

SSBD CA" Q5 Wordcount with Storm Failed Attempt

First Attempt following successful execution of class example

```
hduser@kavi-VirtualBox:~$ mkdir ~/bigdata
hduser@kavi-VirtualBox:~$ cd Downloads
hduser@kavi-VirtualBox:~/Downloads$ ls
airport-codes-na.txt
apache-hive-3.1.2-bin.tar.gz
apache-zookeeper-3.8.4-bin.tar.gz
archive1.zip
archive2.zip
archive.zip
A_Tale_of_Two_Cities.txt
B05793_05_22.png
B05793_05_24.png
britney-spears.txt
ccFraud.csv
'Data Files for MapReduce-20240307'
'Data Files for MapReduce-20240307.zip'
departuredelays.csv
diamonds.csv
diamonds.txt
flink-1.17.0-bin-scala_2.12.tgz
mongodb-linux-x86_64-ubuntu2004-7.0.8
mongodb-linux-x86_64-ubuntu2004-7.0.8.tgz
mongodb-org-mongos_7.0.8_amd64.deb
mongodb-org-server_7.0.8_amd64.deb
output1
pg98-h.zip
pig-0.17.0.tar.gz
pig_tutorial_sample.txt
spark-3.4.2-bin-hadoop3.tgz
Spark_WordCount.ipynb-20240404.zip
SSBD_Tutorial05_Spark.pdf
'Tutorial 3 (MapReduce).pdf'
'Tutorial 4 - HBase-1.pdf'
'Tutorial 4 - HBase-2.pdf'
'Tutorial 4 - HBase.pdf'
'Tutorial 6 (a).ipynb'
'Tutorial 6 (b).ipynb'
Tutorial_6.zip
'Tutorial 7 - Apache Pig-1.pdf'
'Tutorial 7 - Apache Pig.pdf'
'Tutorial 8 - Apache Flink.pdf'
'Tutorial 9 Apache Hive --1.pdf'
'Tutorial 9 Apache Hive --2.pdf'
'Tutorial 9 Apache Hive -.pdf'
'Tutorial practice-20240404.zip'
'WordCount and Topten code-20240311'
'WordCount and Topten code-20240311.zip'
'WordCount with visualization - Homework-20240418.zip'
hduser@kavi-VirtualBox:~/Downloads$
```

```
hduser@kavi-VirtualBox:~/Downloads$ tar -xvf apache-zookeeper-3.8.4-bin.tar.gz
apache-zookeeper-3.8.4-bin/docs/
apache-zookeeper-3.8.4-bin/docs/skin/
apache-zookeeper-3.8.4-bin/docs/images/
apache-zookeeper-3.8.4-bin/docs/skin/basic.css
apache-zookeeper-3.8.4-bin/docs/skin/chapter.gif
apache-zookeeper-3.8.4-bin/docs/skin/chapter_open.gif
apache-zookeeper-3.8.4-bin/docs/skin/current.gif
apache-zookeeper-3.8.4-bin/docs/skin/getBlank.js
apache-zookeeper-3.8.4-bin/docs/skin/getMenu.js
apache-zookeeper-3.8.4-bin/docs/skin/header_white_line.gif
apache-zookeeper-3.8.4-bin/docs/skin/init.js
apache-zookeeper-3.8.4-bin/docs/skin/instruction_arrow.png
apache-zookeeper-3.8.4-bin/docs/skin/menu.js
apache-zookeeper-3.8.4-bin/docs/skin/page.gif
apache-zookeeper-3.8.4-bin/docs/skin/print.css
apache-zookeeper-3.8.4-bin/docs/skin/printer.gif
apache-zookeeper-3.8.4-bin/docs/skin/profile.css
apache-zookeeper-3.8.4-bin/docs/skin/prototype.js
apache-zookeeper-3.8.4-bin/docs/skin/screen.css
apache-zookeeper-3.8.4-bin/docs/images/2pc.jpg
apache-zookeeper-3.8.4-bin/docs/images/bk-overview.jpg
apache-zookeeper-3.8.4-bin/docs/images/favicon.ico
apache-zookeeper-3.8.4-bin/docs/images/state_dia.dia
apache-zookeeper-3.8.4-bin/docs/images/state_dia.jpg
apache-zookeeper-3.8.4-bin/docs/images/zkAuditLogs.jpg
apache-zookeeper-3.8.4-bin/docs/images/zkarch.jpg
apache-zookeeper-3.8.4-bin/docs/images/zkcomponents.jpg
apache-zookeeper-3.8.4-bin/docs/images/zknamespace.jpg
apache-zookeeper-3.8.4-bin/docs/images/zkperfRW-3.2.jpg
apache-zookeeper-3.8.4-bin/docs/images/zkperfRW.jpg
apache-zookeeper-3.8.4-bin/docs/images/zkperfReliability.jpg
apache-zookeeper-3.8.4-bin/docs/images/zkservice.jpg
apache-zookeeper-3.8.4-bin/docs/images/zookeeper_small.gif
apache-zookeeper-3.8.4-bin/docs/index.html
apache-zookeeper-3.8.4-bin/docs/javaExample.html
apache-zookeeper-3.8.4-bin/docs/recipes.html
apache-zookeeper-3.8.4-bin/docs/releasenotes.html
apache-zookeeper-3.8.4-bin/docs/zookeeperAdmin.html
apache-zookeeper-3.8.4-bin/docs/zookeeperAuditLogs.html
apache-zookeeper-3.8.4-bin/docs/zookeeperCLI.html
apache-zookeeper-3.8.4-bin/docs/zookeeperHierarchicalQuorums.html
apache-zookeeper-3.8.4-bin/docs/zookeeperInternals.html
apache-zookeeper-3.8.4-bin/docs/zookeeperJMX.html
apache-zookeeper-3.8.4-bin/docs/zookeeperMonitor.html
apache-zookeeper-3.8.4-bin/docs/zookeeperObservers.html
apache-zookeeper-3.8.4-bin/docs/zookeeperOracleQuorums.html
```

```
apache-zookeeper-3.8.4-bin/lib/jetty-util-ajax-9.4.53.v20231009.jar
apache-zookeeper-3.8.4-bin/lib/jackson-databind-2.15.2.jar
apache-zookeeper-3.8.4-bin/lib/jackson-annotations-2.15.2.jar
apache-zookeeper-3.8.4-bin/lib/jackson-core-2.15.2.jar
apache-zookeeper-3.8.4-bin/lib/jline-2.14.6.jar
apache-zookeeper-3.8.4-bin/lib/metrics-core-4.1.12.1.jar
apache-zookeeper-3.8.4-bin/lib/snappy-java-1.1.10.5.jar
hduser@kavi-VirtualBox:~/Downloads$ mv ./apache-zookeeper-3.8.4-bin /home/hduser/bigdata
hduser@kavi-VirtualBox:~/Downloads$ cd bigdata/apache-zookeeper-3.8.4-bin/conf
bash: cd: bigdata/apache-zookeeper-3.8.4-bin/conf: No such file or directory
hduser@kavi-VirtualBox:~/Downloads$ cd
hduser@kavi-VirtualBox:~$ cd bigdata/
hduser@kavi-VirtualBox:~/bigdata$ cd apache-zookeeper-3.8.4-bin/
hduser@kavi-VirtualBox:~/bigdata/apache-zookeeper-3.8.4-bin$ cd conf
```

```
hduser@kavi-VirtualBox:~/Downloads$ mv ./apache-zookeeper-3.8.4-bin /home/hduser/bigdata
hduser@kavi-VirtualBox:~/Downloads$ cd bigdata/apache-zookeeper-3.8.4-bin/conf
bash: cd: bigdata/apache-zookeeper-3.8.4-bin/conf: No such file or directory
hduser@kavi-VirtualBox:~/Downloads$ cd
hduser@kavi-VirtualBox:~$ cd bigdata/
hduser@kavi-VirtualBox:~/bigdata$ cd apache-zookeeper-3.8.4-bin/
hduser@kavi-VirtualBox:~/bigdata/apache-zookeeper-3.8.4-bin$ cd conf
hduser@kavi-VirtualBox:~/bigdata/apache-zookeeper-3.8.4-bin/conf$ ls
configuration.xsl logback.xml zoo_sample.cfg
hduser@kavi-VirtualBox:~/bigdata/apache-zookeeper-3.8.4-bin/conf$ cp ./zoo_sample.cfg ./zoo.cfg
hduser@kavi-VirtualBox:~/bigdata/apache-zookeeper-3.8.4-bin/conf$ ls
configuration.xsl logback.xml zoo.cfg zoo_sample.cfg
hduser@kavi-VirtualBox:~/bigdata/apache-zookeeper-3.8.4-bin/conf$ nano zoo.cfg
```

hduser@kavi-VirtualBox: ~/bigdata/apache-zookeeper-3.8.4-bin/conf

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```
GNU nano 6.2                         zoo.cfg *
```

The number of milliseconds of each tick
tickTime=2000
The number of ticks that the initial
synchronization phase can take
initLimit=10
The number of ticks that can pass between
sending a request and getting an acknowledgement
syncLimit=5
the directory where the snapshot is stored.
do not use /tmp for storage, /tmp here is just
example sakes.
dataDir=/tmp/zookeeper
the port at which the clients will connect
clientPort=2181
the maximum number of client connections.
increase this if you need to handle more clients
#maxClientCnxns=60

Be sure to read the maintenance section of the
administrator guide before turning on autopurge.

https://zookeeper.apache.org/doc/current/zookeeperAdmin.html#sc_maintenance

The number of snapshots to retain in dataDir
#autopurge.snapRetainCount=3
Purge task interval in hours
Set to "0" to disable auto purge feature
#autopurge.purgeInterval=1

Metrics Providers

https://prometheus.io Metrics Exporter
#metricsProvider.className=org.apache.zookeeper.metrics.prometheus.PrometheusMetricsProvider
#metricsProvider.httpHost=0.0.0
#metricsProvider.httpPort=7000
#metricsProvider.exportJvmInfo=true

admin.enableServer=true
admin.serverPort=9990

^G Help ^O Write Out ^W Where Is ^K Cut ^T Execute ^C Location M-U Undo
^X Exit ^R Read File ^\ Replace ^U Paste ^J Justify ^/ Go To Line M-E Redo

```
hduser@kavi-VirtualBox:~/bigdata/apache-zookeeper-3.8.4-bin/conf$ nano zoo.cfg  
hduser@kavi-VirtualBox:~/bigdata/apache-zookeeper-3.8.4-bin/conf$ cd ..  
hduser@kavi-VirtualBox:~/bigdata/apache-zookeeper-3.8.4-bin$ bin/zkServer.sh start  
ZooKeeper JMX enabled by default  
Using config: /home/hduser/bigdata/apache-zookeeper-3.8.4-bin/bin/../conf/zoo.cfg  
Starting zookeeper ... STARTED  
hduser@kavi-VirtualBox:~/bigdata/apache-zookeeper-3.8.4-bin$
```

```
hduser@kavi-VirtualBox:~/bigdata/apache-zookeeper-3.8.4-bin$ bin/zkServer.sh start
ZooKeeper JMX enabled by default
Using config: /home/hduser/bigdata/apache-zookeeper-3.8.4-bin/bin/../conf/zoo.cfg
Starting zookeeper ... STARTED
hduser@kavi-VirtualBox:~/bigdata/apache-zookeeper-3.8.4-bin$ cd
hduser@kavi-VirtualBox:~$ cd Download
bash: cd: Download: No such file or directory
hduser@kavi-VirtualBox:~$ cd Downloads
hduser@kavi-VirtualBox:~/Downloads$ ls
airport-codes-na.txt          pg98-h.zip
apache-hive-3.1.2-bin.tar.gz    pig-0.17.0.tar.gz
apache-storm-2.4.0.tar.gz      pig_tutorial_sample.txt
apache-zookeeper-3.8.4-bin.tar.gz spark-3.4.2-bin-hadoop3.tgz
archive1.zip                   Spark_WordCount.ipynb-20240404.zip
archive2.zip                   SSBD_Tutorial05_Spark.pdf
archive.zip                     'Tutorial 3 (MapReduce).pdf'
A.Tale_of_Two_Cities.txt       'Tutorial 4 - HBase-1.pdf'
B05793_05_22.png              'Tutorial 4 - HBase-2.pdf'
B05793_05_24.png              'Tutorial 4 - HBase.pdf'
britney-spears.txt             'Tutorial 6 (a).ipynb'
ccFraud.csv                    'Tutorial 6 (b).ipynb'
'Data Files for MapReduce-20240307' 'Tutorial_6.zip'
'Data Files for MapReduce-20240307.zip' 'Tutorial 7 - Apache Pig-1.pdf'
departuredelays.csv            'Tutorial 7 - Apache Pig.pdf'
diamonds.csv                   'Tutorial 8 - Apache Flink.pdf'
diamonds.txt                   'Tutorial 9 Apache Hive --1.pdf'
flink-1.17.0-bin-scala_2.12.tgz 'Tutorial 9 Apache Hive --2.pdf'
mongodb-linux-x86_64-ubuntu2004-7.0.8   'Tutorial 9 Apache Hive -.pdf'
mongodb-linux-x86_64-ubuntu2004-7.0.8.tgz 'Tutorial practice-20240404.zip'
mongodb-org-mongos_7.0.8_amd64.deb     'WordCount and Topten code-20240311'
mongodb-org-server_7.0.8_amd64.deb      'WordCount and Topten code-20240311.zip'
output1                         'WordCount with visualization - Homework-20240418.zip'
hduser@kavi-VirtualBox:~/Downloads$ tar -xzf apache-storm-2.4.0.tar.gz
hduser@kavi-VirtualBox:~/Downloads$ sudo mv ./apache-storm-2.4.0 /home/hduser/bigdata
[sudo] password for hduser:
hduser@kavi-VirtualBox:~/Downloads$
```

```
hduser@kavi-VirtualBox:~/Downloads$ cd
hduser@kavi-VirtualBox:~$ cd bigdata
hduser@kavi-VirtualBox:~/bigdata$ ls
apache-storm-2.4.0  apache-zookeeper-3.8.4-bin
hduser@kavi-VirtualBox:~/bigdata$ cd apache-storm-2.4.0/
hduser@kavi-VirtualBox:~/bigdata/apache-storm-2.4.0$ cd conf
hduser@kavi-VirtualBox:~/bigdata/apache-storm-2.4.0/conf$ ls
seccomp.json.example  storm_env.ini  storm-env.ps1  storm-env.sh  storm.yaml
hduser@kavi-VirtualBox:~/bigdata/apache-storm-2.4.0/conf$ nano storm.yaml
```

hduser@kavi-VirtualBox: ~/bigdata/apache-storm-2.4.0/conf

```
GNU nano 6.2                                     storm.yaml *

# argument:
#   - endpoint: "metrics-collector.mycompany.org"
#   expandMapType: true
#   metricNameSeparator: "."

## Cluster Metrics Consumers
# storm.cluster.metrics.consumer.register:
#   - class: "org.apache.storm.metric.LoggingClusterMetricsConsumer"
#   - class: "org.mycompany.MyMetricsConsumer"
#     argument:
#       - endpoint: "metrics-collector.mycompany.org"
#
# storm.cluster.metrics.consumer.publish.interval.secs: 60

# Event Logger
# topology.event.logger.register:
#   - class: "org.apache.storm.metric.FileBasedEventLogger"
#   - class: "org.mycompany.MyEventLogger"
#     arguments:
#       endpoint: "event-logger.mycompany.org"

# Topology metrics v2 configuration (optional)
#topology.metrics.reporters:
#  # Graphite Reporter
#  - class: "org.apache.storm.metrics2.reporters.GraphiteStormReporter"
#    report.period: 60
#    report.period.units: "SECONDS"
#    graphite.host: "localhost"
#    graphite.port: 2003
#
#  # Console Reporter
#  - class: "org.apache.storm.metrics2.reporters.ConsoleStormReporter"
#    report.period: 10
#    report.period.units: "SECONDS"
#    filter:
#      class: "org.apache.storm.metrics2.filters.RegexFilter"
#      expression: ".*my_component.*emitted.*"

storm.zookeeper.servers:
  - "localhost"
nimbus.seeds: [ "localhost" ]
```

^G Help ^O Write Out ^W Where Is ^K Cut ^T Execute ^C Location M-U Undo
^X Exit ^R Read File ^\ Replace ^U Paste ^J Justify ^/ Go To Line M-E Redo

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```
hduser@kavi-VirtualBox:~/bigdata/apache-storm-2.4.0$ bin/storm nimbus
Running: /usr/bin/java -server -Ddaemon.name=nimbus -Dstorm.options= -Dstorm.home=/home/hduser/bigdata/apache-storm-2.4.0 -Dstorm.log.dir=/home/hduser/bigdata/apache-storm-2.4.0/logs -Djava.library.path=/usr/local/lib:/opt/local/lib:/usr/lib:/usr/lib64 -Dstorm.conf.file= -cp /home/hduser/bigdata/apache-storm-2.4.0/*:/home/hduser/bigdata/apache-storm-2.4.0/lib/*:/home/hduser/bigdata/apache-storm-2.4.0/extlib/*:/home/hduser/bigdata/apache-storm-2.4.0/extlib-daemon/*:/home/hduser/bigdata/apache-storm-2.4.0/conf -Xmx1024m -Djava.serialization.disabled=true -Dlogfile.name=nimbus.log -Dlog4j.configurationFile=/home/hduser/bigdata/apache-storm-2.4.0/log4j2/cluster.xml org.apache.storm.daemon.nimbus.Nimbus
```

hduser@kavi-Vir... x hduser@kavi-Vir... x hduser@kavi-Vir... x hduser@kavi-Vir... x hduser@kavi-Vir... x

```
hduser@kavi-VirtualBox:~/bigdata/apache-storm-2.4.0$ bin/storm supervisor
Running: /usr/bin/java -server -Ddaemon.name=supervisor -Dstorm.options= -Dstorm.home=/home/hduser/bigdata/apache-storm-2.4.0 -Dstorm.log.dir=/home/hduser/bigdata/apache-storm-2.4.0/logs -Djava.library.path=/usr/local/lib:/opt/local/lib:/usr/lib:/usr/lib64 -Dstorm.conf.file= -cp /home/hduser/bigdata/apache-storm-2.4.0/*:/home/hduser/bigdata/apache-storm-2.4.0/lib/*:/home/hduser/bigdata/apache-storm-2.4.0/extlib/*:/home/hduser/bigdata/apache-storm-2.4.0/extlib-daemon/*:/home/hduser/bigdata/apache-storm-2.4.0/conf -Xmx256m -Djava.serialization.disabled=true -Dlogfile.name=supervisor.log -Dlog4j.configurationFile=/home/hduser/bigdata/apache-storm-2.4.0/log4j2/cluster.xml org.apache.storm.daemon.supervisor.Supervisor
```

```
hduser@kavi-VirtualBox:~/bigdata/apache-storm-2.4.0$ bin/storm ui
Running: /usr/bin/java -server -Ddaemon.name=ui -Dstorm.options= -Dstorm.home=/home/hduser/bigdata/apache-storm-2.4.0 -Dstorm.log.dir=/home/hduser/bigdata/apache-storm-2.4.0/logs -Djava.library.path=/usr/local/lib:/opt/local/lib:/usr/lib:/usr/lib64 -Dstorm.conf.file= -cp /home/hduser/bigdata/apache-storm-2.4.0/*:/home/hduser/bigdata/apache-storm-2.4.0/lib/*:/home/hduser/bigdata/apache-storm-2.4.0/extlib/*:/home/hduser/bigdata/apache-storm-2.4.0/extlib/*:/home/hduser/bigdata/apache-storm-2.4.0/conf -Xmx768m -Djava.serialization.disabled=true -Dlogfile.name=ui.log -Dlog4j.configurationFile=/home/hduser/bigdata/apache-storm-2.4.0/log4j2/cluster.xml org.apache.storm.daemon.ui.uiserver
```

Course: Storage Solution | StoreSolnsBigData_HDI | Tutorial 10 - Apache Storm | Tutorial 3 (MapReduce).pdf | gutenberg.org/files/98/ | SSBD CA2 Prep - Google | Storm UI | + | - | X | localhost:8080

Storm UI

Cluster Summary

Version	Supervisors	Used slots	Free slots	Total slots	Executors	Tasks
2.4.0	1	0	4	4	0	0

Nimbus Summary

Host	Port	Status	Version	Uptime
kavi-VirtualBox	6627	Leader	2.4.0	2m 13s

Showing 1 to 1 of 1 entries

Owner Summary

Owner	Total Topologies	Total Executors	Total Workers	Memory Usage (MB)
No data available in table				

Showing 0 to 0 of 0 entries

Topology Summary

Name	Owner	Status	Uptime	Num workers	Num executors	Num tasks	Replication count	Assigned Mem (MB)	Assigned Generic Resources	Scheduler Info	Topology Version	Storm Version
No data available in table												

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Supervisor Summary

Host	Id	Uptime	Slots	Used slots	Avail slots	Used Mem (MB)	Version	Blacklisted
kavi-VirtualBox (log)	f7a52038-eb65-406d-96d9-849ee43f111-127.0.1.1	1m 22s	4	0	4	0	2.4.0	false

