

Deploying ELK Stack on Docker Container

[illegible]

```
Sajal@Sajal-HP MINGW64 ~
$ docker-machine ip
192.168.99.100
```

[illegible]

← → ↻ localhost:9080/hello/sajal

Hello sajal Response received on : Tue Aug 15 21:54:14 IST 2017

```
Sajal@Sajal-HP MINGW64 /F:/Study/Technical Writings/docker/hello-docker
$ docker ps
CONTAINER ID   IMAGE                                COMMAND                  CREATED        STATUS        PORTS
bc53db062934   hello-howtodoinjava/hello-docker   "sh -c 'java $JAVA...'  10 minutes ago Up 10 minutes  0.0.0.0:8080->9080/tcp
Sajal@Sajal-HP MINGW64 /F:/Study/Technical Writings/docker/hello-docker
$ docker stop cocky_hermann
cocky_hermann
```

Generate a Maven Project with Spring Boot 1.4.0

Project Metadata

Artifact coordinates

Group

com.howtodoinjava.demo

Artifact

springbootdemo

Name

SpringBootDemo

Description

Spring Boot Demo for http://howtodoinjava.com

Package Name

com.howtodoinjava.demo

Packaging

Jar

Java Version

1.8

Language

Java

Too many options? [Switch back to the simple version.](#)

Dependencies

Add Spring Boot Starters and dependencies to your application

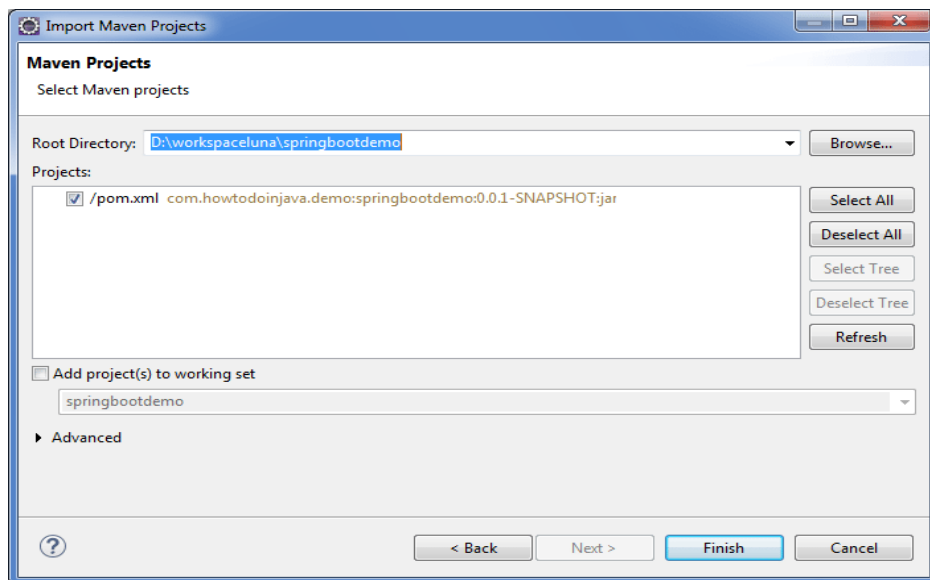
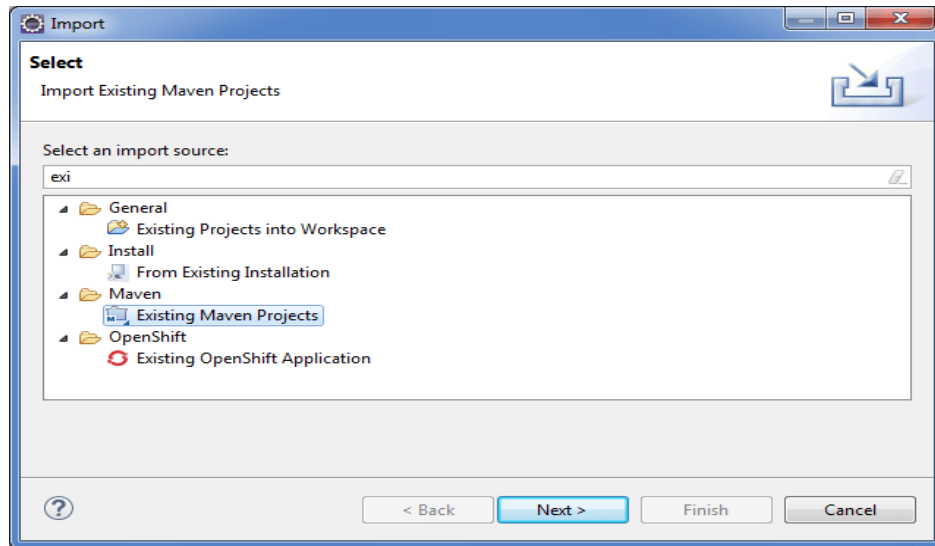
Search for dependencies

