Dockerfile

Automating Build

- Docker image creation can be automated

- Create a directory containing all the files required for the build

- Add a file called Dockerfile which defines the build process.

- Each command in the build file creates a layer of the image.

Dockerfile

Dockerfile contains build directives

▶ FROM defines the starting image

▶ MAINTAINER defines the email address of the builder

FROM centos:latest

MAINTAINER XXX@XXX.com

Shell & Copy

Shell:

► The Dockerfile SHELL command defines the default shell to use

► It must be specified in JSON form

► The default for Linux and windows are shown

► It takes the form SHELL ["executable", "parameters"]

SHELL ["/bin/sh", "-c"]

SHELL ["cmd", "/S", "/C"]

Copy:

► The Dockerfile COPY command copies files into the container o The source files or directories must be in the build context

► The source files can contain UNIX shell wildcards ? * []

► Destination directories must end in a / and will get created if they don't exist

COPY jdk*.rpm /tmp/

Add and Run

Add:

- The Dockerfile ADD command copies files and remote file URLs into the container

- The source files or directories must be in the build context or remote URLs

- The source files can contain UNIX shell wildcards ? * []

- Destination directories must end in a / and will get created if they don't exist Local source files in tar or compressed tar format get unpacked

    ADD apache-maven*.tar.gz /opt/

Run :

- The Dockerfile RUN command executes a Linux command

- Multiple commands can be separated with a ; - needed for cd

- Commands shouldn't block for input – commands have a –y switch which answers yes to all questions

    RUN yum install –y which , RUN rpm –i /tmp/*rpm ,RUN cd /opt; ln –s apache-maven* maven

Env and Command

Env:

▶ The Dockerfile ENV command sets environment variables in the image.

ENV JAVA_HOME=/usr/java/latest

ENV PATH=/usr/local/sbin:/usr/local/bin:/usr/sbin:/usr/bin:/sbin:/bin:/opt/maven/bin

Command :

The Dockerfile CMD command sets the default application.

CMD /bin/bash

Building

▶ The build process requires a directory

▶ All of the directory contents are transferred to the daemon o It must contain a Dockerfile build script

▶ Images should be tagged image-name:version

▶ A temporary container is created for each command in the build

docker build –t centos-java:latest .

THANK YOU