Showing 1 to 1 of 1 entries

Nimbus Configuration

Show 20 entries

Key	Value
blacklist.scheduler.assume.supervisor.bad.based.on.bad.slot	true
blacklist.scheduler.reporter	*org.apache.storm.scheduler.blacklist.reporters.LogReporter*
blacklist.scheduler.resume.time.secs	1800
blacklist.scheduler.strategy	*org.apache.storm.scheduler.blacklist.strategies.DefaultBlacklistStrategy*
blacklist.scheduler.tolerance.count	3
blacklist.scheduler.tolerance.time.secs	300
client.blobstore.class	*org.apache.storm.blobstore.NimbusBlobStore*
dev.zookeeper.path	*/tmp/dev-storm-zookeeper*
drpc.authorizer.acl.filename	*drpc-auth-acl.yaml*
drpc.authorizer.acl.strict	false
drpc.childopts	-Xmx768m
drpc.disable.http.binding	true
drpc.http.creds.plugin	*org.apache.storm.security.auth.DefaultHttpCredentialsPlugin*
drpc.http.port	3774
drpc.https.keystore.password	*

```
Get:3 http://ie.archive.ubuntu.com/ubuntu jammy-updates/main amd64 git amd64 1:2.34.1-1ubuntu1.10 [3,166 kB]
Fetched 4,147 kB in 1s (6,985 kB/s)
Selecting previously unselected package liberror-perl.
(Reading database ... 249498 files and directories currently installed.)
Preparing to unpack .../liberror-perl_0.17029-1_all.deb ...
Unpacking liberror-perl (0.17029-1) ...
Selecting previously unselected package git-man.
Preparing to unpack .../git-man_1%3a2.34.1-1ubuntu1.10_all.deb ...
Unpacking git-man (1:2.34.1-1ubuntu1.10) ...
Selecting previously unselected package git.
Preparing to unpack .../git_1%3a2.34.1-1ubuntu1.10_amd64.deb ...
Unpacking git (1:2.34.1-1ubuntu1.10) ...
Setting up openafs-modules-dkms (1.8.8.1-3ubuntu2~22.04.2) ...
Removing old openafs-1.8.8.1 DKMS files...
Deleting module openafs-1.8.8.1 completely from the DKMS tree.
Loading new openafs-1.8.8.1 DKMS files...
Building for 6.5.0-28-generic
Building initial module for 6.5.0-28-generic
ERROR: Cannot create report: [Errno 17] File exists: '/var/crash/openafs-modules-dkms.0.crash'
Error! Bad return status for module build on kernel: 6.5.0-28-generic (x86_64)
Consult /var/lib/dkms/openafs/1.8.8.1/build/make.log for more information.
dpkg: error processing package openafs-modules-dkms (--configure):
 installed openafs-modules-dkms package post-installation script subprocess returned error exit status
10
Setting up liberror-perl (0.17029-1) ...
Setting up git-man (1:2.34.1-1ubuntu1.10) ...
Setting up git (1:2.34.1-1ubuntu1.10) ...
Processing triggers for man-db (2.10.2-1) ...
Errors were encountered while processing:
 openafs-modules-dkms
E: Sub-process /usr/bin/dpkg returned an error code (1)
hduser@kavi-VirtualBox:~$ cd bigdata
hduser@kavi-VirtualBox:~/bigdata$ git clone https://github.com/ADMICloud/examples.git
Cloning into 'examples'...
remote: Enumerating objects: 152, done.
remote: Total 152 (delta 0), reused 0 (delta 0), pack-reused 152
Receiving objects: 100% (152/152), 34.88 KiB | 11.63 MiB/s, done.
Resolving deltas: 100% (34/34), done.
hduser@kavi-VirtualBox:~/bigdata$ ls
apache-storm-2.4.0 apache-zookeeper-3.8.4-bin examples
hduser@kavi-VirtualBox:~/bigdata$ cd examples
hduser@kavi-VirtualBox:~/bigdata/examples$ ls
hadoop-kmeans hadoop-wordcount java-if-else LICENSE README.md storm-example
hduser@kavi-VirtualBox:~/bigdata/examples$ cd storm-example
hduser@kavi-VirtualBox:~/bigdata/examples/storm-example$ mvn clean install
```

```
[INFO] org/apache/logging/ already added, skipping
[INFO] META-INF/DEPENDENCIES already added, skipping
[INFO] META-INF/LICENSE already added, skipping
[INFO] META-INF/NOTICE already added, skipping
[INFO] META-INF/maven/ already added, skipping
[INFO] META-INF/maven/org.apache.logging.log4j/ already added, skipping
[INFO]
[INFO] --- maven-install-plugin:2.4:install (default-install) @ storm-example ---
Downloading from central: https://repo.maven.apache.org/maven2/org/codehaus/plexus/plexus-utils/3.0.5/plexus-utils-3.0.5.pom
Downloaded from central: https://repo.maven.apache.org/maven2/org/codehaus/plexus/plexus-utils/3.0.5/plexus-utils-3.0.5.pom (2.5 kB at 74 kB/s)
Downloading from central: https://repo.maven.apache.org/maven2/org/codehaus/plexus/plexus/3.1/plexus-3.1.pom
Downloaded from central: https://repo.maven.apache.org/maven2/org/codehaus/plexus/plexus/3.1/plexus-3.1.pom (19 kB at 465 kB/s)
Downloading from central: https://repo.maven.apache.org/maven2/org/codehaus/plexus/plexus-digest/1.0/plexus-digest-1.0.pom
Downloaded from central: https://repo.maven.apache.org/maven2/org/codehaus/plexus/plexus-digest/1.0/plexus-digest-1.0.pom (1.1 kB at 31 kB/s)
Downloading from central: https://repo.maven.apache.org/maven2/org/codehaus/plexus/plexus-components/1.1.7/plexus-components-1.1.7.pom
Downloaded from central: https://repo.maven.apache.org/maven2/org/codehaus/plexus/plexus-components/1.1.7/plexus-components-1.1.7.pom (5.0 kB at 216 kB/s)
Downloading from central: https://repo.maven.apache.org/maven2/org/codehaus/plexus/plexus-utils/3.0.5/plexus-utils-3.0.5.jar
Downloading from central: https://repo.maven.apache.org/maven2/org/codehaus/plexus/plexus-digest/1.0/plexus-digest-1.0.jar
Downloaded from central: https://repo.maven.apache.org/maven2/org/codehaus/plexus/plexus-digest/1.0/plexus-digest-1.0.jar (12 kB at 216 kB/s)
Downloaded from central: https://repo.maven.apache.org/maven2/org/codehaus/plexus/plexus-utils/3.0.5/plexus-utils-3.0.5.jar (230 kB at 2.5 MB/s)
[INFO] Installing /home/hduser/bigdata/examples/storm-example/target/storm-example-1.0.jar to /home/hduser/.m2/repository/admicloud/storm-example/1.0/storm-example-1.0.jar
[INFO] Installing /home/hduser/bigdata/examples/storm-example/pom.xml to /home/hduser/.m2/repository/admicloud/storm-example/1.0/storm-example-1.0.pom
[INFO] Installing /home/hduser/bigdata/examples/storm-example/target/storm-example-1.0-jar-with-dependencies.jar to /home/hduser/.m2/repository/admicloud/storm-example/1.0/storm-example-1.0-jar-with-dependencies.jar
[INFO] -----
[INFO] BUILD SUCCESS
[INFO] -----
[INFO] Total time: 19.479 s
[INFO] Finished at: 2024-05-24T21:20:14+01:00
[INFO] -----
```

hduser@kavi-VirtualBox:~/bigdata/examples/storm-example\$

/home/hduser/bigdata/apache-storm-2.4.0/bin/storm jar

/home/hduser/bigdata/examples/storm-example/target/storm-example-1.0-jar-with-dependencies.jar

admicloud.storm.wordcount.WordCountTopology WordCount

```

[INFO] Finished at: 2024-05-24T21:20:14+01:00
[INFO] -----
hduser@kavi-VirtualBox:~/bigdata/examples/storm-example$ cd
hduser@kavi-VirtualBox:~/bigdata/apache-storm-2.4.0/bin$ storm jar /home/hduser/bigdata/examples/storm-example/target/storm-example-1.0-jar-with-dependencies.jar admicloud.storm.wordcount.WordCountTopology WordCount
SLF4J: Class path contains multiple SLF4J bindings.
SLF4J: Found binding in [jar:file:/home/hduser/bigdata/apache-storm-2.4.0/lib/log4j-slf4j-impl-2.17.1.jar!/org/slf4j/impl/StaticLoggerBinder.class]
SLF4J: Found binding in [jar:file:/home/hduser/bigdata/examples/storm-example/target/storm-example-1.0-jar-with-dependencies.jar!/org/slf4j/impl/StaticLoggerBinder.class]
SLF4J: See http://www.slf4j.org/codes.html#multiple_bindings for an explanation.
SLF4J: Actual binding is of type [org.apache.logging.slf4j.Log4jLoggerFactory]
Running: /usr/bin/java -client -Ddaemon.name= -Dstorm.home=/home/hduser/bigdata/apache-storm-2.4.0 -Dstorm.log.dir=/home/hduser/bigdata/apache-storm-2.4.0/logs -Djava.library.path=/usr/local/lib:/opt/local/lib:/usr/lib64 -Dstorm.conf.file= -cp /home/hduser/bigdata/apache-storm-2.4.0/*:/home/hduser/bigdata/examples/storm-example/target/storm-example-1.0-jar-with-dependencies.jar:/home/hduser/bigdata/apache-storm-2.4.0/conf:/home/hduser/bigdata/apache-storm-2.4.0/bin: -Dstorm.jar=/home/hduser/bigdata/examples/storm-example/target/storm-example-1.0-jar-with-dependencies.jar -Dstorm.dependency.jars= -Dstorm.dependency.artifacts={} admicloud.storm.wordcount.WordCountTopology WordCount
SLF4J: Class path contains multiple SLF4J bindings.
SLF4J: Found binding in [jar:file:/home/hduser/bigdata/apache-storm-2.4.0/lib-worker/log4j-slf4j-impl-2.17.1.jar!/org/slf4j/impl/StaticLoggerBinder.class]
SLF4J: Found binding in [jar:file:/home/hduser/bigdata/examples/storm-example/target/storm-example-1.0-jar-with-dependencies.jar!/org/slf4j/impl/StaticLoggerBinder.class]
SLF4J: See http://www.slf4j.org/codes.html#multiple_bindings for an explanation.
SLF4J: Actual binding is of type [org.apache.logging.slf4j.Log4jLoggerFactory]
21:26:07.908 [main] INFO o.a.s.StormSubmitter - Generated ZooKeeper secret payload for MD5-digest: -6967200058809924023:-6850241104037262783
21:26:08.085 [main] INFO o.a.s.u.NimbusClient - Found leader nimbus : kavi-VirtualBox:6627
21:26:08.092 [main] INFO o.a.s.a.ClientAuthUtils - Got AutoCreds []
21:26:08.151 [main] INFO o.a.s.StormSubmitter - Uploading dependencies - jars...
21:26:08.151 [main] INFO o.a.s.StormSubmitter - Uploading dependencies - artifacts...
21:26:08.152 [main] INFO o.a.s.StormSubmitter - Dependency Blob keys - jars : [] / artifacts : []
21:26:08.193 [main] INFO o.a.s.StormSubmitter - Uploading topology jar /home/hduser/bigdata/examples/storm-example/target/storm-example-1.0-jar-with-dependencies.jar to assigned location: /home/hduser/bigdata/apache-storm-2.4.0/storm-local/nimbus/inbox/stormjar-bfa1b39c-d207-449a-afed-993e57398072.jar
Start uploading file '/home/hduser/bigdata/examples/storm-example/target/storm-example-1.0-jar-with-dependencies.jar' to '/home/hduser/bigdata/apache-storm-2.4.0/storm-local/nimbus/inbox/stormjar-bfa1b39c-d207-449a-afed-993e57398072.jar' (165695 bytes)
[=====] 165695 / 165695
File '/home/hduser/bigdata/examples/storm-example/target/storm-example-1.0-jar-with-dependencies.jar' uploaded to '/home/hduser/bigdata/apache-storm-2.4.0/storm-local/nimbus/inbox/stormjar-bfa1b39c-d207-449a-afed-993e57398072.jar' (165695 bytes)
)
21:26:08.240 [main] INFO o.a.s.StormSubmitter - Successfully uploaded topology jar to assigned location: /home/hduser/bigdata/apache-storm-2.4.0/storm-local/nimbus/inbox/stormjar-bfa1b39c-d207-449a-afed-993e57398072.jar
21:26:08.240 [main] INFO o.a.s.StormSubmitter - Submitting topology WordCount in distributed mode with conf {"storm.zookeeper.topology.auth.scheme":"digest","storm.zookeeper.topology.auth.payload":"-6967200058809924023:-6850241104037262783","topology.workers":3,"topology.debug":true}
21:26:08.514 [main] INFO o.a.s.StormSubmitter - Finished submitting topology: WordCount
hduser@kavi-VirtualBox:~$
```

Course: Storage Solution > StoreSolnsBigData_HD[> Tutorial 10 - Apache Storm -> Tutorial 3 (MapReduce).pdf > Gutenberg.org/files/98/> SSBD CA2 Prep - Google > Storm UI

localhost:8080

Showing 1 to 1 of 1 entries

Owner Summary

Owner	Total Topologies	Total Executors	Total Workers	Memory Usage (MB)
hduser	1	28	3	3584

Showing 1 to 1 of 1 entries

Topology Summary

Name	Owner	Status	Uptime	Num workers	Num executors	Num tasks	Replication count	Assigned Mem (MB)	Assigned Generic Resources	Scheduler Info	Topology Version	Storm Version
WordCount	hduser	ACTIVE	1m 57s	3	28	28	1	3,584	NaN		2.4.0	2.4.0

Showing 1 to 1 of 1 entries

Supervisor Summary

Host	Id	Uptime	Slots	Used slots	Avail slots	Used Mem (MB)	Version	Blacklisted
kavi-VirtualBox (log)	f7a52038-eb65-406d-96d9-849ee43f3111-127.0.1.1	38m 46s	4	3	1	0	2.4.0	false

Showing 1 to 1 of 1 entries

Nimbus Configuration

Show 20 entries	Key	Value
-----------------	-----	-------

Host	ID	Uptime	Slots	Used slots	Avail slots	(MB)	Version	Blacklisted
kavi-VirtualBox (log)	17a52038-eb65-406d-96d9-849ee43f3111-127.0.1.1	38m 46s	4	3	1	0	2.4.0	false

Showing 1 to 1 of 1 entries

Nimbus Configuration

Show 20 entries

Key	Value
blacklist.scheduler.assume.supervisor.bad.based.on.bad.slot	true
blacklist.scheduler.reporter	"org.apache.storm.scheduler.blacklist.reporters.LogReporter"
blacklist.scheduler.resume.time.secs	1800
blacklist.scheduler.strategy	"org.apache.storm.scheduler.blacklist.strategies.DefaultBlacklistStrategy"
blacklist.scheduler.tolerance.count	3
blacklist.scheduler.tolerance.time.secs	300
client.blobstore.class	"org.apache.storm.blobstore.NimbusBlobStore"
dev.zookeeper.path	"/tmp/dev-storm-zookeeper"
drpc.authorizer.acl.filename	"drpc-auth-acl.yaml"
drpc.authorizer.acl.strict	false
drpc.childopts	"-Xmx768m"
drpc.disable.http.binding	true
drpc.http.creds.plugin	"org.apache.storm.security.auth.DefaultHttpCredentialsPlugin"
drpc.http.port	3774
drpc.https.keystore.password	""
drpc.https.keystore.type	"JKS"
drpc.https.port	-1
drpc.invocations.port	3773
drpc.invocations.threads	64

```

import org.apache.storm.Config;
import org.apache.storm.LocalCluster;
import org.apache.storm.StormSubmitter;
import org.apache.storm.topology.TopologyBuilder;
import org.apache.storm.topology.base.BaseBasicBolt;
import org.apache.storm.topology.base.BaseRichSpout;
import org.apache.storm.tuple.Fields;
import org.apache.storm.tuple.Tuple;
import org.apache.storm.tuple.Values;
import org.apache.storm.utils.Utils;

import java.io.BufferedReader;
import java.io.FileReader;
import java.util.HashMap;
import java.util.Map;

public class WordCountTopology {
    public static class TextFileSpout extends BaseRichSpout {
        private SpoutOutputCollector collector;
        private BufferedReader reader;
        private String line;

        @Override
        public void open(Map conf, TopologyContext context, SpoutOutputCollector collector) {
            this.collector = collector;
            try {
                reader = new BufferedReader(new FileReader("path/to/your/text/file.txt"));
            } catch (Exception e) {
                e.printStackTrace();
            }
        }

        @Override
        public void nextTuple() {
            try {
                if ((line = reader.readLine()) != null) {

```

```

        collector.emit(new Values(line));
    }
} catch (Exception e) {
    e.printStackTrace();
}
}

@Override
public void declareOutputFields(OutputFieldsDeclarer declarer) {
    declarer.declare(new Fields("line"));
}
}

public static class WordSplitBolt extends BaseBasicBolt {
    @Override
    public void execute(Tuple tuple, BasicOutputCollector collector) {
        String line = tuple.getStringByField("line");
        String[] words = line.split("\\s+");
        for (String word : words) {
            collector.emit(new Values(word));
        }
    }
}

@Override
public void declareOutputFields(OutputFieldsDeclarer declarer) {
    declarer.declare(new Fields("word"));
}
}

public static class WordCountBolt extends BaseBasicBolt {
    private Map<String, Integer> wordCounts = new HashMap<>();

    @Override
    public void execute(Tuple tuple, BasicOutputCollector collector) {
        String word = tuple.getStringByField("word");
        wordCounts.put(word, wordCounts.getOrDefault(word, 0) + 1);
        // Emit word counts if needed
    }
}

@Override
public void declareOutputFields(OutputFieldsDeclarer declarer) {
    // No output fields for this bolt
}
}

public static void main(String[] args) throws Exception {
    TopologyBuilder builder = new TopologyBuilder();

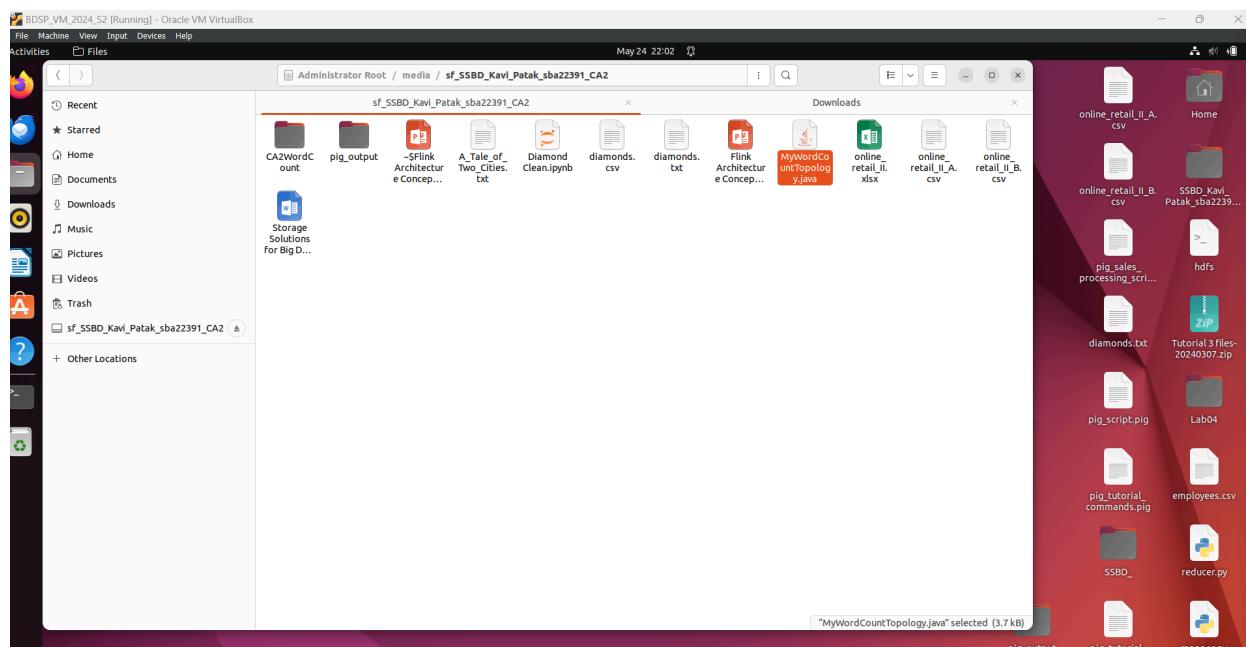
    builder.setSpout("text-file-spout", new TextFileSpout(), 1);
    builder.setBolt("word-split-bolt", new WordSplitBolt(), 2).shuffleGrouping("text-file-spout");
    builder.setBolt("word-count-bolt", new WordCountBolt(), 2).fieldsGrouping("word-split-bolt", new Fields("word"));

    Config conf = new Config();
    conf.setDebug(true);

    if (args != null && args.length > 0) {

```

```
conf.setNumWorkers(3);
StormSubmitter.submitTopologyWithProgressBar(args[0], conf, builder.createTopology());
else {
    conf.setMaxTaskParallelism(3);
    LocalCluster cluster = new LocalCluster();
    cluster.submitTopology("word-count-topology", conf, builder.createTopology());
    Thread.sleep(10000);
    cluster.shutdown();
```



```
hduser@kavi-VirtualBox:~/Downloads$ cd Downloads
hduser@kavi-VirtualBox:~/Downloads$ ls
airport-codes-na.txt
apache-hive-3.1.2-bin.tar.gz
apache-storm-2.4.0.tar.gz
apache-zookeeper-3.8.4-bin.tar.gz
archive1.zip
archive2.zip
archive.zip
A_Tale_of_Two_Cities.txt
B05793_05_22.png
B05793_05_24.png
britney-spears.txt
ccFraud.csv
'Data Files for MapReduce-20240307'
'Data Files for MapReduce-20240307.zip'
departuredelays.csv
diamonds.csv
diamonds.txt
flink-1.17.0-bin-scala_2.12.tgz
mongodb-linux-x86_64-ubuntu2004-7.0.8
mongodb-linux-x86_64-ubuntu2004-7.0.8.tgz
mongodb-org-mongos_7.0.8_amd64.deb
mongodb-org-server_7.0.8_amd64.deb
MyWordCountTopology.java
output1
hduser@kavi-VirtualBox:~/Downloads$
```

```
pg998-h.zip
pig-0.17.0.tar.gz
pig_tutorial_sample.txt
spark-3.4.2-bin-hadoop3.tgz
Spark_WordCount.ipynb-20240404.zip
SSBD_Tutorial05_Spark.pdf
'Tutorial 3 (MapReduce).pdf'
'Tutorial 4 - HBase-1.pdf'
'Tutorial 4 - HBase-2.pdf'
'Tutorial 4 - HBase.pdf'
'Tutorial 6 (a).ipynb'
'Tutorial 6 (b).ipynb'
Tutorial_6.zip
'Tutorial 7 - Apache Pig-1.pdf'
'Tutorial 7 - Apache Pig.pdf'
'Tutorial 8 - Apache Flink.pdf'
'Tutorial 9 Apache Hive --1.pdf'
'Tutorial 9 Apache Hive --2.pdf'
'Tutorial 9 Apache Hive -.pdf'
'Tutorial practice-20240404.zip'
'WordCount and Topten code-20240311'
'WordCount and Topten code-20240311.zip'
'WordCount with visualization - Homework-20240418.zip'
```

cd Downloads

ls

```
sudo mv ./A_Tale_of_Two_Cities.txt /home/hduser/bigdata  
sudo mv ./MyWordCountTopology.java /home/hduser/bigdata
```