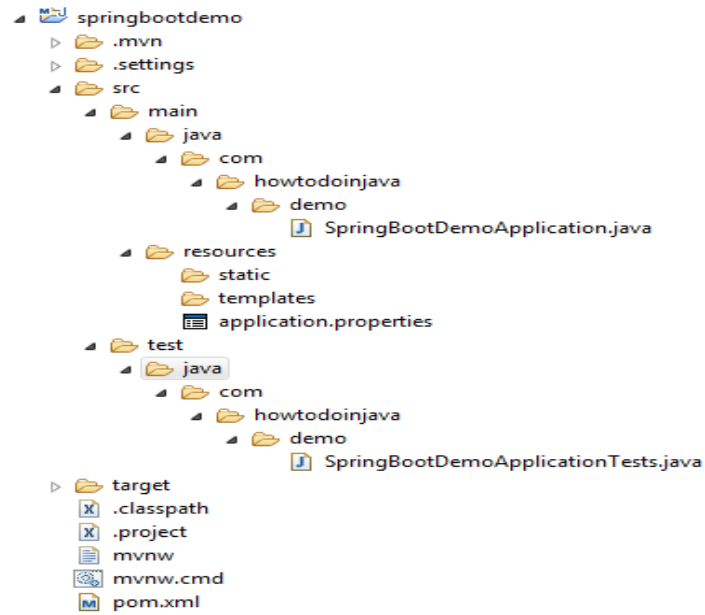
Web, Security, JPA, Actuator, Devtools...

Selected Dependencies

Web Jersey (JAX-RS) HATEOAS JPA Security
HSQldb

Generate Project alt + ↵





Simple REST Client

Request

URL:

Method: ☒ GET ☐ POST ☐ PUT ☐ DELETE ☐ HEAD ☐ OPTIONS

Headers:

Response

Status: 200 OK

Headers:

Data:

← → ↻ localhost:5601/app/kibana#/management/kibana/indices/logstash-*?_g=0&_a=(tab:indexedFields)

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kibana Management / Kibana

Index Patterns Saved Objects Advanced Settings

+ Create Index Pattern

★ logstash-*

Time Filter field name: @timestamp

This page lists every field in the **logstash-*** index and the field's associated core type as recorded by Elasticsearch. While this list allows you to view the core type of each field, changing field types must be done using Elasticsearch's [Mapping API](#)

fields (20) scripted fields (0) source filters (0)

Q Filter All field types

name	type	format	searchable	aggregatable	excluded	controls
@timestamp	date		✓	✓		
@version	string		✓	✓		
_id	string		✓			
_index	string		✓	✓		
_score	number					
_source	_source					
_type	string		✓	✓		
geolp.ip	ip		✓	✓		
geolp.latitude	number		✓	✓		

← → ↻ localhost:5601/app/kibana#/discover?_g=0&_a=(columns:(_source),index:'logstash-*',interval:auto,query:'*',sort:('@timestamp',desc))

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kibana Discover

67 hits

Search... (e.g. status:200 AND extension:PHP)

Uses lucene query syntax

logstash-*

Selected Fields

- ? _source

Available Fields

- @timestamp
- @version
- _id
- _index
- _score
- _type
- class
- host
- level
- logmessage
- message

