	IM
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doc	ker.io/	centos		latest	05

MAGE ID 831aa2c43a4 584b3d2c f6d 584b3d2c f6d ebb17717bed4 ebb17717bed4 f753707788c5 c54a2cc56cbb

41 seconds ago 196.5 MB 12 days ago 196.5 MB 12 days ago 196.5 MB 2 weeks ago 355.4 MB 2 weeks ago 355.4 MB 4 weeks ago 127.1 MB 4 months ago 1.848 kB

CREATED

```
[root@localhost Desktop]# uname -m
x86 64
```

[root@localhost Desktop]# docker build -t devopstomcat docker: "build" requires 1 argument.

8.0

latest

latest

latest

See '/usr/bin/docker-current build --help'.

docker build [OPTIONS] PATH | URL | -Usage:

Build an image from a Dockerfile [root@localhost Desktop]# docker build -t devopstomcat . Sending build context to Docker daemon 5.571 MB

Summary

- Understood the difference between virtual machines and containers
- Installed and configuring Docker on CentOS
- Created your first Docker container

- Understood the client-server architecture of Docker
- Managed containers
- Created a Docker image from Dockerfile



Next Section

Cloud Provisioning and Configuration Management with Chef