Cd

```
cd bigdata
```

ls

```
hduser@kavi-VirtualBox:~/Downloads$ sudo mv ./A_Tale_of_Two_Cities.txt /home/hduser/bigdata  
hduser@kavi-VirtualBox:~/Downloads$ sudo mv ./A_Tale_of_Two_Cities.txt /home/hduser/bigdata  
[sudo] password for hduser:  
hduser@kavi-VirtualBox:~/Downloads$ sudo mv ./MyWordCountTopology.java /home/hduser/bigdata  
hduser@kavi-VirtualBox:~/Downloads$ cd  
hduser@kavi-VirtualBox:~/bigdata  
hduser@kavi-VirtualBox:~/bigdata$ ls  
apache-storm-2.4.0      A_Tale_of_Two_Cities.txt  MyWordCountTopology.java  
apache-zookeeper-3.8.4-bin  examples
```

```
mvn clean compile assembly:single
```

```
hduser@kavi-VirtualBox:~/bigdata$ ls
```

```
apache-storm-2.4.0      A_Tale_of_Two_Cities.txt  MyWordCountTopology.java
```

```
apache-zookeeper-3.8.4-bin  examples
```

```
hduser@kavi-VirtualBox:~/bigdata$ mvn clean compile assembly:single
```

```
[INFO] Scanning for projects...
```

```
[INFO] -----
```

```
[INFO] BUILD FAILURE
```

```
[INFO] -----
```

```
[INFO] Total time: 0.213 s
```

```
[INFO] Finished at: 2024-05-24T22:12:59+01:00
```

```
[INFO] -----
```

```
[ERROR] The goal you specified requires a project to execute but there is no POM in this directory  
(/home/hduser/bigdata). Please verify you invoked Maven from the correct directory. -> [Help 1]
```

```
[ERROR]
```

```
[ERROR] To see the full stack trace of the errors, re-run Maven with the -e switch.
```

```
[ERROR] Re-run Maven using the -X switch to enable full debug logging.
```

```
[ERROR]
```

```
[ERROR] For more information about the errors and possible solutions, please read the following articles:
```

```
[ERROR] [Help 1] http://cwiki.apache.org/confluence/display/MAVEN/MissingProjectException
```

```
hduser@kavi-VirtualBox:~/bigdata$ ls
```

```
apache-storm-2.4.0      A_Tale_of_Two_Cities.txt  MyWordCountTopology.java
```

```
apache-zookeeper-3.8.4-bin  examples
```

```
hduser@kavi-VirtualBox:~/bigdata$ mvn clean compile assembly:single
```

```
[INFO] Scanning for projects...
```

```
[INFO] -----
```

```
[INFO] BUILD FAILURE
```

```
[INFO] -----
```

```
[INFO] Total time: 0.213 s
```

```
[INFO] Finished at: 2024-05-24T22:12:59+01:00
```

```
[INFO] -----
```

```
[ERROR] The goal you specified requires a project to execute but there is no POM in this directory (/hom
```

```
e/hduser/bigdata). Please verify you invoked Maven from the correct directory. -> [Help 1]
```

```
[ERROR]
```

```
[ERROR] To see the full stack trace of the errors, re-run Maven with the -e switch.
```

```
[ERROR] Re-run Maven using the -X switch to enable full debug logging.
```

```
[ERROR]
```

```
[ERROR] For more information about the errors and possible solutions, please read the following articles
```

```
:
```

```
[ERROR] [Help 1] http://cwiki.apache.org/confluence/display/MAVEN/MissingProjectException
```

```
-----
```

```
sudo mv ./pom.xml /home/hduser/bigdata
```

```
hduser@kavi-VirtualBox:~/bigdata$ cd
hduser@kavi-VirtualBox:~$ cd Downloads
hduser@kavi-VirtualBox:~/Downloads$ ls
airport-codes-na.txt
apache-hive-3.1.2-bin.tar.gz
apache-storm-2.4.0.tar.gz
apache-zookeeper-3.8.4-bin.tar.gz
archive1.zip
archive2.zip
archive.zip
B05793_05_22.png
B05793_05_24.png
britney-spears.txt
ccFraud.csv
'Data Files for MapReduce-20240307'
'Data Files for MapReduce-20240307.zip'
departuredelays.csv
diamonds.csv
diamonds.txt
flink-1.17.0-bin-scala_2.12.tgz
mongodb-linux-x86_64-ubuntu2004-7.0.8
mongodb-linux-x86_64-ubuntu2004-7.0.8.tgz
mongodb-org-mongos_7.0.8_amd64.deb
mongodb-org-server_7.0.8_amd64.deb
output1
pg98-h.zip
pig-0.17.0.tar.gz
pig_tutorial_sample.txt
pom.xml
spark-3.4.2-bin-hadoop3.tgz
Spark_WordCount.ipynb-20240404.zip
SSBD_Tutorial05_Spark.pdf
'Tutorial 3 (MapReduce).pdf'
'Tutorial 4 - HBase-1.pdf'
'Tutorial 4 - HBase-2.pdf'
'Tutorial 4 - HBase.pdf'
'Tutorial 6 (a).ipynb'
'Tutorial 6 (b).ipynb'
Tutorial_6.zip
'Tutorial 7 - Apache Pig-1.pdf'
'Tutorial 7 - Apache Pig.pdf'
'Tutorial 8 - Apache Flink.pdf'
'Tutorial 9 Apache Hive --1.pdf'
'Tutorial 9 Apache Hive --2.pdf'
'Tutorial 9 Apache Hive -.pdf'
'Tutorial practice-20240404.zip'
'WordCount and Topten code-20240311'
'WordCount and Topten code-20240311.zip'
'WordCount with visualization - Homework-20240418.zip'
hduser@kavi-VirtualBox:~/Downloads$ sudo mv ./pom.xml /home/hduser/biqdata
```

```
hduser@kavi-VirtualBox:~/bigdata$ ls
apache-storm-2.4.0          A_Tale_of_Two_Cities.txt  MyWordCountTopology.java
apache-zookeeper-3.8.4-bin   examples                  pom.xml
hduser@kavi-VirtualBox:~/bigdata$
```

mvn clean compile assembly:single

```
hduser@k... x hduser@k... x hduser@ka... x hduser@ka... x hduser@ka... x ~  
hduser@kavi-VirtualBox:~$ cd bigdata  
hduser@kavi-VirtualBox:~/bigdata$ cd bigdata  
bash: cd: bigdata: No such file or directory  
hduser@kavi-VirtualBox:~/bigdata$ ls  
apache-storm-2.4.0      A_Tale_of_Two_Cities.txt  MyWordCountTopology.java  
apache-zookeeper-3.8.4-bin examples          pom.xml  
hduser@kavi-VirtualBox:~/bigdata$ mvn clean compile assembly:single  
[INFO] Scanning for projects...  
Downloading from central: https://repo.maven.apache.org/maven2/org/apache/plugins/maven-assembly-plugin/3.3.0/maven-assembly-plugin-3.3.0.pom  
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-assembly-plugin/3.3.0/maven-assembly-plugin-3.3.0.pom (16 kB at 7.6 kB/s)  
Downloading from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-plugins/34/maven-plugins-34.pom  
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-plugins/34/maven-plugins-34.pom (11 kB at 129 kB/s)  
Downloading from central: https://repo.maven.apache.org/maven2/org/apache/maven/maven-parent/34/maven-parent-34.pom  
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/maven-parent/34/maven-parent-34.pom (43 kB at 389 kB/s)  
Downloading from central: https://repo.maven.apache.org/maven2/org/apache/apache/23/apache-23.pom  
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/apache/23/apache-23.pom (18 kB at 312 kB/s)  
Downloading from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-assembly-plugin/3.3.0/maven-assembly-plugin-3.3.0.jar  
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-assembly-plugin/3.3.0/maven-assembly-plugin-3.3.0.jar (242 kB at 1.9 MB/s)  
[INFO]  
[INFO] -----< com.example:word-count-topology >-----  
[INFO] Building word-count-topology 1.0-SNAPSHOT  
[INFO] -----[ jar ]-----  
Downloading from central: https://repo.maven.apache.org/maven2/org/apache/storm/storm-core/2.4.0/storm-core-2.4.0.pom  
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/storm/storm-core/2.4.0/storm-core-2.4.0.pom (25 kB at 189 kB/s)  
Downloading from central: https://repo.maven.apache.org/maven2/org/apache/storm/storm/2.4.0/storm-2.4.0.pom  
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/storm/storm/2.4.0/storm-2.4.0.pom (70 kB at 297 kB/s)  
Downloading from central: https://repo.maven.apache.org/maven2/org/apache/apache/21/apache-21.pom  
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/apache/21/apache-21.pom (17 kB at 398 kB/s)  
Downloading from central: https://repo1.maven.org/maven2/org/glassfish/jersey/jersey-bom/2.29/jersey-bom-2.29.pom  
Downloaded from central: https://repo1.maven.org/maven2/org/glassfish/jersey/jersey-bom/2.29/jersey-bom-
```

```
Downloaded from central: https://repo.maven.apache.org/maven2/net/minidev/accessors-smart/1.2/accessors-smart-1.2.jar (30 kB at 3.7 kB/s)
Downloading from central: https://repo.maven.apache.org/maven2/org/apache/curator/curator-framework/2.7.1/curator-framework-2.7.1.jar
Downloaded from central: https://repo.maven.apache.org/maven2/com/nimbusds/nimbus-jose-jwt/4.41.1/nimbus-jose-jwt-4.41.1.jar (300 kB at 36 kB/s)
Downloading from central: https://repo.maven.apache.org/maven2/org/apache/curator/curator-client/2.7.1/curator-client-2.7.1.jar
Downloaded from central: https://repo.maven.apache.org/maven2/net/minidev/json-smart/2.3/json-smart-2.3.jar (120 kB at 14 kB/s)
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/curator/curator-client/2.7.1/curator-client-2.7.1.jar (70 kB at 8.3 kB/s)
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/curator/curator-framework/2.7.1/curator-framework-2.7.1.jar (186 kB at 22 kB/s)
Downloaded from central: https://repo.maven.apache.org/maven2/io/netty/netty/3.7.0.Final/netty-3.7.0.Final.jar (1.2 MB at 142 kB/s)
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/zookeeper/zookeeper/3.4.6/zookeeper-3.4.6.jar (793 kB at 93 kB/s)
Downloading from clojars: https://clojars.org/repo/com/twitter/carbonite/1.5.0/carbonite-1.5.0.jar
Downloaded from clojars: https://clojars.org/repo/com/twitter/carbonite/1.5.0/carbonite-1.5.0.jar (27 kB at 100 kB/s)
[INFO]
[INFO] --- maven-clean-plugin:2.5:clean (default-clean) @ word-count-topology ---
[INFO]
[INFO] --- maven-resources-plugin:2.6:resources (default-resources) @ word-count-topology ---
[WARNING] Using platform encoding (UTF-8 actually) to copy filtered resources, i.e. build is platform dependent!
[INFO] skip non existing resourceDirectory /home/hduser/bigdata/src/main/resources
[INFO]
[INFO] --- maven-compiler-plugin:3.1:compile (default-compile) @ word-count-topology ---
[INFO] No sources to compile
[INFO]
[INFO] --- maven-assembly-plugin:3.3.0:single (default-cli) @ word-count-topology ---
Downloading from central: https://repo.maven.apache.org/maven2/org/apache/maven/maven-plugin-api/3.0/maven-plugin-api-3.0.pom
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/maven-plugin-api/3.0/maven-plugin-api-3.0.pom (2.3 kB at 82 kB/s)
Downloading from central: https://repo.maven.apache.org/maven2/org/apache/maven/maven/3.0/maven-3.0.pom
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/maven/3.0/maven-3.0.pom (22 kB at 274 kB/s)
Downloading from central: https://repo.maven.apache.org/maven2/org/apache/maven/maven-model/3.0/maven-model-3.0.pom
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/maven-model/3.0/maven-model-3.0.pom (3.9 kB at 81 kB/s)
Downloading from central: https://repo.maven.apache.org/maven2/org/codehaus/plexus/plexus-utils/2.0.4/pl
```

```
hduser@kavi-VirtualBox: ~/bigdata

repository/1.6.2/org.apache.felix.bundlerepository-1.6.2.jar
Downloading from central: https://repo.maven.apache.org/maven2/net/sf/kxml/kxml2/2.2.2/kxml2-2.2.2.jar
Downloading from central: https://repo.maven.apache.org/maven2/org/apache/felix/maven-bundle-plugin/2.3.4/maven-bundle-plugin-2.3.4.jar
Downloading from central: https://repo.maven.apache.org/maven2/org/apache/felix/org.osgi.core/1.0.0/org.osgi.core-1.0.0.jar
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/felix/org.apache.bundlerepository/1.6.2/org.apache.felix.bundlerepository-1.6.2.jar (151 kB at 880 kB/s)
Downloading from central: https://repo.maven.apache.org/maven2/org/apache/felix/org.osgi.service.obr/1.0.1/org.osgi.service.obr-1.0.1.jar
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/felix/org.osgi.core/1.0.0/org.osgi.core-1.0.0.jar (61 kB at 369 kB/s)
Downloading from central: https://repo.maven.apache.org/maven2/org/apache/maven/maven-archiver/2.2/maven-archiver-2.2.jar
Downloaded from central: https://repo.maven.apache.org/maven2/net/sf/kxml/kxml2/2.2.2/kxml2-2.2.2.jar (43 kB at 245 kB/s)
Downloading from central: https://repo.maven.apache.org/maven2/org/apache/maven/wagon/wagon-provider-api/1.0-beta-2/wagon-provider-api-1.0-beta-2.jar
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/felix/maven-bundle-plugin/2.3.4/maven-bundle-plugin-2.3.4.jar (117 kB at 531 kB/s)
Downloading from central: https://repo.maven.apache.org/maven2/org/codehaus/plexus/plexus-archiver/1.0-alpha-7/plexus-archiver-1.0-alpha-7.jar
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/maven-archiver/2.2/maven-archiver-2.2.jar (10 kB at 49 kB/s)
Downloading from central: https://repo.maven.apache.org/maven2/org/codehaus/plexus/plexus-utils/1.4.7/plexus-utils-1.4.7.jar
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/felix/org.osgi.service.obr/1.0.1/org.osgi.service.obr-1.0.1.jar (11 kB at 46 kB/s)
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/wagon/wagon-provider-api/1.0-beta-2/wagon-provider-api-1.0-beta-2.jar (46 kB at 201 kB/s)
Downloaded from central: https://repo.maven.apache.org/maven2/biz/aQute/bndlib/1.15.0/bndlib-1.15.0.jar (548 kB at 2.1 MB/s)
Downloaded from central: https://repo.maven.apache.org/maven2/org/codehaus/plexus/plexus-archiver/1.0-alpha-7/plexus-archiver-1.0-alpha-7.jar (142 kB at 497 kB/s)
Downloaded from central: https://repo.maven.apache.org/maven2/org/codehaus/plexus/plexus-utils/1.4.7/plexus-utils-1.4.7.jar (203 kB at 672 kB/s)
[INFO] Building jar: /home/hduser/bigdata/target/word-count-topology-1.0-SNAPSHOT-jar-with-dependencies.jar
[INFO] -----
[INFO] BUILD SUCCESS
[INFO] -----
[INFO] Total time:  01:31 min
[INFO] Finished at: 2024-05-24T22:25:00+01:00
[INFO] -----
```

```
/home/hduser/bigdata/apache-storm-2.4.0/bin/storm jar
/home/hduser/bigdata/examples/storm-example/target/storm-example-1.0-jar-with-dependencies.jar
admicloud.storm.wordcount.WordCountTopology WordCount
```

```
storm jar target/MyWordCountTopology-1.0-SNAPSHOT-jar-with-dependencies.jar MyWordCountTopology
```

```
/home/hduser/bigdata/apache-storm-2.4.0/bin/storm jar
/home/hduser/bigdata/target/MyWordCountTopology-1.0-SNAPSHOT-jar-with-dependencies.jar MyWordCountTopology
```

```
hduser@kavi-VirtualBox:~$ /home/hduser/bigdata/apache-storm-2.4.0/bin/storm jar
/home/hduser/bigdata/target/WordCountTopology-1.0-SNAPSHOT-jar-with-dependencies.jar MyWordCountTopology
Running: /usr/bin/java -client -Ddaemon.name= -Dstorm.options= -Dstorm.home=/home/hduser/bigdata/apache-storm-2.4.0 -Dstorm.log.dir=/home/hduser/bigdata/apache-storm-2.4.0/logs -Djava.library.path=/usr/local/lib:/opt/local/lib:/usr/lib:/usr/lib64 -Dstorm.conf.file= -cp
/home/hduser/bigdata/apache-storm-2.4.0/*:/home/hduser/bigdata/apache-storm-2.4.0/lib-worker/*:/home/hduser/bigdata/apache-storm-2.4.0/extlib/*:/home/hduser/bigdata/target/WordCountTopology-1.0-SNAPSHOT-jar-with-dependencies.jar:/home/hduser/bigdata/apache-storm-2.4.0/conf:/home/hduser/bigdata/apache-storm-2.4.0/bin:
```

```
-Dstorm.jar=/home/hduser/bigdata/target/WordCountTopology-1.0-SNAPSHOT-jar-with-dependencies.jar  
-Dstorm.dependency.jars= -Dstorm.dependency.artifacts={} MyWordCountTopology  
Error: Could not find or load main class MyWordCountTopology
```

```
hduser@kavi-VirtualBox:~/bigdata$ ls  
apache-storm-2.4.0           A_Tale_of_Two_Cities.txt  MyWordCountTopology.java  target  
apache-zookeeper-3.8.4-bin  examples                  pom.xml
```

```
storm jar target/WordCountTopology-1.0-SNAPSHOT-jar-with-dependencies.jar MyWordCountTopology
```

```
hduser@kavi-VirtualBox:~$ cd bigdata  
hduser@kavi-VirtualBox:~/bigdata$ ls  
apache-storm-2.4.0           A_Tale_of_Two_Cities.txt  MyWordCountTopology.java  target  
apache-zookeeper-3.8.4-bin  examples                  pom.xml  
hduser@kavi-VirtualBox:~/bigdata$ storm jar target/WordCountTopology-1.0-SNAPSHOT-jar-with-dependencies.  
jar MyWordCountTopology
```

```
hduser@kavi-VirtualBox:~/bigdata$ storm jar target/WordCountTopology-1.0-SNAPSHOT-jar-with-dependencies.jar  
MyWordCountTopology  
Command 'storm' not found, but can be installed with:  
sudo apt install storm-lang
```

Further Attempts: Starting from scratch with new directory, java and xml code

```
cd ~  
ls  
mkdir word-count-storm  
cd word-count-storm  
mvn archetype:generate -DgroupId=com.example -DartifactId=word-count-topology  
-DarchetypeArtifactId=maven-archetype-quickstart -DinteractiveMode=false
```

```
hduser@kavi-VirtualBox:~$ cd ~
hduser@kavi-VirtualBox:~$ ls
bigdata    Downloads      hadoop-3.3.6.tar.gz  nltk_data  Public     tmp
Desktop   eclipse-workspace hbase          output      snap       Videos
Documents  export         Music           Pictures    Templates  wordcount.jar
hduser@kavi-VirtualBox:~$ mkdir word-count-storm
hduser@kavi-VirtualBox:~$ cd word-count-storm
hduser@kavi-VirtualBox:~/word-count-storm$ mvn archetype:generate -DgroupId=com.example -DartifactId=word-count-topology -DarchetypeArtifactId=maven-archetype-quickstart -DinteractiveMode=false
[INFO] Scanning for projects...
Downloading from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-deploy-plugin/2.7/maven-deploy-plugin-2.7.pom
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-deploy-plugin/2.7/maven-deploy-plugin-2.7.pom (5.6 kB at 11 kB/s)
Downloading from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-deploy-plugin/2.7/maven-deploy-plugin-2.7.jar
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-deploy-plugin/2.7/maven-deploy-plugin-2.7.jar (27 kB at 323 kB/s)
Downloading from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-site-plugin/3.3/maven-site-plugin-3.3.pom
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-site-plugin/3.3/maven-site-plugin-3.3.pom (21 kB at 341 kB/s)
Downloading from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-site-plugin/3.3/maven-site-plugin-3.3.jar
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-site-plugin/3.3/maven-site-plugin-3.3.jar (124 kB at 1.8 MB/s)
Downloading from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-antrun-plugin/1.3/maven-antrun-plugin-1.3.pom
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-antrun-plugin/1.3/maven-antrun-plugin-1.3.pom (4.7 kB at 118 kB/s)
Downloading from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-plugins/12/maven-plugins-12.pom
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-plugins/12/maven-plugins-12.pom (12 kB at 356 kB/s)
Downloading from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-antrun-plugin/1.3/maven-antrun-plugin-1.3.jar
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-antrun-plugin/1.3/maven-antrun-plugin-1.3.jar (24 kB at 620 kB/s)
Downloading from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-dependency-plugin/2.8/maven-dependency-plugin-2.8.pom
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-dependency-plugin/2.8/maven-dependency-plugin-2.8.pom (11 kB at 294 kB/s)
Downloading from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-dependency-plugin/2.8/maven-dependency-plugin-2.8.jar
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-dependency-
```

```
vy-all-2.4.16.jar (7.2 MB at 2.7 MB/s)
Downloaded from central: https://repo.maven.apache.org/maven2/org/beanshell/bsh/2.0b4/bsh-2.0b4.jar (282 kB at 106 kB/s)
Downloaded from central: https://repo.maven.apache.org/maven2/org/codehaus/groovy/groovy/2.0.1/groovy-2.0.1.jar (3.3 MB at 1.2 MB/s)
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/ant/ant/1.8.1/ant-1.8.1.jar (1.5 MB at 545 kB/s)
Downloaded from central: https://repo.maven.apache.org/maven2/com/ibm/icu/icu4j/70.1/icu4j-70.1.jar (14 MB at 4.3 MB/s)
[INFO] Generating project in Batch mode
Downloading from central: https://repo.maven.apache.org/maven2/org/apache/maven/archetypes/maven-archetype-quickstart/1.0/maven-archetype-quickstart-1.0.pom
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/archetypes/maven-archetype-quickstart/1.0/maven-archetype-quickstart-1.0.pom (703 B at 15 kB/s)
Downloading from central: https://repo.maven.apache.org/maven2/org/apache/maven/archetypes/maven-archetype-bundles/2/maven-archetype-bundles-2.pom
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/archetypes/maven-archetype-bundles/2/maven-archetype-bundles-2.pom (1.5 kB at 42 kB/s)
Downloading from central: https://repo.maven.apache.org/maven2/org/apache/maven/archetype/maven-archetype-parent/1/maven-archetype-parent-1.pom
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/archetype/maven-archetype-parent/1/maven-archetype-parent-1.pom (1.3 kB at 41 kB/s)
Downloading from central: https://repo.maven.apache.org/maven2/org/apache/maven/archetypes/maven-archetype-quickstart/1.0/maven-archetype-quickstart-1.0.jar
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/archetypes/maven-archetype-quickstart/1.0/maven-archetype-quickstart-1.0.jar (4.3 kB at 130 kB/s)
[INFO] -----
[INFO] Using following parameters for creating project from Old (1.x) Archetype: maven-archetype-quickstart:1.0
[INFO] -----
[INFO] Parameter: basedir, Value: /home/hduser/word-count-storm
[INFO] Parameter: package, Value: com.example
[INFO] Parameter: groupId, Value: com.example
[INFO] Parameter: artifactId, Value: word-count-topology
[INFO] Parameter: packageName, Value: com.example
[INFO] Parameter: version, Value: 1.0-SNAPSHOT
[INFO] project created from Old (1.x) Archetype in dir: /home/hduser/word-count-storm/word-count-topology
[INFO] -----
[INFO] BUILD SUCCESS
[INFO] -----
[INFO] Total time: 10.534 s
[INFO] Finished at: 2024-05-25T14:04:40+01:00
[INFO] -----
```

cd word-count-topology

```
hduser@kavi-VirtualBox:~/word-count-storm$ cd word-count-topology
hduser@kavi-VirtualBox:~/word-count-storm/word-count-topology$ ls
pom.xml  src
hduser@kavi-VirtualBox:~/word-count-storm/word-count-topology$
```

nano pom.xml

```
<?xml version="1.0" encoding="UTF-8"?>
<project xmlns="http://maven.apache.org/POM/4.0.0"
          xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
          xsi:schemaLocation="http://maven.apache.org/POM/4.0.0
http://maven.apache.org/xsd/maven-4.0.0.xsd">
    <modelVersion>4.0.0</modelVersion>
    <groupId>com.example</groupId>
    <artifactId>word-count-topology</artifactId>
    <version>1.0-SNAPSHOT</version>

    <!-- Dependencies -->
    <dependencies>
        <!-- Apache Storm -->
        <dependency>
            <groupId>org.apache.storm</groupId>
            <artifactId>storm-core</artifactId>
```

```

<version>2.4.0</version>
</dependency>
<!-- Logging -->
<dependency>
    <groupId>org.slf4j</groupId>
    <artifactId>slf4j-api</artifactId>
    <version>1.7.32</version>
</dependency>
<dependency>
    <groupId>org.slf4j</groupId>
    <artifactId>slf4j-log4j12</artifactId>
    <version>1.7.32</version>
</dependency>
</dependencies>

<!-- Build Configuration -->
<build>
    <plugins>
        <!-- Maven Assembly Plugin to create an executable JAR -->
        <plugin>
            <groupId>org.apache.maven.plugins</groupId>
            <artifactId>maven-assembly-plugin</artifactId>
            <version>3.3.0</version>
            <configuration>
                <archive>
                    <manifest>
                        <mainClass>com.example.WordCountTopology</mainClass>
                    </manifest>
                </archive>
                <descriptorRefs>
                    <descriptorRef>jar-with-dependencies</descriptorRef>
                </descriptorRefs>
            </configuration>
            <executions>
                <execution>
                    <id>make-assembly</id>
                    <phase>package</phase>
                    <goals>
                        <goal>single</goal>
                    </goals>
                </execution>
            </executions>
        </plugin>
    </plugins>
</build>
</project>