August 30th 2017, 23:05:32.330 - August 30th 2017, 23:20:32.331 — Auto

Count

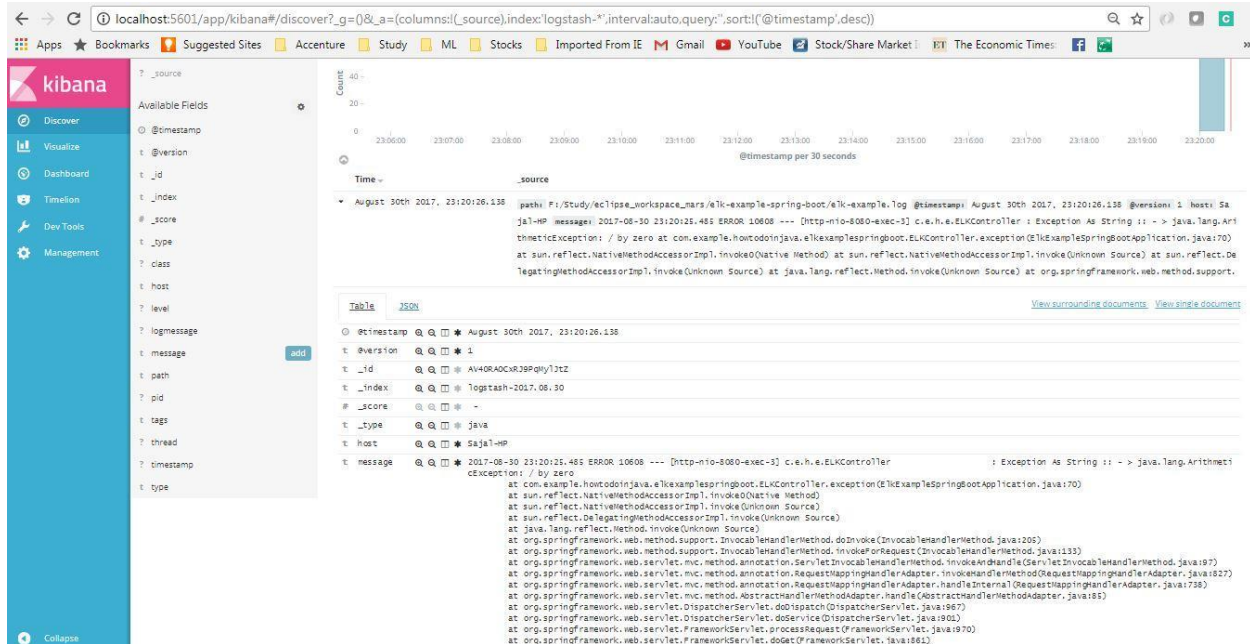
@timestamp per 30 seconds

Time

_source

▶ August 30th 2017, 23:20:26.138 path: F:/Study/eclipse_workspace_mars/elk-example-spring-boot/elk-example.log @timestamp: August 30th 2017, 23:20:26.138 @version: 1 host: Sajal-HP message: 2017-08-30 23:20:25.485 ERROR 10608 --- [http-nio-8080-exec-3] c.e.h.e.ELKController : Exception As String :: -> java.lang.ArithmeticException: / by zero at com.example.howtodojava.elkexamplespringboot.ELKController.exception(ELKExampleSpringBootApplication.java:70) at sun.reflect.NativeMethodAcc

▶ August 30th 2017, 23:20:26.138 path: F:/Study/eclipse_workspace_mars/elk-example-spring-boot/elk-example.log @timestamp: August 30th 2017, 23:20:26.138 @version: 1 host: Sajal-HP message: 2017-08-30 23:20:25.483 ERROR 10608 --- [http-nio-8080-exec-3] c.e.h.e.ELKController : java.lang.ArithmeticException: / by zero type: java tags: _grokparsefailure _id: AV40RAOCxR39PqMy1tY _type: java



Getting Started

Unlock Jenkins

To ensure Jenkins is securely set up by the administrator, a password has been written to the log (not sure where to find it?) and this file on the server:

```
/var/jenkins_home/secrets/initialAdminPassword
```

Please copy the password from either location and paste it below.

Administrator password

Continue

```

INFO: Pre-instantiating singletons in org.springframework.beans.factory.support.DefaultListableBeanFactory@24cf7404: defining beans [filter,legacy]; root of factory hierarchy
Sep 30, 2017 7:18:39 AM jenkins.install.SetupWizard init
INFO:

*****
*****
*****

Jenkins initial setup is required. An admin user has been created and a password generated.
Please use the following password to proceed to installation:

2f064d3663814887964b682940572567

This may also be found at: /var/jenkins_home/secrets/initialAdminPassword

*****
*****
*****

--> setting agent port for jnlp
--> setting agent port for jnlp... done
Sep 30, 2017 7:18:51 AM hudson.model.UpdateSite updateData
INFO: Obtained the latest update center data file for UpdateSource default
Sep 30, 2017 7:18:52 AM hudson.model.UpdateSite updateData
INFO: Obtained the latest update center data file for UpdateSource default
Sep 30, 2017 7:18:52 AM hudson.WebAppMain$3 run
INFO: Jenkins is fully up and running
Sep 30, 2017 7:18:52 AM hudson.model.DownloadService$Downloadable load
INFO: Obtained the updated data file for hudson.tasks.Maven.MavenInstaller
Sep 30, 2017 7:18:58 AM hudson.model.DownloadService$Downloadable load
INFO: Obtained the updated data file for hudson.tools.JDKInstaller
Sep 30, 2017 7:18:59 AM hudson.model.AsyncPeriodicWork$1 run
INFO: Finished Download metadata. 25,543 ms

