How to provide a portable developer workspace with Eclipse Che?

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Agenda

- Introduction to Che - Chedir
- Hand-ons - Let’s create a Chefile
- Advanced capabilities
- What’s Next on Chedir
The Developer Workspace
Che’s Workspaces

IDE  

Project Files  

Runtimes
Workspaces bring their own runtimes

Docker machine

Multi-machines Docker Compose
Chedir: the flow

Provide developer workspace in few seconds:

$ git clone <repoURL>
$ docker run eclipse/che dir up

...workspace is **booted**

...ready to work at [http://localhost:8080/che](http://localhost:8080/che)

...sources are sync with local clone
Demo Usage

Get a developer workspace for: webapp-demo

```bash
$ git clone https://github.com/benoitf/webapp-demo
$ docker run eclipse/che dir up
```
Live Demo

1. Che dir up
2. Developer workspaces with Terminal, Intellisense, Commands, Debugger
3. Author a Chefile
Chefile **Commands**

**Help**

$ docker run eclipse/che

dir init  Create Chefile if not existing

dir up    Boot Eclipse Che workspace

dir status Display status

dir down  Shutdown Eclipse Che + stop workspace

dir destroy Shutdown Eclipse Che + remove workspace

dir ssh    Connect with ssh to workspace’s runtime
Chefile Default

Write default Chefile in folder where `che dir init` is called

Defaults:

- Runtime with ubuntu image
- Project type : blank
- Dummy commands
- Memory = 2GB
# Defines name of the workspace
workspace.name = "che"

# Defines memory allocated to the workspace's runtime
workspace.ram = 2048

# Define the Docker image used as workspace's runtime
# This must conform to a Che recipe type:
workspace.runtime.docker.image="codenvy/alpine_jdk8"

# Define commands that will be displayed in the IDE
# Commands will appear in the command panels and controller.
workspace.commands[0].name = "my-first-command"
workspace.commands[0].type = "mvn"
workspace.commands[0].commandLine = "mvn clean install -f ${current.project.path}"
Chefile Configuration

Image name
"codenvy/alpine_jdk8"

Dockerfile content
"FROM ubuntu ..."

Composefile content
services: 
  db: image: mysql
  dev-machine: image: ubuntu

Project's dockerfile
<project-path>/Dockerfile
Chefile Configuration

Post loading action

# A command that will be executed after the workspace is loaded.
# Reference the name of a command defined above.
Workspace.postload.actions[0].script="echo 'a post-loading command'"
Chefile Commands Configuration

Use Macros

```
workspace.commands[0].commandLine = "mvn clean install -f ${current.project.path}"
```

${explorer.current.file.relpah} -- Path relative to the /projects folder in project tree
${explorer.current.project.name} -- Project name of the file currently selected in explorer

Defines Previews

```
workspace.commands[0].attributes.previewUrl = "http://${server.port.8080}/"
```

${server.<name>} -- Returns protocol, hostname and port of an internal server
${server.<name>.protocol} -- Returns protocol of a server registered by name
${server.<name>.hostname} -- Returns hostname of a server registered by name
${server.<name>.port} -- Returns port of a server registered by name
Host a Chefile on any Repository
Factory

Developer Workspace
Factory

With a Remote Che

With **Che on OpenShift**:  
- Hosted developers workspaces  
- OpenShift containers

With Codenvy:  
- Hosted developers workspaces  
- No installation  
- User management / Scalability
JIRA integration
Jenkins integration

BUILD FAILURE

Build URL: http://ci.codenvy-dev.com/ci/job/dashboard-demo/10/
Project: dashboard-demo

Codenvy Workspace: http://internal.codenvy.corp/P74r33wvye32j8lny8w

Ssh Workspace: ssh://root@turner.12.codenvy.corp.com:55321
Date of build: Wed, 16 Mar 2016 11:41:55 +0200
Build duration: 14 sec

No Changes

CONSOLE OUTPUT
Started by user Stéphane Tournié
Building on master in workspace/home/jenkins/jenkins/job/dashboard-demo/workspace
> git rev-parse --is-inside-work-tree # timeout=10
Fetching changes from the remote Git repository
> git config remote.origin.url git@github.com:codenvy-demos/dashboard.git # timeout=10
Fetching upstream changes from git@github.com:codenvy-demos/dashboard.git
> git --version # timeout=10
> git -c core.askpass=true fetch --tags --progress git@github.com:codenvy-demos/dashboard.git +refs/heads/*:refs/remotes/origin/*
> git rev-parse refs/remotes/origin/MKTG-414*(commit) # timeout=10
> git rev-parse refs/remotes/origin/MKTG-414*(commit) # timeout=10
Checking out Revision b101d67ee3d3ad7f4032d19b5b970b5ab545fbf6e (refs/remotes/origin/MKTG-414)
> git config.core.spacescheckout # timeout=10
> git checkout -f b101d67ee3d3ad7f4032d19b5b970b5ab545fbf6e
> git rev-list b101d67ee3d3ad7f4032d19b5b970b5ab545fbf6e # timeout=10
No emails were triggered.
Parsing POMs
ERROR: Failed to parse POMs
org.apache.maven.project:ProjectBuildingException: Some problems were encountered while processing the POMs:
[FATAL] Non-parseable POM home/jenkins/jenkins/jobs/dashboard-demo/workspace/pom.xml: and tag name must match start tag name from line 14 (position: TEXT seen ..." ... @21:14) @ line 21, column 14

More error messages are shown in /var/log/maven starters/errorLog.txt
What’s Next on Chedir

- Factory/Chefile Syntax Consolidation
- Chefile <-> Factory Translation Engine
- Chefile and Workspace sync
- IDE Post Loading actions
- Chefile editor and Intellisense
And of course...

eclipse.org/che

Getting started guides
Downloads
Documentations
Contribution guide
Thank You