```

```
hduser@kavi-VirtualBox:~/word-count-storm/word-count-topology$ nano pom.xml
```

```
GNU nano 6.2                               pom.xml *
```

```
<?xml version="1.0" encoding="UTF-8"?>
<project xmlns="http://maven.apache.org/POM/4.0.0"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation="http://maven.apache.org/POM/4.0.0 http://maven.apache.org/xsd/maven-4.0.0.xsd">
  <modelVersion>4.0.0</modelVersion>
  <groupId>com.example</groupId>
  <artifactId>word-count-topology</artifactId>
  <version>1.0-SNAPSHOT</version>

  <!-- Dependencies -->
  <dependencies>
    <!-- Apache Storm -->
    <dependency>
      <groupId>org.apache.storm</groupId>
      <artifactId>storm-core</artifactId>
      <version>2.4.0</version>
    </dependency>
    <!-- Logging -->
    <dependency>
      <groupId>org.slf4j</groupId>
      <artifactId>slf4j-api</artifactId>
      <version>1.7.32</version>
    </dependency>
    <dependency>
      <groupId>org.slf4j</groupId>
      <artifactId>slf4j-log4j12</artifactId>
      <version>1.7.32</version>
    </dependency>
  </dependencies>

  <!-- Build Configuration -->
  <build>
    <plugins>
      <!-- Maven Assembly Plugin to create an executable JAR -->
      <plugin>
        <groupId>org.apache.maven.plugins</groupId>
        <artifactId>maven-assembly-plugin</artifactId>
        <version>3.3.0</version>
        <configuration>
          <archive>
            <manifest>
```

GNU nano 6.2 pom.xml *

```
<archive>
    <manifest>
        <mainClass>com.example.WordCountTopology</mainClass>
    </manifest>
</archive>
<descriptorRefs>
    <descriptorRef>jar-with-dependencies</descriptorRef>
</descriptorRefs>
</configuration>
<executions>
    <execution>
        <id>make-assembly</id>
        <phase>package</phase>
        <goals>
            <goal>single</goal>
        </goals>
    </execution>
</executions>
</plugin>
</plugins>
</build>
</project>
<project xmlns="http://maven.apache.org/POM/4.0.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="http://maven.apache.org/POM/4.0.0 http://maven.apache.org/maven-v4_0_0.xsd">
<modelVersion>4.0.0</modelVersion>
<groupId>com.example</groupId>
<artifactId>word-count-topology</artifactId>
<packaging>jar</packaging>
<version>1.0-SNAPSHOT</version>
<name>word-count-topology</name>
<url>http://maven.apache.org</url>
<dependencies>
    <dependency>
        <groupId>junit</groupId>
        <artifactId>junit</artifactId>
        <version>3.8.1</version>
        <scope>test</scope>
    </dependency>
</dependencies>
</project>

```

cd ~/word-count-storm/word-count-topology

mkdir input

nano input/A_Tale_of_Two_Cities.txt

```
hduser@kavi-VirtualBox:~/word-count-storm/word-count-topology/src/main/java/com/example$ cd ~/word-count
-storm/word-count-topology
hduser@kavi-VirtualBox:~/word-count-storm/word-count-topology$ mkdir input
hduser@kavi-VirtualBox:~/word-count-storm/word-count-topology$ nano input/A_Tale_of_Two_Cities.txt
```

Open ▾



A_Tale_of_Two_Cities.txt
~/Downloads

Save



691 that he might have been sitting for his portrait.
692
693 Very orderly and methodical he looked, with a hand on each knee, and a
694 loud watch ticking a sonorous sermon under his flapped waist-coat,
695 as though it pitted its gravity and longevity against the levity and
696 evanescence of the brisk fire. He had a good leg, and was a little vain
697 of it, for his brown stockings fitted sleek and close, and were of a
698 fine texture; his shoes and buckles, too, though plain, were trim. He
699 wore an odd little sleek crisp flaxen wig, setting very close to his
700 head: which wig, it is to be presumed, was made of hair, but which
701 looked far more as though it were spun from filaments of silk or glass.
702 His linen, though not of a fineness in accordance with his stockings,
703 was as white as the tops of the waves that broke upon the neighbouring
704 beach, or the specks of sail that glinted in the sunlight far at sea. A
705 face habitually suppressed and quieted, was still lighted up under the
706 quaint wig by a pair of moist bright eyes that it must have cost
707 their owner, in years gone by, some pains to drill to the composed and
708 reserved expression of Tellson's Bank. He had a healthy colour in his
709 cheeks, and his face, though lined, bore few traces of anxiety.
710 But, perhaps the confidential bachelor clerks in Tellson's Bank were
711 principally occupied with the cares of other people; and perhaps
712 second-hand cares, like second-hand clothes, come easily off and on.
713

714 Completing his resemblance to a man who was sitting for his portrait,
715 Mr. Lorry dropped off to sleep. The arrival of his breakfast roused him,
716 and he said to the drawer, as he moved his chair to it:

717
718 "I wish accommodation prepared for a young lady who may come here at any
719 time to-day. She may ask for Mr. Jarvis Lorry, or she may only ask for a
720 gentleman from Tellson's Bank. Please to let me know."

721
722 "Yes, sir. Tellson's Bank in London, sir?"

723
724 "Yes."

725
726 "Yes, sir. We have oftentimes the honour to entertain your gentlemen in
727 their travelling backwards and forwards betwixt London and Paris, sir. A
728 vast deal of travelling, sir, in Tellson and Company's House."

Plain Text ▾ Tab Width: 8 ▾ Ln 1, Col 1 ▾ INS

```
GNU nano 6.2                               input/A Tale of Two Cities.txt *
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█

^G Help **^O Write Out** **^W Where Is** **^K Cut** **^T Execute** **^C Location** **M-U Undo**
^X Exit **^R Read File** **^\\ Replace** **^U Paste** **^J Justify** **^/ Go To Line** **M-E Redo**

```
cd src/main/java/com/example/
nano WordCountTopology.java
```

```
hduser@kavi-VirtualBox:~/word-count-storm/word-count-topology$ cd src/main/java/com/example/
hduser@kavi-VirtualBox:~/word-count-storm/word-count-topology/src/main/java/com/example$ nano WordCountTopology.java
```

```
package com.example;

import org.apache.storm.Config;
import org.apache.storm.LocalCluster;
import org.apache.storm.StormSubmitter;
import org.apache.storm.spout.SpoutOutputCollector;
import org.apache.storm.task.OutputCollector;
import org.apache.storm.task.TopologyContext;
import org.apache.storm.topology.BasicOutputCollector;
import org.apache.storm.topology.OutputFieldsDeclarer;
import org.apache.storm.topology.TopologyBuilder;
import org.apache.storm.topology.base.BaseBasicBolt;
import org.apache.storm.topology.base.BaseRichSpout;
import org.apache.storm.tuple.Fields;
import org.apache.storm.tuple.Tuple;
import org.apache.storm.tuple.Values;
import org.apache.storm.utils.Utils;

import java.io.BufferedReader;
```

```
import java.io.FileReader;
import java.util.HashMap;
import java.util.Map;

public class WordCountTopology {
    public static class TextFileSpout extends BaseRichSpout {
        private SpoutOutputCollector collector;
        private BufferedReader reader;
        private String line;

        @Override
        public void open(Map conf, TopologyContext context, SpoutOutputCollector collector) {
            this.collector = collector;
            try {
                reader = new BufferedReader(new FileReader("input/A_Tale_of_Two_Cities.txt"));
            } catch (Exception e) {
                e.printStackTrace();
            }
        }

        @Override
        public void nextTuple() {
            try {
                if ((line = reader.readLine()) != null) {
                    collector.emit(new Values(line));
                } else {
                    Utils.sleep(100); // Sleep if no more lines to read
                }
            } catch (Exception e) {
                e.printStackTrace();
            }
        }

        @Override
        public void close() {
            try {
                reader.close();
            } catch (Exception e) {
                e.printStackTrace();
            }
        }

        @Override
        public void declareOutputFields(OutputFieldsDeclarer declarer) {
            declarer.declare(new Fields("line"));
        }
    }

    public static class WordSplitBolt extends BaseBasicBolt {
        @Override
        public void execute(Tuple tuple, BasicOutputCollector collector) {
            String line = tuple.getStringByField("line");
            String[] words = line.split("\\s+");
            for (String word : words) {
                collector.emit(new Values(word));
            }
        }
    }
}
```

```

}

@Override
public void declareOutputFields(OutputFieldsDeclarer declarer) {
    declarer.declare(new Fields("word"));
}
}

public static class WordCountBolt extends BaseBasicBolt {
    private Map<String, Integer> wordCounts = new HashMap<>();

    @Override
    public void execute(Tuple tuple, BasicOutputCollector collector) {
        String word = tuple.getStringByField("word");
        int count = wordCounts.getOrDefault(word, 0) + 1;
        wordCounts.put(word, count);
        collector.emit(new Values(word, count));
    }

    @Override
    public void declareOutputFields(OutputFieldsDeclarer declarer) {
        declarer.declare(new Fields("word", "count"));
    }
}

public static void main(String[] args) throws Exception {
    TopologyBuilder builder = new TopologyBuilder();

    builder.setSpout("text-file-spout", new TextFileSpout(), 1);
    builder.setBolt("word-split-bolt", new WordSplitBolt(),
2).shuffleGrouping("text-file-spout");
    builder.setBolt("word-count-bolt", new WordCountBolt(),
2).fieldsGrouping("word-split-bolt", new Fields("word"));

    Config conf = new Config();
    conf.setDebug(true);

    if (args != null && args.length > 0) {
        conf.setNumWorkers(3);
        StormSubmitter.submitTopologyWithProgressBar(args[0], conf,
builder.createTopology());
    } else {
        conf.setMaxTaskParallelism(3);
        LocalCluster cluster = new LocalCluster();
        cluster.submitTopology("word-count-topology", conf, builder.createTopology());
        Thread.sleep(10000);
        cluster.shutdown();
    }
}
}

```

GNU nano 6.2

WordCountTopology.java *

```
package com.example;

import org.apache.storm.Config;
import org.apache.storm.LocalCluster;
import org.apache.storm.StormSubmitter;
import org.apache.storm.spout.SpoutOutputCollector;
import org.apache.storm.task.OutputCollector;
import org.apache.storm.task.TopologyContext;
import org.apache.storm.topology.BasicOutputCollector;
import org.apache.storm.topology.OutputFieldsDeclarer;
import org.apache.storm.topology.TopologyBuilder;
import org.apache.storm.topology.base.BaseBasicBolt;
import org.apache.storm.topology.base.BaseRichSpout;
import org.apache.storm.tuple.Fields;
import org.apache.storm.tuple.Tuple;
import org.apache.storm.tuple.Values;
import org.apache.storm.utils.Utils;

import java.io.BufferedReader;
import java.io.FileReader;
import java.util.HashMap;
import java.util.Map;

public class WordCountTopology {
    public static class TextFileSpout extends BaseRichSpout {
        private SpoutOutputCollector collector;
        private BufferedReader reader;
        private String line;

        @Override
        public void open(Map conf, TopologyContext context, SpoutOutputCollector collector) {
            this.collector = collector;
            try {
                reader = new BufferedReader(new FileReader("input/A_Tale_of_Two_Cities.txt"));
            } catch (Exception e) {
                e.printStackTrace();
            }
        }

        @Override
        public void nextTuple() {
```

```
GNU nano 6.2                                WordCountTopology.java *
```

```
public void nextTuple() {
    try {
        if ((line = reader.readLine()) != null) {
            collector.emit(new Values(line));
        } else {
            Utils.sleep(100); // Sleep if no more lines to read
        }
    } catch (Exception e) {
        e.printStackTrace();
    }
}

@Override
public void close() {
    try {
        reader.close();
    } catch (Exception e) {
        e.printStackTrace();
    }
}

@Override
public void declareOutputFields(OutputFieldsDeclarer declarer) {
    declarer.declare(new Fields("line"));
}

public static class WordSplitBolt extends BaseBasicBolt {
    @Override
    public void execute(Tuple tuple, BasicOutputCollector collector) {
        String line = tuple.getStringByField("line");
        String[] words = line.split("\\s+");
        for (String word : words) {
            collector.emit(new Values(word));
        }
    }

    @Override
    public void declareOutputFields(OutputFieldsDeclarer declarer) {
        declarer.declare(new Fields("word"));
    }
}
```

```
GNU nano 6.2                                     WordCountTopology.java *
```

```
        }
```

```
}
```

```
public static class WordCountBolt extends BaseBasicBolt {
```

```
    private Map<String, Integer> wordCounts = new HashMap<>();
```

```
    @Override
```

```
    public void execute(Tuple tuple, BasicOutputCollector collector) {
```

```
        String word = tuple.getStringByField("word");
```

```
        int count = wordCounts.getOrDefault(word, 0) + 1;
```

```
        wordCounts.put(word, count);
```

```
        collector.emit(new Values(word, count));
```

```
    }
```

```
    @Override
```

```
    public void declareOutputFields(OutputFieldsDeclarer declarer) {
```

```
        declarer.declare(new Fields("word", "count"));
```

```
    }
```

```
}
```

```
public static void main(String[] args) throws Exception {
```

```
    TopologyBuilder builder = new TopologyBuilder();
```

```
    builder.setSpout("text-file-spout", new TextFileSpout(), 1);
```

```
    builder.setBolt("word-split-bolt", new WordSplitBolt(), 2).shuffleGrouping("text-file-spout");
```

```
    builder.setBolt("word-count-bolt", new WordCountBolt(), 2).fieldsGrouping("word-split-bolt", new Fields("word", "count"));
```

```
    Config conf = new Config();
```

```
    conf.setDebug(true);
```

```
    if (args != null && args.length > 0) {
```

```
        conf.setNumWorkers(3);
```

```
        StormSubmitter.submitTopologyWithProgressBar(args[0], conf, builder.createTopology());
```

```
    } else {
```

```
        conf.setMaxTaskParallelism(3);
```

```
        LocalCluster cluster = new LocalCluster();
```

```
        cluster.submitTopology("word-count-topology", conf, builder.createTopology());
```

```
        Thread.sleep(10000);
```

```
        cluster.shutdown();
```

```
    }
```

```
}
```

GNU nano 6.2

WordCountTopology.java *

```
public static class WordCountBolt extends BaseBasicBolt {
    private Map<String, Integer> wordCounts = new HashMap<>();

    @Override
    public void execute(Tuple tuple, BasicOutputCollector collector) {
        String word = tuple.getStringByField("word");
        int count = wordCounts.getOrDefault(word, 0) + 1;
        wordCounts.put(word, count);
        collector.emit(new Values(word, count));
    }

    @Override
    public void declareOutputFields(OutputFieldsDeclarer declarer) {
        declarer.declare(new Fields("word", "count"));
    }
}

public static void main(String[] args) throws Exception {
    TopologyBuilder builder = new TopologyBuilder();

    builder.setSpout("text-file-spout", new TextFileSpout(), 1);
    builder.setBolt("word-split-bolt", new WordSplitBolt(), 2).shuffleGrouping("text-file-spout");
    builder.setBolt("word-count-bolt", new WordCountBolt(), 2).fieldsGrouping("word-split-bolt", new Fields("word"));

    Config conf = new Config();
    conf.setDebug(true);

    if (args != null && args.length > 0) {
        conf.setNumWorkers(3);
        StormSubmitter.submitTopologyWithProgressBar(args[0], conf, builder.createTopology());
    } else {
        conf.setMaxTaskParallelism(3);
        LocalCluster cluster = new LocalCluster();
        cluster.submitTopology("word-count-topology", conf, builder.createTopology());
        Thread.sleep(10000);
        cluster.shutdown();
    }
}
```

|

^G Help ^O Write Out ^W Where Is ^K Cut ^T Execute ^C Location M-U Undo
^X Exit ^R Read File ^\ Replace ^U Paste ^J Justify ^/ Go To Line M-E Redo

```
cd ~/word-count-storm/word-count-topology
mvn clean package
```

```
hduser@kavi-VirtualBox:~/word-count-storm/word-count-topology/src/main/java/com/example$ nano WordCountTopology.java
hduser@kavi-VirtualBox:~/word-count-storm/word-count-topology/src/main/java/com/example$ cd ~/word-count-storm/word-count-topology
hduser@kavi-VirtualBox:~/word-count-storm/word-count-topology$ mvn clean package
```

```
hduser@kavi-VirtualBox:~/word-count-storm/word-count-topology$ mvn clean package
[INFO] Scanning for projects...
[ERROR] [ERROR] Some problems were encountered while processing the POMs:
[FATAL] Non-parseable POM /home/hduser/word-count-storm/word-count-topology/pom.xml: start tag not allowed in epilog but got p (position: END_TAG seen ...</build>\n</project>\n<p... @62:3)
@ line 62, column 3
@
[ERROR] The build could not read 1 project -> [Help 1]
[ERROR]
[ERROR] The project (/home/hduser/word-count-storm/word-count-topology/pom.xml) has 1 error
[ERROR] Non-parseable POM /home/hduser/word-count-storm/word-count-topology/pom.xml: start tag not allowed in epilog but got p (position: END_TAG seen ...</build>\n</project>\n<p... @62:3)
@ line 62, column 3 -> [Help 2]
[ERROR]
[ERROR] To see the full stack trace of the errors, re-run Maven with the -e switch.
[ERROR] Re-run Maven using the -X switch to enable full debug logging.
```

```
[ERROR]
[ERROR] For more information about the errors and possible solutions, please read the
following articles:
[ERROR] [Help 1] http://cwiki.apache.org/confluence/display/MAVEN/ProjectBuildingException
[ERROR] [Help 2] http://cwiki.apache.org/confluence/display/MAVEN/ModelParseException
hduser@kavi-VirtualBox:~/word-count-storm/word-count-topology$
```

```
hduser@kavi-VirtualBox:~/word-count-storm/word-count-topology$ mvn clean package
[INFO] Scanning for projects...
[ERROR] [ERROR] Some problems were encountered while processing the POMs:
[FATAL] Non-parseable POM /home/hduser/word-count-storm/word-count-topology/pom.xml: start tag not allowed in epilog but got p (position: END_TAG seen ...</build>\n</project>\n<p... @62:3)  @ line 62, column
3
@
[ERROR] The build could not read 1 project -> [Help 1]
[ERROR]
[ERROR]   The project (/home/hduser/word-count-storm/word-count-topology/pom.xml) has 1 error
[ERROR]     Non-parseable POM /home/hduser/word-count-storm/word-count-topology/pom.xml: start tag not allowed in epilog but got p (position: END_TAG seen ...</build>\n</project>\n<p... @62:3)  @ line 62, column
3 -> [Help 2]
[ERROR]
[ERROR] To see the full stack trace of the errors, re-run Maven with the -e switch.
[ERROR] Re-run Maven using the -X switch to enable full debug logging.
[ERROR]
[ERROR] For more information about the errors and possible solutions, please read the following articles
:
[ERROR] [Help 1] http://cwiki.apache.org/confluence/display/MAVEN/ProjectBuildingException
[ERROR] [Help 2] http://cwiki.apache.org/confluence/display/MAVEN/ModelParseException
```

```
nano pom.xml
```

```
<?xml version="1.0" encoding="UTF-8"?>
<project xmlns="http://maven.apache.org/POM/4.0.0"
          xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
          xsi:schemaLocation="http://maven.apache.org/POM/4.0.0
http://maven.apache.org/xsd/maven-4.0.0.xsd">
    <modelVersion>4.0.0</modelVersion>
    <groupId>com.example</groupId>
    <artifactId>word-count-topology</artifactId>
    <version>1.0-SNAPSHOT</version>

    <!-- Dependencies -->
    <dependencies>
        <!-- Apache Storm -->
        <dependency>
            <groupId>org.apache.storm</groupId>
            <artifactId>storm-core</artifactId>
            <version>2.4.0</version>
        </dependency>
        <!-- Logging -->
        <dependency>
            <groupId>org.slf4j</groupId>
            <artifactId>slf4j-api</artifactId>
            <version>1.7.32</version>
        </dependency>
        <dependency>
            <groupId>org.slf4j</groupId>
            <artifactId>slf4j-log4j12</artifactId>
            <version>1.7.32</version>
        </dependency>
    </dependencies>

    <!-- Build Configuration -->
```

```
<build>
  <plugins>
    <!-- Maven Assembly Plugin to create an executable JAR -->
    <plugin>
      <groupId>org.apache.maven.plugins</groupId>
      <artifactId>maven-assembly-plugin</artifactId>
      <version>3.3.0</version>
      <configuration>
        <archive>
          <manifest>
            <mainClass>com.example.WordCountTopology</mainClass>
          </manifest>
        </archive>
        <descriptorRefs>
          <descriptorRef>jar-with-dependencies</descriptorRef>
        </descriptorRefs>
      </configuration>
      <executions>
        <execution>
          <id>make-assembly</id>
          <phase>package</phase>
          <goals>
            <goal>single</goal>
          </goals>
        </execution>
      </executions>
    </plugin>
  </plugins>
</build>
</project>
```

```
GNU nano 6.2                                     pom.xml *
```

```
<?xml version="1.0" encoding="UTF-8"?>
<project xmlns="http://maven.apache.org/POM/4.0.0"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation="http://maven.apache.org/POM/4.0.0 http://maven.apache.org/xsd/maven-4.0.0.xsd">
  <modelVersion>4.0.0</modelVersion>
  <groupId>com.example</groupId>
  <artifactId>word-count-topology</artifactId>
  <version>1.0-SNAPSHOT</version>

  <!-- Dependencies -->
  <dependencies>
    <!-- Apache Storm -->
    <dependency>
      <groupId>org.apache.storm</groupId>
      <artifactId>storm-core</artifactId>
      <version>2.4.0</version>
    </dependency>
    <!-- Logging -->
    <dependency>
      <groupId>org.slf4j</groupId>
      <artifactId>slf4j-api</artifactId>
      <version>1.7.32</version>
    </dependency>
    <dependency>
      <groupId>org.slf4j</groupId>
      <artifactId>slf4j-log4j12</artifactId>
      <version>1.7.32</version>
    </dependency>
  </dependencies>

  <!-- Build Configuration -->
  <build>
    <plugins>
      <!-- Maven Assembly Plugin to create an executable JAR -->
      <plugin>
        <groupId>org.apache.maven.plugins</groupId>
        <artifactId>maven-assembly-plugin</artifactId>
        <version>3.3.0</version>
        <configuration>
          <archive>
            <manifest>
```

GNU nano 6.2

pom.xml *

```
</dependency>
<dependency>
    <groupId>org.slf4j</groupId>
    <artifactId>slf4j-log4j12</artifactId>
    <version>1.7.32</version>
</dependency>
</dependencies>

<!-- Build Configuration -->
<build>
    <plugins>
        <!-- Maven Assembly Plugin to create an executable JAR -->
        <plugin>
            <groupId>org.apache.maven.plugins</groupId>
            <artifactId>maven-assembly-plugin</artifactId>
            <version>3.3.0</version>
            <configuration>
                <archive>
                    <manifest>
                        <mainClass>com.example.WordCountTopology</mainClass>
                    </manifest>
                </archive>
                <descriptorRefs>
                    <descriptorRef>jar-with-dependencies</descriptorRef>
                </descriptorRefs>
            </configuration>
            <executions>
                <execution>
                    <id>make-assembly</id>
                    <phase>package</phase>
                    <goals>
                        <goal>single</goal>
                    </goals>
                </execution>
            </executions>
        </plugin>
    </plugins>
</build>
</project>
```

^G Help **^O** Write Out **^W** Where Is **^K** Cut **^T** Execute **^C** Location **M-U** Undo
^X Exit **^R** Read File **^** Replace **^U** Paste **^J** Justify **^/** Go To Line **M-E** Redo