```

simple-java-maven-app 1
 Pipeline
 Changes
 Tests
 Artifacts
 Logout

Branch: — 1m 9s No changes
 Commit: — - Started by user Alex

> General SCM <1s

> docker pull maven:3-alpine — Shell Script 44s

```

1 [simple-java-maven-app] Running shell script
2 + docker pull maven:3-alpine
3 3-alpine: Pulling from library/maven
4 88286f41530e: Already exists
5 009f6e766a1b: Pulling fs layer
6 86ed68184682: Pulling fs layer
7 f9cdc72bb970: Pulling fs layer
8 7e4415124188: Pulling fs layer
9 f6ba1c32fdb3: Pulling fs layer
10 8f690e3687b2: Pulling fs layer
11 7e4415124188: Waiting
12 f6ba1c32fdb3: Waiting
13 8f690e3687b2: Waiting
14 009f6e766a1b: Download complete
15 009f6e766a1b: Pull complete
16 f9cdc72bb970: Download complete
17 f6ba1c32fdb3: Download complete
18 8f690e3687b2: Verifying Checksum
19 8f690e3687b2: Download complete
20 7e4415124188: Verifying Checksum
21 7e4415124188: Download complete
22 86ed68184682: Verifying Checksum
23 86ed68184682: Download complete
24 86ed68184682: Pull complete
25 f9cdc72bb970: Pull complete
26 7e4415124188: Pull complete
27 f6ba1c32fdb3: Pull complete
28 8f690e3687b2: Pull complete
29 Digest: sha256:400fb45cfcedfc492ff91319ea0a58f570172f8cf65f40b9b14931f44a6c1417
30 Status: Downloaded newer image for maven:3-alpine

```

simple-java-maven-app 1

Pipeline

Changes

Tests

Artifacts

Logout

Branch: --

1m 50s

No changes

Commit: --

-

Started by user Alex

Start

Build

End

Steps Build

✓

> docker pull maven:3-alpine -- Shell Script

56s

✓

> General SCM

<1s

ⓘ

> mvn -B -DskipTests clean package -- Shell Script

28s

```

1 [simple-java-maven-app] Running shell script
2 + mvn -B -DskipTests clean package
3 [INFO] Scanning for projects...
4 [INFO]
5 [INFO] -----
6 [INFO] Building my-app 1.0-SNAPSHOT
7 [INFO] -----
8 [INFO] Downloading: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-clean-plugin/2.5/maven-clean-plugin-2.5.pom
9 [INFO] Downloaded: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-clean-plugin/2.5/maven-clean-plugin-2.5.pom (3.9
kB at 1.5 kB/s)
10 [INFO] Downloading: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-plugins/22/maven-plugins-22.pom
11 [INFO] Downloaded: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-plugins/22/maven-plugins-22.pom (13 kB at 22
kB/s)
12 [INFO] Downloading: https://repo.maven.apache.org/maven2/org/apache/maven/maven-parent/21/maven-parent-21.pom

```

Jenkins

Pipelines

Administration

Logout

simple-java-maven-app

☆

⚙

Activity

Branches

Pull Requests

Run

STATUS	RUN	COMMIT	MESSAGE	DURATION	COMPLETED
✓	1	--	Started by user Alex	2m 49s	7 minutes ago

- e2b50bd · (no branch) · 19th September 2017 10:42 PM

✓ simple-java-maven-app 2

PipelineChangesTestsArtifacts🔄⚙️📄Logout✕

Branch: — 25s Changes by gilesgas
Commit: — a few seconds ago Started by user Alex