```
hduser@kavi-VirtualBox:~/word-count-storm/word-count-topology$ mvn clean package
[INFO] Scanning for projects...
[ERROR] [ERROR] Some problems were encountered while processing the POMs:
[FATAL] Non-parseable POM /home/hduser/word-count-storm/word-count-topology/pom.xml: start tag not allowed in epilog but got p (position: END_TAG seen ...</build>\n</project>\n<p... @62:3)
@ line 62, column 3
@
[ERROR] The build could not read 1 project -> [Help 1]
[ERROR]
[ERROR] The project (/home/hduser/word-count-storm/word-count-topology/pom.xml) has 1 error
[ERROR] Non-parseable POM /home/hduser/word-count-storm/word-count-topology/pom.xml: start tag not allowed in epilog but got p (position: END_TAG seen ...</build>\n</project>\n<p... @62:3)
@ line 62, column 3 -> [Help 2]
[ERROR]
[ERROR] To see the full stack trace of the errors, re-run Maven with the -e switch.
[ERROR] Re-run Maven using the -X switch to enable full debug logging.
[ERROR]
[ERROR] For more information about the errors and possible solutions, please read the following articles:
[ERROR] [Help 1] http://cwiki.apache.org/confluence/display/MAVEN/ProjectBuildingException
[ERROR] [Help 2] http://cwiki.apache.org/confluence/display/MAVEN/ModelParseException
hduser@kavi-VirtualBox:~/word-count-storm/word-count-topology$ cd word-count-topology
bash: cd: word-count-topology: No such file or directory
hduser@kavi-VirtualBox:~/word-count-storm/word-count-topology$ nano pom.xml
hduser@kavi-VirtualBox:~/word-count-storm/word-count-topology$ mvn clean package
[INFO] Scanning for projects...
```

```
[INFO]
[INFO] -----< com.example:word-count-topology >-----
[INFO] Building word-count-topology 1.0-SNAPSHOT
[INFO] -----[ jar ]-----
Downloading from central:
https://repo.maven.apache.org/maven2/net/minidev/json-smart/maven-metadata.xml
Downloading from clojars: https://clojars.org/repo/net/minidev/json-smart/maven-metadata.xml
Downloading from apache.snapshots:
https://repository.apache.org/snapshots/net/minidev/json-smart/maven-metadata.xml
Downloading from apache.snapshots.https:
https://repository.apache.org/content/repositories/snapshots/net/minidev/json-smart/maven-metadata.xml
Downloaded from central:
https://repo.maven.apache.org/maven2/net/minidev/json-smart/maven-metadata.xml (1.3 kB at 2.5 kB/s)
Downloading from repository.jboss.org:
http://repository.jboss.org/nexus/content/groups/public/net/minidev/json-smart/maven-metadata.xml
Downloading from central:
https://repo.maven.apache.org/maven2/org/slf4j/slf4j-api/1.7.32/slf4j-api-1.7.32.pom
Downloaded from central:
https://repo.maven.apache.org/maven2/org/slf4j/slf4j-api/1.7.32/slf4j-api-1.7.32.pom (3.8 kB at 94 kB/s)
Downloading from central:
https://repo.maven.apache.org/maven2/org/slf4j/slf4j-parent/1.7.32/slf4j-parent-1.7.32.pom
Downloaded from central:
https://repo.maven.apache.org/maven2/org/slf4j/slf4j-parent/1.7.32/slf4j-parent-1.7.32.pom (14 kB at 230 kB/s)
Downloading from central:
https://repo.maven.apache.org/maven2/org/slf4j/slf4j-log4j12/1.7.32/slf4j-log4j12-1.7.32.pom
Downloaded from central:
https://repo.maven.apache.org/maven2/org/slf4j/slf4j-log4j12/1.7.32/slf4j-log4j12-1.7.32.pom (1.1 kB at 32 kB/s)
Downloading from central:
https://repo.maven.apache.org/maven2/log4j/log4j/1.2.17/log4j-1.2.17.pom
Downloaded from central:
https://repo.maven.apache.org/maven2/log4j/log4j/1.2.17/log4j-1.2.17.pom (22 kB at 483 kB/s)
Downloading from central:
https://repo.maven.apache.org/maven2/org/slf4j/slf4j-api/1.7.32/slf4j-api-1.7.32.jar
Downloading from central:
https://repo.maven.apache.org/maven2/org/slf4j/slf4j-log4j12/1.7.32/slf4j-log4j12-1.7.32.jar
Downloading from central:
https://repo.maven.apache.org/maven2/log4j/log4j/1.2.17/log4j-1.2.17.jar
Downloaded from central:
https://repo.maven.apache.org/maven2/org/slf4j/slf4j-api/1.7.32/slf4j-api-1.7.32.jar (42 kB at 639 kB/s)
Downloaded from central:
https://repo.maven.apache.org/maven2/org/slf4j/slf4j-log4j12/1.7.32/slf4j-log4j12-1.7.32.jar (12 kB at 152 kB/s)
Downloaded from central:
https://repo.maven.apache.org/maven2/log4j/log4j/1.2.17/log4j-1.2.17.jar (490 kB at 2.2 MB/s)
[INFO]
[INFO] --- maven-clean-plugin:2.5:clean (default-clean) @ word-count-topology ---
[INFO]
[INFO] --- maven-resources-plugin:2.6:resources (default-resources) @ word-count-topology ---
```

```
[WARNING] Using platform encoding (UTF-8 actually) to copy filtered resources, i.e. build is
platform dependent!
[INFO] skip non existing resourceDirectory
/home/hduser/word-count-storm/word-count-topology/src/main/resources
[INFO]
[INFO] --- maven-compiler-plugin:3.1:compile (default-compile) @ word-count-topology ---
[INFO] Changes detected - recompiling the module!
[WARNING] File encoding has not been set, using platform encoding UTF-8, i.e. build is
platform dependent!
[INFO] Compiling 2 source files to
/home/hduser/word-count-storm/word-count-topology/target/classes
[INFO] -----
[ERROR] COMPILATION ERROR :
[INFO] -----
[ERROR]
/home/hduser/word-count-storm/word-count-topology/src/main/java/com/example/WordCountTopology.
java:[85,63] diamond operator is not supported in -source 1.5
(use -source 7 or higher to enable diamond operator)
[INFO] 1 error
[INFO] -----
[INFO] -----
[INFO] BUILD FAILURE
[INFO] -----
[INFO] Total time:  4.143 s
[INFO] Finished at: 2024-05-25T14:39:11+01:00
[INFO] -----
[ERROR] Failed to execute goal org.apache.maven.plugins:maven-compiler-plugin:3.1:compile
(default-compile) on project word-count-topology: Compilation failure
[ERROR]
/home/hduser/word-count-storm/word-count-topology/src/main/java/com/example/WordCountTopology.
java:[85,63] diamond operator is not supported in -source 1.5
[ERROR]     (use -source 7 or higher to enable diamond operator)
[ERROR]
[ERROR] -> [Help 1]
[ERROR]
[ERROR] To see the full stack trace of the errors, re-run Maven with the -e switch.
[ERROR] Re-run Maven using the -X switch to enable full debug logging.
[ERROR]
[ERROR] For more information about the errors and possible solutions, please read the
following articles:
[ERROR] [Help 1] http://cwiki.apache.org/confluence/display/MAVEN/MojoFailureException
```

```

Downloaded from central: https://repo.maven.apache.org/maven2/log4j/log4j/1.2.17/log4j-1.2.17.jar (490 kB at 2.2 MB/s)
[INFO]
[INFO] --- maven-clean-plugin:2.5:clean (default-clean) @ word-count-topology ---
[INFO]
[INFO] --- maven-resources-plugin:2.6:resources (default-resources) @ word-count-topology ---
[WARNING] Using platform encoding (UTF-8 actually) to copy filtered resources, i.e. build is platform dependent!
[INFO] skip non existing resourceDirectory /home/hduser/word-count-storm/word-count-topology/src/main/resources
[INFO]
[INFO] --- maven-compiler-plugin:3.1:compile (default-compile) @ word-count-topology ---
[INFO] Changes detected - recompiling the module!
[WARNING] File encoding has not been set, using platform encoding UTF-8, i.e. build is platform dependent!
[INFO] Compiling 2 source files to /home/hduser/word-count-storm/word-count-topology/target/classes
[INFO] -----
[ERROR] COMPILATION ERROR :
[INFO] -----
[ERROR] /home/hduser/word-count-storm/word-count-topology/src/main/java/com/example/WordCountTopology.java:[85,63] diamond operator is not supported in -source 1.5
  (use -source 7 or higher to enable diamond operator)
[INFO] 1 error
[INFO] -----
[INFO] -----
[INFO] BUILD FAILURE
[INFO] -----
[INFO] Total time:  4.143 s
[INFO] Finished at: 2024-05-25T14:39:11+01:00
[INFO] -----
[ERROR] Failed to execute goal org.apache.maven.plugins:maven-compiler-plugin:3.1:compile (default-compile) on project word-count-topology: Compilation failure
[ERROR] /home/hduser/word-count-storm/word-count-topology/src/main/java/com/example/WordCountTopology.java:[85,63] diamond operator is not supported in -source 1.5
[ERROR]   (use -source 7 or higher to enable diamond operator)
[ERROR]
[ERROR]   -> [Help 1]
[ERROR]
[ERROR] To see the full stack trace of the errors, re-run Maven with the -e switch.
[ERROR] Re-run Maven using the -X switch to enable full debug logging.
[ERROR]
[ERROR] For more information about the errors and possible solutions, please read the following articles:
[ERROR] [Help 1] http://cwiki.apache.org/confluence/display/MAVEN/MojoFailureException
hduser@kavi-VirtualBox:~/word-count-storm/word-count-topology$ []

```

nano pom.xml

```

<?xml version="1.0" encoding="UTF-8"?>
<project xmlns="http://maven.apache.org/POM/4.0.0"
          xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
          xsi:schemaLocation="http://maven.apache.org/POM/4.0.0
http://maven.apache.org/xsd/maven-4.0.0.xsd">
    <modelVersion>4.0.0</modelVersion>
    <groupId>com.example</groupId>
    <artifactId>word-count-topology</artifactId>
    <version>1.0-SNAPSHOT</version>

    <!-- Dependencies -->
    <dependencies>
        <!-- Apache Storm -->
        <dependency>
            <groupId>org.apache.storm</groupId>
            <artifactId>storm-core</artifactId>
            <version>2.4.0</version>
        </dependency>
        <!-- Logging -->
        <dependency>
            <groupId>org.slf4j</groupId>
            <artifactId>slf4j-api</artifactId>
            <version>1.7.32</version>
        </dependency>
    
```

```
<dependency>
    <groupId>org.slf4j</groupId>
    <artifactId>slf4j-log4j12</artifactId>
    <version>1.7.32</version>
</dependency>
</dependencies>

<!-- Build Configuration -->
<build>
    <plugins>
        <!-- Maven Compiler Plugin to set the Java version -->
        <plugin>
            <groupId>org.apache.maven.plugins</groupId>
            <artifactId>maven-compiler-plugin</artifactId>
            <version>3.8.1</version>
            <configuration>
                <source>1.8</source>
                <target>1.8</target>
            </configuration>
        </plugin>
        <!-- Maven Assembly Plugin to create an executable JAR -->
        <plugin>
            <groupId>org.apache.maven.plugins</groupId>
            <artifactId>maven-assembly-plugin</artifactId>
            <version>3.3.0</version>
            <configuration>
                <archive>
                    <manifest>
                        <mainClass>com.example.WordCountTopology</mainClass>
                    </manifest>
                </archive>
                <descriptorRefs>
                    <descriptorRef>jar-with-dependencies</descriptorRef>
                </descriptorRefs>
            </configuration>
            <executions>
                <execution>
                    <id>make-assembly</id>
                    <phase>package</phase>
                    <goals>
                        <goal>single</goal>
                    </goals>
                </execution>
            </executions>
        </plugin>
    </plugins>
</build>
</project>
```

GNU nano 6.2

pom.xml *

```
<?xml version="1.0" encoding="UTF-8"?>
<project xmlns="http://maven.apache.org/POM/4.0.0"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation="http://maven.apache.org/POM/4.0.0 http://maven.apache.org/xsd/maven-4.0.0.xsd">
  <modelVersion>4.0.0</modelVersion>
  <groupId>com.example</groupId>
  <artifactId>word-count-topology</artifactId>
  <version>1.0-SNAPSHOT</version>

  <!-- Dependencies -->
  <dependencies>
    <!-- Apache Storm -->
    <dependency>
      <groupId>org.apache.storm</groupId>
      <artifactId>storm-core</artifactId>
      <version>2.4.0</version>
    </dependency>
    <!-- Logging -->
    <dependency>
      <groupId>org.slf4j</groupId>
      <artifactId>slf4j-api</artifactId>
      <version>1.7.32</version>
    </dependency>
    <dependency>
      <groupId>org.slf4j</groupId>
      <artifactId>slf4j-log4j12</artifactId>
      <version>1.7.32</version>
    </dependency>
  </dependencies>

  <!-- Build Configuration -->
  <build>
    <plugins>
      <!-- Maven Compiler Plugin to set the Java version -->
      <plugin>
        <groupId>org.apache.maven.plugins</groupId>
        <artifactId>maven-compiler-plugin</artifactId>
        <version>3.8.1</version>
        <configuration>
          <source>1.8</source>
          <target>1.8</target>
        </configuration>
      </plugin>
    </plugins>
  </build>
</project>
```

```

GNU nano 6.2                                     pom.xml *
<plugins>
    <!-- Maven Compiler Plugin to set the Java version -->
    <plugin>
        <groupId>org.apache.maven.plugins</groupId>
        <artifactId>maven-compiler-plugin</artifactId>
        <version>3.8.1</version>
        <configuration>
            <source>1.8</source>
            <target>1.8</target>
        </configuration>
    </plugin>
    <!-- Maven Assembly Plugin to create an executable JAR -->
    <plugin>
        <groupId>org.apache.maven.plugins</groupId>
        <artifactId>maven-assembly-plugin</artifactId>
        <version>3.3.0</version>
        <configuration>
            <archive>
                <manifest>
                    <mainClass>com.example.WordCountTopology</mainClass>
                </manifest>
            </archive>
            <descriptorRefs>
                <descriptorRef>jar-with-dependencies</descriptorRef>
            </descriptorRefs>
        </configuration>
        <executions>
            <execution>
                <id>make-assembly</id>
                <phase>package</phase>
                <goals>
                    <goal>single</goal>
                </goals>
            </execution>
        </executions>
    </plugin>
</plugins>
</build>
</project>

```

```

^G Help      ^O Write Out  ^W Where Is   ^K Cut          ^T Execute     ^C Location  M-U Undo
^X Exit      ^R Read File  ^\ Replace    ^U Paste       ^J Justify    ^/ Go To Line M-E Redo

```

```

hduser@kavi-VirtualBox:~/word-count-storm/word-count-topology$ mvn clean package
[INFO] Scanning for projects...
[ERROR] [ERROR] Some problems were encountered while processing the POMs:
[FATAL] Non-parseable POM /home/hduser/word-count-storm/word-count-topology/pom.xml: start tag
not allowed in epilog but got p (position: END_TAG seen ...</build>\n</project>\n<p... @62:3)
@ line 62, column 3
@
[ERROR] The build could not read 1 project -> [Help 1]
[ERROR]
[ERROR] The project (/home/hduser/word-count-storm/word-count-topology/pom.xml) has 1 error
[ERROR] Non-parseable POM /home/hduser/word-count-storm/word-count-topology/pom.xml: start
tag not allowed in epilog but got p (position: END_TAG seen ...</build>\n</project>\n<p...
@62:3) @ line 62, column 3 -> [Help 2]
[ERROR]
[ERROR] To see the full stack trace of the errors, re-run Maven with the -e switch.
[ERROR] Re-run Maven using the -X switch to enable full debug logging.
[ERROR]
[ERROR] For more information about the errors and possible solutions, please read the
following articles:
[ERROR] [Help 1] http://cwiki.apache.org/confluence/display/MAVEN/ProjectBuildingException
[ERROR] [Help 2] http://cwiki.apache.org/confluence/display/MAVEN/ModelParseException
hduser@kavi-VirtualBox:~/word-count-storm/word-count-topology$ cd word-count-topology
bash: cd: word-count-topology: No such file or directory
hduser@kavi-VirtualBox:~/word-count-storm/word-count-topology$ nano pom.xml
hduser@kavi-VirtualBox:~/word-count-storm/word-count-topology$ mvn clean package
[INFO] Scanning for projects...

```

```
[INFO]
[INFO] -----< com.example:word-count-topology >-----
[INFO] Building word-count-topology 1.0-SNAPSHOT
[INFO] -----[ jar ]-----
Downloading from central:
https://repo.maven.apache.org/maven2/net/minidev/json-smart/maven-metadata.xml
Downloading from clojars: https://clojars.org/repo/net/minidev/json-smart/maven-metadata.xml
Downloading from apache.snapshots:
https://repository.apache.org/snapshots/net/minidev/json-smart/maven-metadata.xml
Downloading from apache.snapshots.https:
https://repository.apache.org/content/repositories/snapshots/net/minidev/json-smart/maven-metadata.xml
Downloaded from central:
https://repo.maven.apache.org/maven2/net/minidev/json-smart/maven-metadata.xml (1.3 kB at 2.5 kB/s)
Downloading from repository.jboss.org:
http://repository.jboss.org/nexus/content/groups/public/net/minidev/json-smart/maven-metadata.xml
Downloading from central:
https://repo.maven.apache.org/maven2/org/slf4j/slf4j-api/1.7.32/slf4j-api-1.7.32.pom
Downloaded from central:
https://repo.maven.apache.org/maven2/org/slf4j/slf4j-api/1.7.32/slf4j-api-1.7.32.pom (3.8 kB at 94 kB/s)
Downloading from central:
https://repo.maven.apache.org/maven2/org/slf4j/slf4j-parent/1.7.32/slf4j-parent-1.7.32.pom
Downloaded from central:
https://repo.maven.apache.org/maven2/org/slf4j/slf4j-parent/1.7.32/slf4j-parent-1.7.32.pom (14 kB at 230 kB/s)
Downloading from central:
https://repo.maven.apache.org/maven2/org/slf4j/slf4j-log4j12/1.7.32/slf4j-log4j12-1.7.32.pom
Downloaded from central:
https://repo.maven.apache.org/maven2/org/slf4j/slf4j-log4j12/1.7.32/slf4j-log4j12-1.7.32.pom (1.1 kB at 32 kB/s)
Downloading from central:
https://repo.maven.apache.org/maven2/log4j/log4j/1.2.17/log4j-1.2.17.pom
Downloaded from central:
https://repo.maven.apache.org/maven2/log4j/log4j/1.2.17/log4j-1.2.17.pom (22 kB at 483 kB/s)
Downloading from central:
https://repo.maven.apache.org/maven2/org/slf4j/slf4j-api/1.7.32/slf4j-api-1.7.32.jar
Downloading from central:
https://repo.maven.apache.org/maven2/org/slf4j/slf4j-log4j12/1.7.32/slf4j-log4j12-1.7.32.jar
Downloading from central:
https://repo.maven.apache.org/maven2/log4j/log4j/1.2.17/log4j-1.2.17.jar
Downloaded from central:
https://repo.maven.apache.org/maven2/org/slf4j/slf4j-api/1.7.32/slf4j-api-1.7.32.jar (42 kB at 639 kB/s)
Downloaded from central:
https://repo.maven.apache.org/maven2/org/slf4j/slf4j-log4j12/1.7.32/slf4j-log4j12-1.7.32.jar (12 kB at 152 kB/s)
Downloaded from central:
https://repo.maven.apache.org/maven2/log4j/log4j/1.2.17/log4j-1.2.17.jar (490 kB at 2.2 MB/s)
[INFO]
[INFO] --- maven-clean-plugin:2.5:clean (default-clean) @ word-count-topology ---
[INFO]
[INFO] --- maven-resources-plugin:2.6:resources (default-resources) @ word-count-topology ---
```

```
[WARNING] Using platform encoding (UTF-8 actually) to copy filtered resources, i.e. build is
platform dependent!
[INFO] skip non existing resourceDirectory
/home/hduser/word-count-storm/word-count-topology/src/main/resources
[INFO]
[INFO] --- maven-compiler-plugin:3.1:compile (default-compile) @ word-count-topology ---
[INFO] Changes detected - recompiling the module!
[WARNING] File encoding has not been set, using platform encoding UTF-8, i.e. build is
platform dependent!
[INFO] Compiling 2 source files to
/home/hduser/word-count-storm/word-count-topology/target/classes
[INFO] -----
[ERROR] COMPILATION ERROR :
[INFO] -----
[ERROR]
/home/hduser/word-count-storm/word-count-topology/src/main/java/com/example/WordCountTopology.
java:[85,63] diamond operator is not supported in -source 1.5
(use -source 7 or higher to enable diamond operator)
[INFO] 1 error
[INFO] -----
[INFO] -----
[INFO] BUILD FAILURE
[INFO] -----
[INFO] Total time:  4.143 s
[INFO] Finished at: 2024-05-25T14:39:11+01:00
[INFO] -----
[ERROR] Failed to execute goal org.apache.maven.plugins:maven-compiler-plugin:3.1:compile
(default-compile) on project word-count-topology: Compilation failure
[ERROR]
/home/hduser/word-count-storm/word-count-topology/src/main/java/com/example/WordCountTopology.
java:[85,63] diamond operator is not supported in -source 1.5
[ERROR]     (use -source 7 or higher to enable diamond operator)
[ERROR]
[ERROR]  -> [Help 1]
[ERROR]
[ERROR] To see the full stack trace of the errors, re-run Maven with the -e switch.
[ERROR] Re-run Maven using the -X switch to enable full debug logging.
[ERROR]
[ERROR] For more information about the errors and possible solutions, please read the
following articles:
[ERROR] [Help 1] http://cwiki.apache.org/confluence/display/MAVEN/MojoFailureException
hduser@kavi-VirtualBox:~/word-count-storm/word-count-topology$ nano pom.xml
hduser@kavi-VirtualBox:~/word-count-storm/word-count-topology$ mvn clean package
[INFO] Scanning for projects...
[INFO]
[INFO] -----< com.example:word-count-topology >-----
[INFO] Building word-count-topology 1.0-SNAPSHOT
[INFO] -----[ jar ]-----
Downloading from central:
https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-compiler-plugin/3.8.1/mave
n-compiler-plugin-3.8.1.pom
Downloaded from central:
https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-compiler-plugin/3.8.1/mave
n-compiler-plugin-3.8.1.pom (12 kB at 27 kB/s)
```

Downloading from central:
<https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-plugins/33/maven-plugins-3.3.pom>

Downloaded from central:
[https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-plugins/33/maven-plugins-3.3.pom \(11 kB at 237 kB/s\)](https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-plugins/33/maven-plugins-3.3.pom (11 kB at 237 kB/s))

Downloading from central:
<https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-compiler-plugin/3.8.1/maven-compiler-plugin-3.8.1.jar>

Downloaded from central:
[https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-compiler-plugin/3.8.1/maven-compiler-plugin-3.8.1.jar \(62 kB at 758 kB/s\)](https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-compiler-plugin/3.8.1/maven-compiler-plugin-3.8.1.jar (62 kB at 758 kB/s))

[INFO]

[INFO] --- maven-clean-plugin:2.5:clean (default-clean) @ word-count-topology ---

[INFO] Deleting /home/hduser/word-count-storm/word-count-topology/target

[INFO]

[INFO] --- maven-resources-plugin:2.6:resources (default-resources) @ word-count-topology ---

[WARNING] Using platform encoding (UTF-8 actually) to copy filtered resources, i.e. build is platform dependent!

[INFO] skip non existing resourceDirectory
/home/hduser/word-count-storm/word-count-topology/src/main/resources

[INFO]

[INFO] --- maven-compiler-plugin:3.8.1:compile (default-compile) @ word-count-topology ---

Downloading from central:
<https://repo.maven.apache.org/maven2/org/codehaus/plexus/plexus-component-annotations/1.7.1/plexus-component-annotations-1.7.1.pom>

Downloaded from central:
[https://repo.maven.apache.org/maven2/org/codehaus/plexus/plexus-component-annotations/1.7.1/plexus-component-annotations-1.7.1.pom \(770 B at 19 kB/s\)](https://repo.maven.apache.org/maven2/org/codehaus/plexus/plexus-component-annotations/1.7.1/plexus-component-annotations-1.7.1.pom (770 B at 19 kB/s))

Downloading from central:
<https://repo.maven.apache.org/maven2/org/codehaus/plexus/plexus-containers/1.7.1/plexus-containers-1.7.1.pom>

Downloaded from central:
[https://repo.maven.apache.org/maven2/org/codehaus/plexus/plexus-containers/1.7.1/plexus-containers-1.7.1.pom \(5.0 kB at 105 kB/s\)](https://repo.maven.apache.org/maven2/org/codehaus/plexus/plexus-containers/1.7.1/plexus-containers-1.7.1.pom (5.0 kB at 105 kB/s))

Downloading from central:
<https://repo.maven.apache.org/maven2/org/codehaus/plexus/plexus-java/0.9.10/plexus-java-0.9.10.pom>

Downloaded from central:
[https://repo.maven.apache.org/maven2/org/codehaus/plexus/plexus-java/0.9.10/plexus-java-0.9.10.pom \(5.1 kB at 142 kB/s\)](https://repo.maven.apache.org/maven2/org/codehaus/plexus/plexus-java/0.9.10/plexus-java-0.9.10.pom (5.1 kB at 142 kB/s))

Downloading from central:
<https://repo.maven.apache.org/maven2/org/codehaus/plexus/plexus-languages/0.9.10/plexus-languages-0.9.10.pom>

Downloaded from central:
[https://repo.maven.apache.org/maven2/org/codehaus/plexus/plexus-languages/0.9.10/plexus-languages-0.9.10.pom \(4.1 kB at 122 kB/s\)](https://repo.maven.apache.org/maven2/org/codehaus/plexus/plexus-languages/0.9.10/plexus-languages-0.9.10.pom (4.1 kB at 122 kB/s))

Downloading from central: <https://repo.maven.apache.org/maven2/org/ow2/asm/asm/6.2/asm-6.2.pom>

Downloaded from central: [https://repo.maven.apache.org/maven2/org/ow2/asm/asm/6.2/asm-6.2.pom \(2.9 kB at 82 kB/s\)](https://repo.maven.apache.org/maven2/org/ow2/asm/asm/6.2/asm-6.2.pom (2.9 kB at 82 kB/s))

Downloading from central: <https://repo.maven.apache.org/maven2/org/ow2/ow2/1.5/ow2-1.5.pom>

Downloaded from central: [https://repo.maven.apache.org/maven2/org/ow2/ow2/1.5/ow2-1.5.pom \(11 kB at 187 kB/s\)](https://repo.maven.apache.org/maven2/org/ow2/ow2/1.5/ow2-1.5.pom (11 kB at 187 kB/s))

Downloading from central:
<https://repo.maven.apache.org/maven2/com/thoughtworks/qdox/qdox/2.0-M9/qdox-2.0-M9.pom>

Downloaded from central:
<https://repo.maven.apache.org/maven2/com/thoughtworks/qdox/qdox/2.0-M9/qdox-2.0-M9.pom> (16 kB at 396 kB/s)

Downloading from central:
<https://repo.maven.apache.org/maven2/org/codehaus/plexus/plexus-compiler-api/2.8.4/plexus-compiler-api-2.8.4.pom>

Downloaded from central:
<https://repo.maven.apache.org/maven2/org/codehaus/plexus/plexus-compiler-api/2.8.4/plexus-compiler-api-2.8.4.pom> (867 B at 19 kB/s)

Downloading from central:
<https://repo.maven.apache.org/maven2/org/codehaus/plexus/plexus-compiler/2.8.4/plexus-compiler-2.8.4.pom>

Downloaded from central:
<https://repo.maven.apache.org/maven2/org/codehaus/plexus/plexus-compiler/2.8.4/plexus-compiler-2.8.4.pom> (6.0 kB at 155 kB/s)

Downloading from central:
<https://repo.maven.apache.org/maven2/org/codehaus/plexus/plexus-compiler-manager/2.8.4/plexus-compiler-manager-2.8.4.pom>

Downloaded from central:
<https://repo.maven.apache.org/maven2/org/codehaus/plexus/plexus-compiler-manager/2.8.4/plexus-compiler-manager-2.8.4.pom> (692 B at 12 kB/s)

Downloading from central:
<https://repo.maven.apache.org/maven2/org/codehaus/plexus/plexus-compiler-javac/2.8.4/plexus-compiler-javac-2.8.4.pom>

Downloaded from central:
<https://repo.maven.apache.org/maven2/org/codehaus/plexus/plexus-compiler-javac/2.8.4/plexus-compiler-javac-2.8.4.pom> (771 B at 16 kB/s)

Downloading from central:
<https://repo.maven.apache.org/maven2/org/codehaus/plexus/plexus-compilers/2.8.4/plexus-compilers-2.8.4.pom>

Downloaded from central:
<https://repo.maven.apache.org/maven2/org/codehaus/plexus/plexus-compilers/2.8.4/plexus-compilers-2.8.4.pom> (1.3 kB at 26 kB/s)

Downloading from central:
<https://repo.maven.apache.org/maven2/org/codehaus/plexus/plexus-utils/2.0.4/plexus-utils-2.0.4.jar>

Downloading from central:
<https://repo.maven.apache.org/maven2/org/codehaus/plexus/plexus-interpolation/1.14/plexus-interpolation-1.14.jar>

Downloading from central:
<https://repo.maven.apache.org/maven2/org/apache/maven/shared/maven-shared-utils/3.2.1/maven-shared-utils-3.2.1.jar>

Downloading from central:
<https://repo.maven.apache.org/maven2/org/codehaus/plexus/plexus-component-annotations/1.7.1/plexus-component-annotations-1.7.1.jar>

Downloading from central:
<https://repo.maven.apache.org/maven2/org/codehaus/plexus/plexus-java/0.9.10/plexus-java-0.9.10.jar>

Downloaded from central:
<https://repo.maven.apache.org/maven2/org/codehaus/plexus/plexus-component-annotations/1.7.1/plexus-component-annotations-1.7.1.jar> (4.3 kB at 22 kB/s)

Downloading from central: <https://repo.maven.apache.org/maven2/org/ow2/asm/asm/6.2/asm-6.2.jar>

Downloaded from central:
<https://repo.maven.apache.org/maven2/org/codehaus/plexus/plexus-interpolation/1.14/plexus-interpolation-1.14.jar> (61 kB at 196 kB/s)

Downloading from central:
<https://repo.maven.apache.org/maven2/com/thoughtworks/qdox/qdox/2.0-M9/qdox-2.0-M9.jar>
Downloaded from central:
<https://repo.maven.apache.org/maven2/org/codehaus/plexus/plexus-java/0.9.10/plexus-java-0.9.10.jar> (39 kB at 96 kB/s)
Downloading from central:
<https://repo.maven.apache.org/maven2/org/codehaus/plexus/plexus-compiler-api/2.8.4/plexus-compiler-api-2.8.4.jar>
Downloaded from central: <https://repo.maven.apache.org/maven2/org/ow2/asm/asm/6.2/asm-6.2.jar> (111 kB at 209 kB/s)
Downloading from central:
<https://repo.maven.apache.org/maven2/org/codehaus/plexus/plexus-compiler-manager/2.8.4/plexus-compiler-manager-2.8.4.jar>
Downloaded from central:
<https://repo.maven.apache.org/maven2/org/codehaus/plexus/plexus-compiler-api/2.8.4/plexus-compiler-api-2.8.4.jar> (27 kB at 44 kB/s)
Downloaded from central:
<https://repo.maven.apache.org/maven2/org/codehaus/plexus/plexus-utils/2.0.4/plexus-utils-2.0.4.jar> (222 kB at 342 kB/s)
Downloading from central:
<https://repo.maven.apache.org/maven2/org/codehaus/plexus/plexus-compiler-javac/2.8.4/plexus-compiler-javac-2.8.4.jar>
Downloaded from central:
<https://repo.maven.apache.org/maven2/org/codehaus/plexus/plexus-compiler-manager/2.8.4/plexus-compiler-manager-2.8.4.jar> (4.7 kB at 7.3 kB/s)
Downloaded from central:
<https://repo.maven.apache.org/maven2/org/apache/maven/shared/maven-shared-utils/3.2.1/maven-shared-utils-3.2.1.jar> (167 kB at 253 kB/s)
Downloaded from central:
<https://repo.maven.apache.org/maven2/org/codehaus/plexus/plexus-compiler-javac/2.8.4/plexus-compiler-javac-2.8.4.jar> (21 kB at 30 kB/s)
Downloaded from central:
<https://repo.maven.apache.org/maven2/com/thoughtworks/qdox/qdox/2.0-M9/qdox-2.0-M9.jar> (317 kB at 430 kB/s)
[INFO] Changes detected - recompiling the module!
[WARNING] File encoding has not been set, using platform encoding UTF-8, i.e. build is platform dependent!
[INFO] Compiling 2 source files to
/home/hduser/word-count-storm/word-count-topology/target/classes
[INFO]
[INFO] --- maven-resources-plugin:2.6:testResources (default-testResources) @ word-count-topology ---
[WARNING] Using platform encoding (UTF-8 actually) to copy filtered resources, i.e. build is platform dependent!
[INFO] skip non existing resourceDirectory
/home/hduser/word-count-storm/word-count-topology/src/test/resources
[INFO]
[INFO] --- maven-compiler-plugin:3.8.1:testCompile (default-testCompile) @ word-count-topology ---
[INFO] Changes detected - recompiling the module!
[WARNING] File encoding has not been set, using platform encoding UTF-8, i.e. build is platform dependent!
[INFO] Compiling 1 source file to
/home/hduser/word-count-storm/word-count-topology/target/test-classes
[INFO] -----
[ERROR] COMPILATION ERROR :

```
[INFO] -----
[ERROR]
/home/hduser/word-count-storm/word-count-topology/src/test/java/com/example/AppTest.java:[3,23
] package junit.framework does not exist
[ERROR]
/home/hduser/word-count-storm/word-count-topology/src/test/java/com/example/AppTest.java:[4,23
] package junit.framework does not exist
[ERROR]
/home/hduser/word-count-storm/word-count-topology/src/test/java/com/example/AppTest.java:[5,23
] package junit.framework does not exist
[ERROR]
/home/hduser/word-count-storm/word-count-topology/src/test/java/com/example/AppTest.java:[11,1
3] cannot find symbol
    symbol: class TestCase
[ERROR]
/home/hduser/word-count-storm/word-count-topology/src/test/java/com/example/AppTest.java:[26,1
9] cannot find symbol
    symbol:   class Test
    location: class com.example.AppTest
[INFO] 5 errors
[INFO] -----
[INFO] -----
[INFO] BUILD FAILURE
[INFO] -----
[INFO] Total time:  4.874 s
[INFO] Finished at: 2024-05-25T14:48:40+01:00
[INFO] -----
[ERROR] Failed to execute goal
org.apache.maven.plugins:maven-compiler-plugin:3.8.1:testCompile (default-testCompile) on
project word-count-topology: Compilation failure: Compilation failure:
[ERROR]
/home/hduser/word-count-storm/word-count-topology/src/test/java/com/example/AppTest.java:[3,23
] package junit.framework does not exist
[ERROR]
/home/hduser/word-count-storm/word-count-topology/src/test/java/com/example/AppTest.java:[4,23
] package junit.framework does not exist
[ERROR]
/home/hduser/word-count-storm/word-count-topology/src/test/java/com/example/AppTest.java:[5,23
] package junit.framework does not exist
[ERROR]
/home/hduser/word-count-storm/word-count-topology/src/test/java/com/example/AppTest.java:[11,1
3] cannot find symbol
[ERROR]   symbol: class TestCase
[ERROR]
/home/hduser/word-count-storm/word-count-topology/src/test/java/com/example/AppTest.java:[26,1
9] cannot find symbol
[ERROR]   symbol:   class Test
[ERROR]   location: class com.example.AppTest
[ERROR] -> [Help 1]
[ERROR]
[ERROR] To see the full stack trace of the errors, re-run Maven with the -e switch.
[ERROR] Re-run Maven using the -X switch to enable full debug logging.
[ERROR]
[ERROR] For more information about the errors and possible solutions, please read the
following articles:
[ERROR] [Help 1] http://cwiki.apache.org/confluence/display/MAVEN/MojoFailureException
```

```
<project xmlns="http://maven.apache.org/POM/4.0.0"
    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xsi:schemaLocation="http://maven.apache.org/POM/4.0.0
http://maven.apache.org/xsd/maven-4.0.0.xsd">
    <modelVersion>4.0.0</modelVersion>

    <groupId>com.example</groupId>
    <artifactId>word-count-topology</artifactId>
    <version>1.0-SNAPSHOT</version>
    <packaging>jar</packaging>

    <name>word-count-topology</name>

    <properties>
        <project.build.sourceEncoding>UTF-8</project.build.sourceEncoding>
        <maven.compiler.source>1.8</maven.compiler.source>
        <maven.compiler.target>1.8</maven.compiler.target>
    </properties>

    <dependencies>
        <!-- Storm dependencies -->
        <dependency>
            <groupId>org.apache.storm</groupId>
            <artifactId>storm-core</artifactId>
            <version>2.2.0</version>
        </dependency>
        <dependency>
            <groupId>org.apache.storm</groupId>
            <artifactId>storm-client</artifactId>
            <version>2.2.0</version>
        </dependency>

        <!-- Logging dependencies -->
        <dependency>
            <groupId>org.slf4j</groupId>
            <artifactId>slf4j-api</artifactId>
            <version>1.7.32</version>
        </dependency>
        <dependency>
            <groupId>org.slf4j</groupId>
            <artifactId>slf4j-log4j12</artifactId>
            <version>1.7.32</version>
        </dependency>
        <dependency>
            <groupId>log4j</groupId>
            <artifactId>log4j</artifactId>
            <version>1.2.17</version>
        </dependency>

        <!-- JUnit for testing -->
        <dependency>
            <groupId>junit</groupId>
            <artifactId>junit</artifactId>
            <version>4.13.2</version>
            <scope>test</scope>
        </dependency>
    </dependencies>

```

```
</dependency>
</dependencies>

<build>
    <plugins>
        <!-- Compiler plugin to set Java version -->
        <plugin>
            <groupId>org.apache.maven.plugins</groupId>
            <artifactId>maven-compiler-plugin</artifactId>
            <version>3.8.1</version>
            <configuration>
                <source>1.8</source>
                <target>1.8</target>
            </configuration>
        </plugin>
    </plugins>
</build>
</project>
```

```
nano pom.xml
```

GNU nano 6.2

pom.xml

```
<project xmlns="http://maven.apache.org/POM/4.0.0"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation="http://maven.apache.org/POM/4.0.0 http://maven.apache.org/xsd/maven-4.0.0.xsd">
  <modelVersion>4.0.0</modelVersion>

  <groupId>com.example</groupId>
  <artifactId>word-count-topology</artifactId>
  <version>1.0-SNAPSHOT</version>
  <packaging>jar</packaging>

  <name>word-count-topology</name>

  <properties>
    <project.build.sourceEncoding>UTF-8</project.build.sourceEncoding>
    <maven.compiler.source>1.8</maven.compiler.source>
    <maven.compiler.target>1.8</maven.compiler.target>
  </properties>

  <dependencies>
    <!-- Storm dependencies -->
    <dependency>
      <groupId>org.apache.storm</groupId>
      <artifactId>storm-core</artifactId>
      <version>2.2.0</version>
    </dependency>
    <dependency>
      <groupId>org.apache.storm</groupId>
      <artifactId>storm-client</artifactId>
      <version>2.2.0</version>
    </dependency>

    <!-- Logging dependencies -->
    <dependency>
      <groupId>org.slf4j</groupId>
      <artifactId>slf4j-api</artifactId>
      <version>1.7.32</version>
    </dependency>
    <dependency>
      <groupId>org.slf4j</groupId>
      <artifactId>slf4j-log4j12</artifactId>
      <version>1.7.32</version>
    </dependency>
  </dependencies>

```

GNU nano 6.2

pom.xml

```
<groupId>org.slf4j</groupId>
<artifactId>slf4j-api</artifactId>
<version>1.7.32</version>
</dependency>
<dependency>
    <groupId>org.slf4j</groupId>
    <artifactId>slf4j-log4j12</artifactId>
    <version>1.7.32</version>
</dependency>
<dependency>
    <groupId>log4j</groupId>
    <artifactId>log4j</artifactId>
    <version>1.2.17</version>
</dependency>

<!-- JUnit for testing -->
<dependency>
    <groupId>junit</groupId>
    <artifactId>junit</artifactId>
    <version>4.13.2</version>
    <scope>test</scope>
</dependency>
</dependencies>

<build>
    <plugins>
        <!-- Compiler plugin to set Java version -->
        <plugin>
            <groupId>org.apache.maven.plugins</groupId>
            <artifactId>maven-compiler-plugin</artifactId>
            <version>3.8.1</version>
            <configuration>
                <source>1.8</source>
                <target>1.8</target>
            </configuration>
        </plugin>
    </plugins>
</build>
</project>
```

|

^G Help **^O** Write Out **^W** Where Is **^K** Cut **^T** Execute **^C** Location **M-U** Undo
^X Exit **^R** Read File **^** Replace **^U** Paste **^J** Justify **^/** Go To Line **M-E** Redo

mvn clean package

```
[INFO] Using 'UTF-8' encoding to copy filtered resources.
[INFO] skip non existing resourceDirectory /home/hduser/word-count-storm/word-count-topology/src/test/resources
[INFO]
[INFO] --- maven-compiler-plugin:3.8.1:testCompile (default-testCompile) @ word-count-topology ---
[INFO] Changes detected - recompiling the module!
[INFO] Compiling 1 source file to /home/hduser/word-count-storm/word-count-topology/target/test-classes
[INFO]
[INFO] --- maven-surefire-plugin:2.12.4:test (default-test) @ word-count-topology ---
[INFO] Surefire report directory: /home/hduser/word-count-storm/word-count-topology/target/surefire-reports
Downloading from central: https://repo.maven.apache.org/maven2/org/apache/maven/surefire/surefire-junit4/2.12.4/surefire-junit4-2.12.4.pom
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/surefire/surefire-junit4/2.12.4/surefire-junit4-2.12.4.pom (2.4 kB at 86 kB/s)
Downloading from central: https://repo.maven.apache.org/maven2/org/apache/maven/surefire/surefire-providers/2.12.4/surefire-providers-2.12.4.pom
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/surefire/surefire-providers/2.12.4/surefire-providers-2.12.4.pom (2.3 kB at 76 kB/s)
Downloading from central: https://repo.maven.apache.org/maven2/org/apache/maven/surefire/surefire-junit4/2.12.4/surefire-junit4-2.12.4.jar
Downloaded from central: https://repo.maven.apache.org/maven2/org/apache/maven/surefire/surefire-junit4/2.12.4/surefire-junit4-2.12.4.jar (37 kB at 998 kB/s)

-----
T E S T S
-----
Running com.example.AppTest
Tests run: 1, Failures: 0, Errors: 0, Skipped: 0, Time elapsed: 0.073 sec

Results :

Tests run: 1, Failures: 0, Errors: 0, Skipped: 0

[INFO]
[INFO] --- maven-jar-plugin:2.4:jar (default-jar) @ word-count-topology ---
[INFO] Building jar: /home/hduser/word-count-storm/word-count-topology/target/word-count-topology-1.0-SNAPSHOT.jar
[INFO] -----
[INFO] BUILD SUCCESS
[INFO] -----
[INFO] Total time:  9.284 s
[INFO] Finished at: 2024-05-25T14:59:45+01:00
[INFO] -----
```

```
hduser@kavi-VirtualBox:~/word-count-storm/word-count-topology$
```

```
storm jar target/word-count-topology-1.0-SNAPSHOT-jar-with-dependencies.jar
com.example.WordCountTopology
```

```
storm jar target/word-count-topology-1.0-SNAPSHOT-jar-with-dependencies.jar
com.example.WordCountTopology word-count-topology
```

```
hduser@kavi-VirtualBox:~/word-count-storm/word-count-topology$ storm jar
target/word-count-topology-1.0-SNAPSHOT-jar-with-dependencies.jar
com.example.WordCountTopology
WARNING: The path /home/hduser/word-count-storm/word-count-topology/jar could not be found.
Will not import it.
WARNING: The path
/home/hduser/word-count-storm/word-count-topology/target/word-count-topology-1.0-SNAPSHOT-jar-
with-dependencies.jar could not be found. Will not import it.
WARNING: The path
/home/hduser/word-count-storm/word-count-topology/com.example.WordCountTopology could not be
found. Will not import it.
Welcome to the Storm compiler!
Root directory: /usr/lib/storm
Compiler boot in 55.58 ms
Type 'licenses' to show licenses for all currently used modules.
bs>
```

```
hduser@kavi-VirtualBox:~/word-count-storm/word-count-topology$ ls target/
```

```
classes           generated-test-sources  maven-status      test-classes
generated-sources  maven-archiver        surefire-reports   word-count-topology-1.0-SNAPSHOT.jar

<project xmlns="http://maven.apache.org/POM/4.0.0"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation="http://maven.apache.org/POM/4.0.0
  http://maven.apache.org/xsd/maven-4.0.0.xsd">
  <modelVersion>4.0.0</modelVersion>

  <groupId>com.example</groupId>
  <artifactId>word-count-topology</artifactId>
  <version>1.0-SNAPSHOT</version>
  <packaging>jar</packaging>

  <name>word-count-topology</name>
  <url>http://maven.apache.org</url>

  <properties>
    <project.build.sourceEncoding>UTF-8</project.build.sourceEncoding>
    <maven.compiler.source>1.8</maven.compiler.source>
    <maven.compiler.target>1.8</maven.compiler.target>
  </properties>

  <dependencies>
    <!-- Apache Storm dependencies -->
    <dependency>
      <groupId>org.apache.storm</groupId>
      <artifactId>storm-core</artifactId>
      <version>2.2.0</version>
    </dependency>
    <dependency>
      <groupId>org.apache.storm</groupId>
      <artifactId>storm-kafka-client</artifactId>
      <version>2.2.0</version>
    </dependency>

    <!-- Logging framework -->
    <dependency>
      <groupId>org.slf4j</groupId>
      <artifactId>slf4j-api</artifactId>
      <version>1.7.32</version>
    </dependency>
    <dependency>
      <groupId>org.slf4j</groupId>
      <artifactId>slf4j-log4j12</artifactId>
      <version>1.7.32</version>
    </dependency>
    <dependency>
      <groupId>log4j</groupId>
      <artifactId>log4j</artifactId>
      <version>1.2.17</version>
    </dependency>
  </dependencies>