StartBuildTestEnd

StartBuildTestEnd

Steps Test

✓ mvn test — Shell Script 9s

```
1 [simple-java-maven-app] Running shell script
2 + mvn test
3 [INFO] Scanning for projects...
4 [INFO]
5 [INFO] -----
6 [INFO] Building my-app 1.0-SNAPSHOT
7 [INFO] -----
8 [INFO]
9 [INFO] --- maven-resources-plugin:2.6:resources (default-resources) @ my-app ---
10 [WARNING] Using platform encoding (UTF-8 actually) to copy filtered resources, i.e. build is platform dependent!
11 [INFO] skip non existing resourceDirectory /var/jenkins_home/workspace/simple-java-maven-app/src/main/resources
12 [INFO]
13 [INFO] --- maven-compiler-plugin:3.1:compile (default-compile) @ my-app ---
14 [INFO] Nothing to compile - all classes are up to date
15 [INFO]
16 [INFO] --- maven-resources-plugin:2.6:testResources (default-testResources) @ my-app ---
17 [WARNING] Using platform encoding (UTF-8 actually) to copy filtered resources, i.e. build is platform dependent!
18 [INFO] skip non existing resourceDirectory /var/jenkins_home/workspace/simple-java-maven-app/src/test/resources
```

✓ simple-java-maven-app 3

PipelineChangesTestsArtifacts🔄⚙️📄Logout✕

Branch: — 1m 3s Changes by gilesgas
Commit: — a few seconds ago Started by user Alex

StartBuildTestDeliverEnd

StartBuildTestDeliverEnd

Steps Deliver

✓ > ./jenkins/scripts/deliver.sh — Shell Script 43s

```

10 [INFO] -----
11 [INFO] Building my-app 1.0-SNAPSHOT
12 [INFO] -----
13 [INFO]
14 [INFO] --- maven-jar-plugin:3.0.2:jar (default-cli) @ my-app ---
15 [INFO]
16 [INFO] --- maven-install-plugin:2.4:install (default-cli) @ my-app ---
17 [INFO] Installing /var/jenkins_home/workspace/simple-java-maven-app/target/my-app-1.0-SNAPSHOT.jar to
18 [INFO] /root/.m2/repository/com/mycompany/app/my-app/1.0-SNAPSHOT/my-app-1.0-SNAPSHOT.jar
19 [INFO] Installing /var/jenkins_home/workspace/simple-java-maven-app/pom.xml to /root/.m2/repository/com/mycompany/app/my-app/1.0-
20 [INFO] SNAPSHOT/my-app-1.0-SNAPSHOT.pom
21 [INFO] -----
22 [INFO] Building my-app 1.0-SNAPSHOT
23 [INFO] -----
24 [INFO] --- maven-help-plugin:2.2:evaluate (default-cli) @ my-app ---
25 [INFO] No artifact parameter specified, using 'com.mycompany.app:my-app:jar:1.0-SNAPSHOT' as project.
26 [INFO]
27 my-app
28 [INFO] -----
29 [INFO] BUILD SUCCESS
30 [INFO] -----
31 [INFO] Total time: 1.870 s
32 [INFO] Finished at: 2017-10-01T13:20:22Z
33 [INFO] Final Memory: 18M/96M
34 [INFO] -----
35 + set +x
36 The following complex command extracts the value of the <name/> element
37 within <project/> of your Java/Maven projects "pom.xml" file.
38 ++ mvn help:evaluate -Dexpression=project.name
39 ++ grep '^[\[]'
40 + NAME=my-app
41 + set +x
42 The following complex command behaves similarly to the previous one but
43 extracts the value of the <version/> element within <project/> instead.
44 ++ mvn help:evaluate -Dexpression=project.version
45 ++ grep '^[\[]'
46 + VERSION=1.0-SNAPSHOT
47 + set +x
48 The following command runs and outputs the execution of your Java
49 application (which Jenkins built using Maven) to the Jenkins UI.
50 + java -jar target/my-app-1.0-SNAPSHOT.jar
51 Hello World!

```

Jenkins

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simple-java-maven-app

[Activity](#)
[Branches](#)
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Run

STATUS	RUN	COMMIT	MESSAGE	DURATION	COMPLETED
	3	—	Add 'Deliver' stage	1m 3s	5 minutes ago
	2	—	Add 'Test' stage	25s	10 minutes ago
	1	—	Started by user Alex	2m 49s	25 minutes ago

· e2b50bd · (no branch) · 19th September 2017 10:42 PM