  <build>
    <plugins>
```

```

<plugin>
    <groupId>org.apache.maven.plugins</groupId>
    <artifactId>maven-shade-plugin</artifactId>
    <version>3.2.4</version>
    <executions>
        <execution>
            <phase>package</phase>
            <goals>
                <goal>shade</goal>
            </goals>
            <configuration>
                <createDependencyReducedPom>false</createDependencyReducedPom>
            </configuration>
        </execution>
    </executions>
</plugin>
</plugins>
</build>
</project>

```

```

hduser@kavi-VirtualBox:~/word-count-storm/word-count-topology$ mvn clean package
[INFO] Scanning for projects...
[INFO]
[INFO] -----< com.example:word-count-topology >-----
[INFO] Building word-count-topology 1.0-SNAPSHOT
[INFO] -----[ jar ]-----
Downloading from central:
https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-shade-plugin/3.2.4/maven-s
hade-plugin-3.2.4.pom
Downloaded from central:
https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-shade-plugin/3.2.4/maven-s
hade-plugin-3.2.4.pom (11 kB at 26 kB/s)
Downloading from central:
https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-shade-plugin/3.2.4/maven-s
hade-plugin-3.2.4.jar
Downloaded from central:
https://repo.maven.apache.org/maven2/org/apache/maven/plugins/maven-shade-plugin/3.2.4/maven-s
hade-plugin-3.2.4.jar (134 kB at 1.1 MB/s)
Downloading from central:
https://repo.maven.apache.org/maven2/org/apache/storm/storm-kafka-client/2.2.0/storm-kafka-cl
ient-2.2.0.pom
Downloaded from central:
https://repo.maven.apache.org/maven2/org/apache/storm/storm-kafka-client/2.2.0/storm-kafka-cl
ient-2.2.0.pom (6.9 kB at 31 kB/s)
Downloading from central:
https://repo.maven.apache.org/maven2/com/fasterxml/jackson/core/jackson-databind/2.9.8/jackson
-databind-2.9.8.pom
Downloaded from central:
https://repo.maven.apache.org/maven2/com/fasterxml/jackson/core/jackson-databind/2.9.8/jackson
-databind-2.9.8.pom (6.3 kB at 137 kB/s)
Downloading from central:
https://repo.maven.apache.org/maven2/com/fasterxml/jackson/core/jackson-annotations/2.9.0/jack
son-annotations-2.9.0.pom
Downloaded from central:
https://repo.maven.apache.org/maven2/com/fasterxml/jackson/core/jackson-annotations/2.9.0/jack
son-annotations-2.9.0.pom (1.9 kB at 40 kB/s)

```

Downloading from central:
<https://repo.maven.apache.org/maven2/com/fasterxml/jackson/jackson-parent/2.9.0/jackson-parent-2.9.0.pom>

Downloaded from central:
<https://repo.maven.apache.org/maven2/com/fasterxml/jackson/jackson-parent/2.9.0/jackson-parent-2.9.0.pom> (7.8 kB at 182 kB/s)

Downloading from central:
<https://repo.maven.apache.org/maven2/com/fasterxml/oss-parent/28/oss-parent-28.pom>

Downloaded from central:
<https://repo.maven.apache.org/maven2/com/fasterxml/oss-parent/28/oss-parent-28.pom> (20 kB at 417 kB/s)

Downloading from central:
<https://repo.maven.apache.org/maven2/org/apache/storm/storm-kafka-client/2.2.0/storm-kafka-client-2.2.0.jar>

Downloading from central:
<https://repo.maven.apache.org/maven2/com/fasterxml/jackson/core/jackson-databind/2.9.8/jackson-databind-2.9.8.jar>

Downloading from central:
<https://repo.maven.apache.org/maven2/com/fasterxml/jackson/core/jackson-annotations/2.9.0/jackson-annotations-2.9.0.jar>

Downloaded from central:
<https://repo.maven.apache.org/maven2/com/fasterxml/jackson/core/jackson-annotations/2.9.0/jackson-annotations-2.9.0.jar> (67 kB at 429 kB/s)

Downloaded from central:
<https://repo.maven.apache.org/maven2/org/apache/storm/storm-kafka-client/2.2.0/storm-kafka-client-2.2.0.jar> (120 kB at 470 kB/s)

Downloaded from central:
<https://repo.maven.apache.org/maven2/com/fasterxml/jackson/core/jackson-databind/2.9.8/jackson-databind-2.9.8.jar> (1.3 MB at 3.1 MB/s)

[INFO]

[INFO] --- maven-clean-plugin:2.5:clean (default-clean) @ word-count-topology ---

[INFO] Deleting /home/hduser/word-count-storm/word-count-topology/target

[INFO]

[INFO] --- maven-resources-plugin:2.6:resources (default-resources) @ word-count-topology ---

[INFO] Using 'UTF-8' encoding to copy filtered resources.

[INFO] skip non existing resourceDirectory

/home/hduser/word-count-storm/word-count-topology/src/main/resources

[INFO]

[INFO] --- maven-compiler-plugin:3.1:compile (default-compile) @ word-count-topology ---

[INFO] Changes detected - recompiling the module!

[INFO] Compiling 2 source files to

/home/hduser/word-count-storm/word-count-topology/target/classes

[INFO]

[INFO] --- maven-resources-plugin:2.6:testResources (default-testResources) @ word-count-topology ---

[INFO] Using 'UTF-8' encoding to copy filtered resources.

[INFO] skip non existing resourceDirectory

/home/hduser/word-count-storm/word-count-topology/src/test/resources

[INFO]

[INFO] --- maven-compiler-plugin:3.1:testCompile (default-testCompile) @ word-count-topology ---

[INFO] Changes detected - recompiling the module!

[INFO] Compiling 1 source file to

/home/hduser/word-count-storm/word-count-topology/target/test-classes

[INFO] -----

[ERROR] COMPILATION ERROR :

```
[INFO] -----
[ERROR]
/home/hduser/word-count-storm/word-count-topology/src/test/java/com/example/AppTest.java:[3,23
] package junit.framework does not exist
[ERROR]
/home/hduser/word-count-storm/word-count-topology/src/test/java/com/example/AppTest.java:[4,23
] package junit.framework does not exist
[ERROR]
/home/hduser/word-count-storm/word-count-topology/src/test/java/com/example/AppTest.java:[5,23
] package junit.framework does not exist
[ERROR]
/home/hduser/word-count-storm/word-count-topology/src/test/java/com/example/AppTest.java:[11,1
3] cannot find symbol
    symbol: class TestCase
[ERROR]
/home/hduser/word-count-storm/word-count-topology/src/test/java/com/example/AppTest.java:[26,1
9] cannot find symbol
    symbol:   class Test
    location: class com.example.AppTest
[INFO] 5 errors
[INFO] -----
[INFO] -----
[INFO] BUILD FAILURE
[INFO] -----
[INFO] Total time:  4.026 s
[INFO] Finished at: 2024-05-25T15:23:41+01:00
[INFO] -----
[ERROR] Failed to execute goal org.apache.maven.plugins:maven-compiler-plugin:3.1:testCompile
(default-testCompile) on project word-count-topology: Compilation failure: Compilation
failure:
[ERROR]
/home/hduser/word-count-storm/word-count-topology/src/test/java/com/example/AppTest.java:[3,23
] package junit.framework does not exist
[ERROR]
/home/hduser/word-count-storm/word-count-topology/src/test/java/com/example/AppTest.java:[4,23
] package junit.framework does not exist
[ERROR]
/home/hduser/word-count-storm/word-count-topology/src/test/java/com/example/AppTest.java:[5,23
] package junit.framework does not exist
[ERROR]
/home/hduser/word-count-storm/word-count-topology/src/test/java/com/example/AppTest.java:[11,1
3] cannot find symbol
[ERROR]   symbol: class TestCase
[ERROR]
/home/hduser/word-count-storm/word-count-topology/src/test/java/com/example/AppTest.java:[26,1
9] cannot find symbol
[ERROR]   symbol:   class Test
[ERROR]   location: class com.example.AppTest
[ERROR] -> [Help 1]
[ERROR]
[ERROR] To see the full stack trace of the errors, re-run Maven with the -e switch.
[ERROR] Re-run Maven using the -X switch to enable full debug logging.
[ERROR]
[ERROR] For more information about the errors and possible solutions, please read the
following articles:
[ERROR] [Help 1] http://cwiki.apache.org/confluence/display/MAVEN/MojoFailureException
```

```
<dependency>
  <groupId>junit</groupId>
  <artifactId>junit</artifactId>
  <version>4.13.1</version>
  <scope>test</scope>
</dependency>
```

```
GNU nano 6.2                               pom.xml
<project xmlns="http://maven.apache.org/POM/4.0.0" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation="http://maven.apache.org/POM/4.0.0 http://maven.apache.org/xsd/maven-4.0.0.xsd">
  <modelVersion>4.0.0</modelVersion>

  <groupId>com.example</groupId>
  <artifactId>word-count-topology</artifactId>
  <version>1.0-SNAPSHOT</version>
  <packaging>jar</packaging>

  <name>word-count-topology</name>
  <url>http://maven.apache.org</url>

  <properties>
    <project.build.sourceEncoding>UTF-8</project.build.sourceEncoding>
    <maven.compiler.source>1.8</maven.compiler.source>
    <maven.compiler.target>1.8</maven.compiler.target>
  </properties>

  <dependencies>
    <!-- Apache Storm dependencies -->
    <dependency>
      <groupId>org.apache.storm</groupId>
      <artifactId>storm-core</artifactId>
      <version>2.2.0</version>
    </dependency>
    <dependency>
      <groupId>org.apache.storm</groupId>
      <artifactId>storm-kafka-client</artifactId>
      <version>2.2.0</version>
    </dependency>

    <!-- Logging framework -->
    <dependency>
      <groupId>org.slf4j</groupId>
      <artifactId>slf4j-api</artifactId>
      <version>1.7.32</version>
    </dependency>
    <dependency>
      <groupId>org.slf4j</groupId>
      <artifactId>slf4j-log4j12</artifactId>
      <version>1.7.32</version>
    </dependency>
  </dependencies>

```

GNU nano 6.2

pom.xml

```
<groupId>org.slf4j</groupId>
<artifactId>slf4j-log4j12</artifactId>
<version>1.7.32</version>
</dependency>
<dependency>
    <groupId>log4j</groupId>
    <artifactId>log4j</artifactId>
    <version>1.2.17</version>
</dependency>
<dependency>
    <groupId>junit</groupId>
    <artifactId>junit</artifactId>
    <version>4.13.1</version>
    <scope>test</scope>
</dependency>

</dependencies>

<build>
    <plugins>
        <plugin>
            <groupId>org.apache.maven.plugins</groupId>
            <artifactId>maven-shade-plugin</artifactId>
            <version>3.2.4</version>
            <executions>
                <execution>
                    <phase>package</phase>
                    <goals>
                        <goal>shade</goal>
                    </goals>
                    <configuration>
                        <createDependencyReducedPom>false</createDependencyReducedPom>
                    </configuration>
                </execution>
            </executions>
        </plugin>
    </plugins>
</build>
</project>
```

^G Help ^O Write Out ^W Where Is ^K Cut ^T Execute ^C Location M-U Undo
^X Exit ^R Read File ^\ Replace ^U Paste ^J Justify ^/ Go To Line M-E Redo

```
<project xmlns="http://maven.apache.org/POM/4.0.0"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="http://maven.apache.org/POM/4.0.0
http://maven.apache.org/xsd/maven-4.0.0.xsd">
    <modelVersion>4.0.0</modelVersion>

    <groupId>com.example</groupId>
    <artifactId>word-count-topology</artifactId>
    <version>1.0-SNAPSHOT</version>
    <packaging>jar</packaging>

    <name>word-count-topology</name>
    <url>http://maven.apache.org</url>

    <properties>
        <project.build.sourceEncoding>UTF-8</project.build.sourceEncoding>
        <maven.compiler.source>1.8</maven.compiler.source>
        <maven.compiler.target>1.8</maven.compiler.target>
    </properties>
```

```
<dependencies>
    <!-- Apache Storm dependencies -->
    <dependency>
        <groupId>org.apache.storm</groupId>
        <artifactId>storm-core</artifactId>
        <version>2.2.0</version>
    </dependency>
    <dependency>
        <groupId>org.apache.storm</groupId>
        <artifactId>storm-kafka-client</artifactId>
        <version>2.2.0</version>
    </dependency>

    <!-- Logging framework -->
    <dependency>
        <groupId>org.slf4j</groupId>
        <artifactId>slf4j-api</artifactId>
        <version>1.7.32</version>
    </dependency>
    <dependency>
        <groupId>org.slf4j</groupId>
        <artifactId>slf4j-log4j12</artifactId>
        <version>1.7.32</version>
    </dependency>
    <dependency>
        <groupId>log4j</groupId>
        <artifactId>log4j</artifactId>
        <version>1.2.17</version>
    </dependency>
    <dependency>
        <groupId>junit</groupId>
        <artifactId>junit</artifactId>
        <version>4.13.1</version>
        <scope>test</scope>
    </dependency>
</dependencies>

<build>
    <plugins>
        <plugin>
            <groupId>org.apache.maven.plugins</groupId>
            <artifactId>maven-shade-plugin</artifactId>
            <version>3.2.4</version>
            <executions>
                <execution>
                    <phase>package</phase>
                    <goals>
                        <goal>shade</goal>
                    </goals>
                    <configuration>
                        <createDependencyReducedPom>false</createDependencyReducedPom>
                    </configuration>
                </execution>
            </executions>
        </plugin>
    </plugins>

```

```
</build>
</project>
```

```
hduser@kavi-VirtualBox:~/word-count-storm/word-count-topology$ mvn clean package
[INFO] Scanning for projects...
[INFO]
[INFO] -----< com.example:word-count-topology >-----
[INFO] Building word-count-topology 1.0-SNAPSHOT
[INFO] -----[ jar ]-----
Downloading from central:
https://repo.maven.apache.org/maven2/junit/junit/4.13.1/junit-4.13.1.pom
Downloaded from central:
https://repo.maven.apache.org/maven2/junit/junit/4.13.1/junit-4.13.1.pom (25 kB at 52 kB/s)
Downloading from central:
https://repo.maven.apache.org/maven2/junit/junit/4.13.1/junit-4.13.1.jar
Downloaded from central:
https://repo.maven.apache.org/maven2/junit/junit/4.13.1/junit-4.13.1.jar (383 kB at 2.1 MB/s)
[INFO]
[INFO] --- maven-clean-plugin:2.5:clean (default-clean) @ word-count-topology ---
[INFO] Deleting /home/hduser/word-count-storm/word-count-topology/target
[INFO]
[INFO] --- maven-resources-plugin:2.6:resources (default-resources) @ word-count-topology ---
[INFO] Using 'UTF-8' encoding to copy filtered resources.
[INFO] skip non existing resourceDirectory
/home/hduser/word-count-storm/word-count-topology/src/main/resources
[INFO]
[INFO] --- maven-compiler-plugin:3.1:compile (default-compile) @ word-count-topology ---
[INFO] Changes detected - recompiling the module!
[INFO] Compiling 2 source files to
/home/hduser/word-count-storm/word-count-topology/target/classes
[INFO]
[INFO] --- maven-resources-plugin:2.6:testResources (default-testResources) @ word-count-topology ---
[INFO] Using 'UTF-8' encoding to copy filtered resources.
[INFO] skip non existing resourceDirectory
/home/hduser/word-count-storm/word-count-topology/src/test/resources
[INFO]
[INFO] --- maven-compiler-plugin:3.1:testCompile (default-testCompile) @ word-count-topology ---
[INFO] Changes detected - recompiling the module!
[INFO] Compiling 1 source file to
/home/hduser/word-count-storm/word-count-topology/target/test-classes
[INFO]
[INFO] --- maven-surefire-plugin:2.12.4:test (default-test) @ word-count-topology ---
[INFO] Surefire report directory:
/home/hduser/word-count-storm/word-count-topology/target/surefire-reports

-----
T E S T S
-----
Running com.example.AppTest
Tests run: 1, Failures: 0, Errors: 0, Skipped: 0, Time elapsed: 0.086 sec

Results :
```

Tests run: 1, Failures: 0, Errors: 0, Skipped: 0

```
[INFO]
[INFO] --- maven-jar-plugin:2.4:jar (default-jar) @ word-count-topology ---
[INFO] Building jar:
/home/hduser/word-count-storm/word-count-topology/target/word-count-topology-1.0-SNAPSHOT.jar
[INFO]
[INFO] --- maven-shade-plugin:3.2.4:shade (default) @ word-count-topology ---
Downloading from central:
https://repo.maven.apache.org/maven2/org/apache/maven/shared/maven-artifact-transfer/0.12.0/maven-artifact-transfer-0.12.0.pom
Downloaded from central:
https://repo.maven.apache.org/maven2/org/apache/maven/shared/maven-artifact-transfer/0.12.0/maven-artifact-transfer-0.12.0.pom (11 kB at 201 kB/s)
Downloading from central: https://repo.maven.apache.org/maven2/org/ow2/asm/asm/8.0/asm-8.0.pom
Downloaded from central: https://repo.maven.apache.org/maven2/org/ow2/asm/asm/8.0/asm-8.0.pom
(2.9 kB at 92 kB/s)
Downloading from central:
https://repo.maven.apache.org/maven2/org/ow2/asm/asm-commons/8.0/asm-commons-8.0.pom
Downloaded from central:
https://repo.maven.apache.org/maven2/org/ow2/asm/asm-commons/8.0/asm-commons-8.0.pom (3.7 kB
at 136 kB/s)
Downloading from central:
https://repo.maven.apache.org/maven2/org/ow2/asm/asm-tree/8.0/asm-tree-8.0.pom
Downloaded from central:
https://repo.maven.apache.org/maven2/org/ow2/asm/asm-tree/8.0/asm-tree-8.0.pom (3.1 kB at 120
kB/s)
Downloading from central:
https://repo.maven.apache.org/maven2/org/ow2/asm/asm-analysis/8.0/asm-analysis-8.0.pom
Downloaded from central:
https://repo.maven.apache.org/maven2/org/ow2/asm/asm-analysis/8.0/asm-analysis-8.0.pom (3.2 kB
at 99 kB/s)
Downloading from central:
https://repo.maven.apache.org/maven2/org/apache/maven/shared/maven-dependency-tree/3.0.1/maven
-dependency-tree-3.0.1.pom
Downloaded from central:
https://repo.maven.apache.org/maven2/org/apache/maven/shared/maven-dependency-tree/3.0.1/maven
-dependency-tree-3.0.1.pom (7.5 kB at 250 kB/s)
Downloading from central:
https://repo.maven.apache.org/maven2/org/vafer/jdependency/2.4.0/jdependency-2.4.0.pom
Downloaded from central:
https://repo.maven.apache.org/maven2/org/vafer/jdependency/2.4.0/jdependency-2.4.0.pom (15 kB
at 419 kB/s)
Downloading from central:
https://repo.maven.apache.org/maven2/org/ow2/asm/asm-util/8.0/asm-util-8.0.pom
Downloaded from central:
https://repo.maven.apache.org/maven2/org/ow2/asm/asm-util/8.0/asm-util-8.0.pom (3.7 kB at 96
kB/s)
Downloading from central:
https://repo.maven.apache.org/maven2/com/google/guava/guava/28.2-android/guava-28.2-android.p
m
Downloaded from central:
https://repo.maven.apache.org/maven2/com/google/guava/guava/28.2-android/guava-28.2-android.p
m (11 kB at 199 kB/s)
```

Downloading from central:
<https://repo.maven.apache.org/maven2/com/google/guava/guava-parent/28.2-android/guava-parent-28.2-android.pom>

Downloaded from central:
[https://repo.maven.apache.org/maven2/com/google/guava/guava-parent/28.2-android/guava-parent-28.2-android.pom \(13 kB at 478 kB/s\)](https://repo.maven.apache.org/maven2/com/google/guava/guava-parent/28.2-android/guava-parent-28.2-android.pom (13 kB at 478 kB/s))

Downloading from central:
<https://repo.maven.apache.org/maven2/org/checkerframework/checker-compat-qual/2.5.5/checker-compat-qual-2.5.5.pom>

Downloaded from central:
[https://repo.maven.apache.org/maven2/org/checkerframework/checker-compat-qual/2.5.5/checker-compat-qual-2.5.5.pom \(2.7 kB at 57 kB/s\)](https://repo.maven.apache.org/maven2/org/checkerframework/checker-compat-qual/2.5.5/checker-compat-qual-2.5.5.pom (2.7 kB at 57 kB/s))

Downloading from central:
https://repo.maven.apache.org/maven2/com/google/errorprone/error_prone_annotations/2.3.4/error_prone_annotations-2.3.4.pom

Downloaded from central:
[https://repo.maven.apache.org/maven2/com/google/errorprone/error_prone_annotations/2.3.4/error_prone_annotations-2.3.4.pom \(2.1 kB at 64 kB/s\)](https://repo.maven.apache.org/maven2/com/google/errorprone/error_prone_annotations/2.3.4/error_prone_annotations-2.3.4.pom (2.1 kB at 64 kB/s))

Downloading from central:
https://repo.maven.apache.org/maven2/com/google/errorprone/error_prone_parent/2.3.4/error_prone_parent-2.3.4.pom

Downloaded from central:
[https://repo.maven.apache.org/maven2/com/google/errorprone/error_prone_parent/2.3.4/error_prone_parent-2.3.4.pom \(5.4 kB at 123 kB/s\)](https://repo.maven.apache.org/maven2/com/google/errorprone/error_prone_parent/2.3.4/error_prone_parent-2.3.4.pom (5.4 kB at 123 kB/s))

Downloading from central:
<https://repo.maven.apache.org/maven2/com/google/j2objc/j2objc-annotations/1.3/j2objc-annotations-1.3.pom>

Downloaded from central:
[https://repo.maven.apache.org/maven2/com/google/j2objc/j2objc-annotations/1.3/j2objc-annotations-1.3.pom \(2.8 kB at 86 kB/s\)](https://repo.maven.apache.org/maven2/com/google/j2objc/j2objc-annotations/1.3/j2objc-annotations-1.3.pom (2.8 kB at 86 kB/s))

Downloading from central:
<https://repo.maven.apache.org/maven2/org/apache/commons/commons-lang3/3.7/commons-lang3-3.7.pom>

Downloaded from central:
[https://repo.maven.apache.org/maven2/org/apache/commons/commons-lang3/3.7/commons-lang3-3.7.pom \(28 kB at 834 kB/s\)](https://repo.maven.apache.org/maven2/org/apache/commons/commons-lang3/3.7/commons-lang3-3.7.pom (28 kB at 834 kB/s))

Downloading from central:
<https://repo.maven.apache.org/maven2/org/apache/maven/shared/maven-artifact-transfer/0.12.0/maven-artifact-transfer-0.12.0.jar>

Downloading from central:
<https://repo.maven.apache.org/maven2/org/apache/maven/shared/maven-common-artifact-filters/3.0.1/maven-common-artifact-filters-3.0.1.jar>

Downloading from central: <https://repo.maven.apache.org/maven2/org/ow2/asm/asm/8.0/asm-8.0.jar>

Downloading from central:
<https://repo.maven.apache.org/maven2/org/ow2/asm/asm-commons/8.0/asm-commons-8.0.jar>

Downloading from central:
<https://repo.maven.apache.org/maven2/org/ow2/asm/asm-tree/8.0/asm-tree-8.0.jar>

Downloaded from central:
[https://repo.maven.apache.org/maven2/org/apache/maven/shared/maven-artifact-transfer/0.12.0/maven-artifact-transfer-0.12.0.jar \(120 kB at 847 kB/s\)](https://repo.maven.apache.org/maven2/org/apache/maven/shared/maven-artifact-transfer/0.12.0/maven-artifact-transfer-0.12.0.jar (120 kB at 847 kB/s))

Downloading from central:
<https://repo.maven.apache.org/maven2/org/ow2/asm/asm-analysis/8.0/asm-analysis-8.0.jar>

Downloaded from central:
[https://repo.maven.apache.org/maven2/org/apache/maven/shared/maven-common-artifact-filters/3.0.1/maven-common-artifact-filters-3.0.1.jar \(61 kB at 271 kB/s\)](https://repo.maven.apache.org/maven2/org/apache/maven/shared/maven-common-artifact-filters/3.0.1/maven-common-artifact-filters-3.0.1.jar (61 kB at 271 kB/s))

Downloading from central:
<https://repo.maven.apache.org/maven2/org/apache/maven/shared/maven-dependency-tree/3.0.1/maven-dependency-tree-3.0.1.jar>

Downloaded from central:
<https://repo.maven.apache.org/maven2/org/ow2/asm/asm-analysis/8.0/asm-analysis-8.0.jar> (33 kB at 117 kB/s)

Downloaded from central: <https://repo.maven.apache.org/maven2/org/ow2/asm/asm/8.0/asm-8.0.jar> (122 kB at 413 kB/s)

Downloading from central:
<https://repo.maven.apache.org/maven2/org/vafer/jdependency/2.4.0/jdependency-2.4.0.jar>

Downloading from central:
<https://repo.maven.apache.org/maven2/org/ow2/asm/asm-util/8.0/asm-util-8.0.jar>

Downloaded from central:
<https://repo.maven.apache.org/maven2/org/ow2/asm/asm-commons/8.0/asm-commons-8.0.jar> (72 kB at 197 kB/s)

Downloading from central:
<https://repo.maven.apache.org/maven2/com/google/guava/guava/28.2-android/guava-28.2-android.jar>

Downloaded from central:
<https://repo.maven.apache.org/maven2/org/ow2/asm/asm-tree/8.0/asm-tree-8.0.jar> (53 kB at 142 kB/s)

Downloading from central:
<https://repo.maven.apache.org/maven2/org/checkerframework/checker-compat-qual/2.5.5/checker-compat-qual-2.5.5.jar>

Downloaded from central:
<https://repo.maven.apache.org/maven2/org/apache/maven/shared/maven-dependency-tree/3.0.1/maven-dependency-tree-3.0.1.jar> (37 kB at 90 kB/s)

Downloading from central:
https://repo.maven.apache.org/maven2/com/google/errorprone/error_prone_annotations/2.3.4/error_prone_annotations-2.3.4.jar

Downloaded from central:
<https://repo.maven.apache.org/maven2/org/checkerframework/checker-compat-qual/2.5.5/checker-compat-qual-2.5.5.jar> (5.9 kB at 11 kB/s)

Downloading from central:
<https://repo.maven.apache.org/maven2/com/google/j2objc/j2objc-annotations/1.3/j2objc-annotations-1.3.jar>

Downloaded from central:
https://repo.maven.apache.org/maven2/com/google/errorprone/error_prone_annotations/2.3.4/error_prone_annotations-2.3.4.jar (14 kB at 23 kB/s)

Downloading from central:
<https://repo.maven.apache.org/maven2/org/apache/commons/commons-lang3/3.7/commons-lang3-3.7.jar>

Downloaded from central:
<https://repo.maven.apache.org/maven2/org/ow2/asm/asm-util/8.0/asm-util-8.0.jar> (85 kB at 138 kB/s)

Downloaded from central:
<https://repo.maven.apache.org/maven2/org/vafer/jdependency/2.4.0/jdependency-2.4.0.jar> (180 kB at 292 kB/s)

Downloaded from central:
<https://repo.maven.apache.org/maven2/com/google/j2objc/j2objc-annotations/1.3/j2objc-annotations-1.3.jar> (8.8 kB at 14 kB/s)

Downloaded from central:
<https://repo.maven.apache.org/maven2/org/apache/commons/commons-lang3/3.7/commons-lang3-3.7.jar> (500 kB at 626 kB/s)

Downloaded from central:

<https://repo.maven.apache.org/maven2/com/google/guava/28.2-android/guava-28.2-android.jar> (2.6 MB at 3.0 MB/s)

[INFO] Including org.apache.storm:storm-core:jar:2.2.0 in the shaded jar.

[INFO] Including org.apache.storm:storm-clojure:jar:2.2.0 in the shaded jar.

[INFO] Including org.clojure:tools.logging:jar:0.2.3 in the shaded jar.

[INFO] Including org.clojure:clojure:jar:1.3.0-beta1 in the shaded jar.

[INFO] Including com.twitter:carbonite:jar:1.5.0 in the shaded jar.

[INFO] Including com.esotericsoftware:kryo:jar:3.0.3 in the shaded jar.

[INFO] Including com.esotericsoftware:reflectasm:jar:1.10.1 in the shaded jar.

[INFO] Including org.ow2.asm:asm:jar:5.0.3 in the shaded jar.

[INFO] Including com.esotericsoftware:minlog:jar:1.3.0 in the shaded jar.

[INFO] Including org.objenesis:objenesis:jar:2.1 in the shaded jar.

[INFO] Including com.twitter:chill-java:jar:0.8.0 in the shaded jar.

[INFO] Including com.esotericsoftware:kryo-shaded:jar:3.0.3 in the shaded jar.

[INFO] Including org.apache.storm:storm-server:jar:2.2.0 in the shaded jar.

[INFO] Including org.apache.storm:storm-client:jar:2.2.0 in the shaded jar.

[INFO] Including org.apache.storm:storm-shaded-deps:jar:2.2.0 in the shaded jar.

[INFO] Including com.sun.activation:jakarta.activation:jar:1.2.1 in the shaded jar.

[INFO] Including jakarta.activation:jakarta.activation-api:jar:1.2.1 in the shaded jar.

[INFO] Including jakarta.xml.bind:jakarta.xml.bind-api:jar:2.3.2 in the shaded jar.

[INFO] Including javax.annotation:javax.annotation-api:jar:1.3.2 in the shaded jar.

[INFO] Including io.dropwizard.metrics:metrics-graphite:jar:3.2.6 in the shaded jar.

[INFO] Including io.dropwizard.metrics:metrics-jvm:jar:3.2.6 in the shaded jar.

[INFO] Including io.dropwizard.metrics:metrics-core:jar:3.2.6 in the shaded jar.

[INFO] Including org.apache.commons:commons-exec:jar:1.3 in the shaded jar.

[INFO] Including org.apache.commons:commons-compress:jar:1.18 in the shaded jar.

[INFO] Including org.rocksdb:rocksdbjni:jar:5.18.4 in the shaded jar.

[INFO] Including jline:jline:jar:0.9.94 in the shaded jar.

[INFO] Including javax.servlet:javax.servlet-api:jar:3.1.0 in the shaded jar.

[INFO] Including commons-collections:commons-collections:jar:3.2.2 in the shaded jar.

[INFO] Including org.yaml:snakeyaml:jar:1.26 in the shaded jar.

[INFO] Including org.apache.httpcomponents:httpclient:jar:4.5.6 in the shaded jar.

[INFO] Including org.apache.httpcomponents:httpcore:jar:4.4.10 in the shaded jar.

[INFO] Including commons-logging:commons-logging:jar:1.2 in the shaded jar.

[INFO] Including commons-cli:commons-cli:jar:1.4 in the shaded jar.

[INFO] Including commons-io:commons-io:jar:2.6 in the shaded jar.

[INFO] Including commons-lang:commons-lang:jar:2.6 in the shaded jar.

[INFO] Including com.googlecode.json-simple:json-simple:jar:1.1 in the shaded jar.

[INFO] Including com.google.guava:guava:jar:27.0.1-jre in the shaded jar.

[INFO] Including com.google.guava:failureaccess:jar:1.0.1 in the shaded jar.

[INFO] Including com.google.guava:listenablefuture:jar:9999.0-empty-to-avoid-conflict-with-guava in the shaded jar.

[INFO] Including com.google.code.findbugs:jsr305:jar:3.0.2 in the shaded jar.

[INFO] Including org.checkerframework:checker-qual:jar:2.5.2 in the shaded jar.

[INFO] Including com.google.errorprone:error_prone_annotations:jar:2.2.0 in the shaded jar.

[INFO] Including com.google.j2objc:j2objc-annotations:jar:1.1 in the shaded jar.

[INFO] Including org.codehaus.mojo:animal-sniffer-annotations:jar:1.17 in the shaded jar.

[INFO] Including org.apache.logging.log4j:log4j-api:jar:2.11.2 in the shaded jar.

[INFO] Including org.apache.logging.log4j:log4j-core:jar:2.11.2 in the shaded jar.

[INFO] Including org.apache.logging.log4j:log4j-slf4j-impl:jar:2.11.2 in the shaded jar.

[INFO] Including org.slf4j:log4j-over-slf4j:jar:1.7.26 in the shaded jar.

[INFO] Including joda-time:joda-time:jar:2.3 in the shaded jar.

[INFO] Including org.eclipse.jetty:jetty-server:jar:9.4.14.v20181114 in the shaded jar.

[INFO] Including org.eclipse.jetty:jetty-http:jar:9.4.14.v20181114 in the shaded jar.

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[INFO] Including org.eclipse.jetty:jetty-io:jar:9.4.14.v20181114 in the shaded jar.
[INFO] Including org.eclipse.jetty:jetty-util:jar:9.4.14.v20181114 in the shaded jar.
[INFO] Including org.eclipse.jetty:jetty-servlet:jar:9.4.14.v20181114 in the shaded jar.
[INFO] Including org.eclipse.jetty:jetty-security:jar:9.4.14.v20181114 in the shaded jar.
[INFO] Including org.eclipse.jetty:jetty-servlets:jar:9.4.14.v20181114 in the shaded jar.
[INFO] Including org.eclipse.jetty:jetty-continuation:jar:9.4.14.v20181114 in the shaded jar.
[INFO] Including com.fasterxml.jackson.core:jackson-core:jar:2.9.8 in the shaded jar.
[INFO] Including com.fasterxml.jackson.dataformat:jackson-dataformat-smile:jar:2.9.8 in the shaded jar.
[INFO] Including commons-fileupload:commons-fileupload:jar:1.3.3 in the shaded jar.
[INFO] Including commons-codec:commons-codec:jar:1.11 in the shaded jar.
[INFO] Including org.apache.hadoop:hadoop-auth:jar:2.8.5 in the shaded jar.
[INFO] Including com.nimbusds:nimbus-jose-jwt:jar:4.41.1 in the shaded jar.
[INFO] Including com.github.stephenc.jcip:jcip-annotations:jar:1.0-1 in the shaded jar.
[INFO] Including net.minidev:json-smart:jar:2.3 in the shaded jar.
[INFO] Including net.minidev:accessors-smart:jar:1.2 in the shaded jar.
[INFO] Including org.apache.zookeeper:zookeeper:jar:3.4.6 in the shaded jar.
[INFO] Including io.netty:netty:jar:3.7.0.Final in the shaded jar.
[INFO] Including org.apache.curator:curator-framework:jar:2.7.1 in the shaded jar.
[INFO] Including org.apache.curator:curator-client:jar:2.7.1 in the shaded jar.
[INFO] Including org.apache.storm:storm-kafka-client:jar:2.2.0 in the shaded jar.
[INFO] Including com.fasterxml.jackson.core:jackson-databind:jar:2.9.8 in the shaded jar.
[INFO] Including com.fasterxml.jackson.core:jackson-annotations:jar:2.9.0 in the shaded jar.
[INFO] Including org.slf4j:slf4j-api:jar:1.7.32 in the shaded jar.
[INFO] Including org.slf4j:slf4j-log4j12:jar:1.7.32 in the shaded jar.
[INFO] Including log4j:log4j:jar:1.2.17 in the shaded jar.
[WARNING] Discovered module-info.class. Shading will break its strong encapsulation.
[WARNING] accessors-smart-1.2.jar, animal-sniffer-annotations-1.17.jar, asm-5.0.3.jar, carbonite-1.5.0.jar, checker-qual-2.5.2.jar, chill-java-0.8.0.jar, clojure-1.3.0-beta1.jar, commons-cli-1.4.jar, commons-codec-1.11.jar, commons-collections-3.2.2.jar, commons-compress-1.18.jar, commons-exec-1.3.jar, commons-fileupload-1.3.3.jar, commons-io-2.6.jar, commons-lang-2.6.jar, commons-logging-1.2.jar, curator-client-2.7.1.jar, curator-framework-2.7.1.jar, error_prone_annotations-2.2.0.jar, failureaccess-1.0.1.jar, guava-27.0.1-jre.jar, hadoop-auth-2.8.5.jar, httpclient-4.5.6.jar, httpcore-4.4.10.jar, j2objc-annotations-1.1.jar, jackson-annotations-2.9.0.jar, jackson-core-2.9.8.jar, jackson-databind-2.9.8.jar, jackson-dataformat-smile-2.9.8.jar, jakarta.activation-1.2.1.jar, jakarta.activation-api-1.2.1.jar, jakarta.xml.bind-api-2.3.2.jar, javax.annotation-api-1.3.2.jar, javax.servlet-api-3.1.0.jar, jcip-annotations-1.0-1.jar, jetty-continuation-9.4.14.v20181114.jar, jetty-http-9.4.14.v20181114.jar, jetty-io-9.4.14.v20181114.jar, jetty-security-9.4.14.v20181114.jar, jetty-server-9.4.14.v20181114.jar, jetty-servlet-9.4.14.v20181114.jar, jetty-servlets-9.4.14.v20181114.jar, jetty-util-9.4.14.v20181114.jar, jline-0.9.94.jar, joda-time-2.3.jar, json-simple-1.1.jar, json-smart-2.3.jar, jsr305-3.0.2.jar, kryo-3.0.3.jar, kryo-shaded-3.0.3.jar, listenablefuture-9999.0-empty-to-avoid-conflict-with-guava.jar, log4j-1.2.17.jar, log4j-api-2.11.2.jar, log4j-core-2.11.2.jar, log4j-over-slf4j-1.7.26.jar, log4j-slf4j-impl-2.11.2.jar, metrics-core-3.2.6.jar, metrics-graphite-3.2.6.jar, metrics-jvm-3.2.6.jar, minlog-1.3.0.jar, netty-3.7.0.Final.jar, nimbus-jose-jwt-4.41.1.jar, objenesis-2.1.jar, reflectasm-1.10.1.jar, rocksdbjni-5.18.4.jar, slf4j-api-1.7.32.jar, slf4j-log4j12-1.7.32.jar, snakeyaml-1.26.jar, storm-client-2.2.0.jar, storm-clojure-2.2.0.jar, storm-core-2.2.0.jar, storm-kafka-client-2.2.0.jar, storm-server-2.2.0.jar, storm-shaded-deps-2.2.0.jar, tools.logging-0.2.3.jar, word-count-topology-1.0-SNAPSHOT.jar, zookeeper-3.4.6.jar define 1 overlapping resource:
[WARNING] - META-INF/MANIFEST.MF
[WARNING] curator-client-2.7.1.jar, curator-framework-2.7.1.jar, httpclient-4.5.6.jar, httpcore-4.4.10.jar, jackson-core-2.9.8.jar, jackson-databind-2.9.8.jar, log4j-1.2.17.jar, log4j-api-2.11.2.jar, log4j-core-2.11.2.jar, log4j-slf4j-impl-2.11.2.jar, objenesis-2.1.jar,
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storm-client-2.2.0.jar, storm-clojure-2.2.0.jar, storm-core-2.2.0.jar,  
storm-kafka-client-2.2.0.jar, storm-server-2.2.0.jar, storm-shaded-deps-2.2.0.jar define 1  
overlapping resource:  
[WARNING] - META-INF/NOTICE  
[WARNING] curator-client-2.7.1.jar, curator-framework-2.7.1.jar, httpclient-4.5.6.jar,  
httpcore-4.4.10.jar, log4j-api-2.11.2.jar, log4j-core-2.11.2.jar, log4j-slf4j-impl-2.11.2.jar,  
storm-client-2.2.0.jar, storm-clojure-2.2.0.jar, storm-core-2.2.0.jar,  
storm-kafka-client-2.2.0.jar, storm-server-2.2.0.jar, storm-shaded-deps-2.2.0.jar define 1  
overlapping resource:  
[WARNING] - META-INF/DEPENDENCIES  
[WARNING] curator-client-2.7.1.jar, curator-framework-2.7.1.jar, httpclient-4.5.6.jar,  
httpcore-4.4.10.jar, jackson-annotations-2.9.0.jar, jackson-core-2.9.8.jar,  
jackson-databind-2.9.8.jar, jetty-continuation-9.4.14.v20181114.jar,  
jetty-http-9.4.14.v20181114.jar, jetty-io-9.4.14.v20181114.jar,  
jetty-security-9.4.14.v20181114.jar, jetty-server-9.4.14.v20181114.jar,  
jetty-servlet-9.4.14.v20181114.jar, jetty-servlets-9.4.14.v20181114.jar,  
jetty-util-9.4.14.v20181114.jar, log4j-1.2.17.jar, log4j-api-2.11.2.jar,  
log4j-core-2.11.2.jar, log4j-slf4j-impl-2.11.2.jar, objenesis-2.1.jar, storm-client-2.2.0.jar,  
storm-clojure-2.2.0.jar, storm-core-2.2.0.jar, storm-kafka-client-2.2.0.jar,  
storm-server-2.2.0.jar, storm-shaded-deps-2.2.0.jar define 1 overlapping resource:  
[WARNING] - META-INF/LICENSE  
[WARNING] kryo-3.0.3.jar, kryo-shaded-3.0.3.jar define 181 overlapping classes:  
[WARNING] - com.esotericsoftware.kryo.ClassResolver  
[WARNING] - com.esotericsoftware.kryo.DefaultSerializer  
[WARNING] - com.esotericsoftware.kryo.Generics  
[WARNING] - com.esotericsoftware.kryo.Kryo  
[WARNING] - com.esotericsoftware.kryo.Kryo$Closure  
[WARNING] - com.esotericsoftware.kryo.Kryo$DefaultInstantiatorStrategy  
[WARNING] - com.esotericsoftware.kryo.Kryo$DefaultInstantiatorStrategy$1  
[WARNING] - com.esotericsoftware.kryo.Kryo$DefaultInstantiatorStrategy$2  
[WARNING] - com.esotericsoftware.kryo.Kryo$DefaultSerializerEntry  
[WARNING] - com.esotericsoftware.kryo.KryoCopyable  
[WARNING] - 171 more...  
[WARNING] kryo-shaded-3.0.3.jar, reflectasm-1.10.1.jar define 7 overlapping classes and  
resources:  
[WARNING] - META-INF/maven/com.esotericsoftware/reflectasm/pom.properties  
[WARNING] - META-INF/maven/com.esotericsoftware/reflectasm/pom.xml  
[WARNING] - com.esotericsoftware.reflectasm.AccessClassLoader  
[WARNING] - com.esotericsoftware.reflectasm.ConstructorAccess  
[WARNING] - com.esotericsoftware.reflectasm.FieldAccess  
[WARNING] - com.esotericsoftware.reflectasm.MethodAccess  
[WARNING] - com.esotericsoftware.reflectasm.PublicConstructorAccess  
[WARNING] guava-27.0.1-jre.jar, storm-shaded-deps-2.2.0.jar define 2 overlapping resources:  
[WARNING] - META-INF/maven/com.google.guava/guava/pom.properties  
[WARNING] - META-INF/maven/com.google.guava/guava/pom.xml  
[WARNING] failureaccess-1.0.1.jar, storm-shaded-deps-2.2.0.jar define 2 overlapping resources:  
[WARNING] - META-INF/maven/com.google.guava/failureaccess/pom.properties  
[WARNING] - META-INF/maven/com.google.guava/failureaccess/pom.xml  
[WARNING] listenablefuture-9999.0-empty-to-avoid-conflict-with-guava.jar,  
storm-shaded-deps-2.2.0.jar define 2 overlapping resources:  
[WARNING] - META-INF/maven/com.google.guava/listenablefuture/pom.properties  
[WARNING] - META-INF/maven/com.google.guava/listenablefuture/pom.xml  
[WARNING] curator-framework-2.7.1.jar, storm-shaded-deps-2.2.0.jar define 2 overlapping  
resources:  
[WARNING] - META-INF/maven/org.apache.curator/curator-framework/pom.properties  
[WARNING] - META-INF/maven/org.apache.curator/curator-framework/pom.xml
```

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[WARNING] curator-client-2.7.1.jar, storm-shaded-deps-2.2.0.jar define 2 overlapping resources:  
[WARNING]   - META-INF/maven/org.apache.curator/curator-client/pom.properties  
[WARNING]   - META-INF/maven/org.apache.curator/curator-client/pom.xml  
[WARNING] storm-shaded-deps-2.2.0.jar, zookeeper-3.4.6.jar define 1 overlapping resource:  
[WARNING]   - LICENSE.txt  
[WARNING] netty-3.7.0.Final.jar, storm-shaded-deps-2.2.0.jar define 12 overlapping resources:  
[WARNING]   - META-INF/license/LICENSE.base64.txt  
[WARNING]   - META-INF/license/LICENSE.commons-logging.txt  
[WARNING]   - META-INF/license/LICENSE.felix.txt  
[WARNING]   - META-INF/license/LICENSE.jboss-logging.txt  
[WARNING]   - META-INF/license/LICENSE.jsr166y.txt  
[WARNING]   - META-INF/license/LICENSE.jzlib.txt  
[WARNING]   - META-INF/license/LICENSE.log4j.txt  
[WARNING]   - META-INF/license/LICENSE.protobuf.txt  
[WARNING]   - META-INF/license/LICENSE.slf4j.txt  
[WARNING]   - META-INF/license/LICENSE.webbit.txt  
[WARNING]   - 2 more...  
[WARNING] commons-io-2.6.jar, storm-shaded-deps-2.2.0.jar define 2 overlapping resources:  
[WARNING]   - META-INF/maven/commons-io/commons-io/pom.properties  
[WARNING]   - META-INF/maven/commons-io/commons-io/pom.xml  
[WARNING] commons-lang-2.6.jar, storm-shaded-deps-2.2.0.jar define 2 overlapping resources:  
[WARNING]   - META-INF/maven/commons-lang/commons-lang/pom.properties  
[WARNING]   - META-INF/maven/commons-lang/commons-lang/pom.xml  
[WARNING] commons-collections-3.2.2.jar, storm-shaded-deps-2.2.0.jar define 2 overlapping resources:  
[WARNING]   - META-INF/maven/commons-collections/commons-collections/pom.properties  
[WARNING]   - META-INF/maven/commons-collections/commons-collections/pom.xml  
[WARNING] snakeyaml-1.26.jar, storm-shaded-deps-2.2.0.jar define 2 overlapping resources:  
[WARNING]   - META-INF/maven/org.yaml/snakeyaml/pom.properties  
[WARNING]   - META-INF/maven/org.yaml/snakeyaml/pom.xml  
[WARNING] commons-codec-1.11.jar, storm-shaded-deps-2.2.0.jar define 2 overlapping resources:  
[WARNING]   - META-INF/maven/commons-codec/commons-codec/pom.properties  
[WARNING]   - META-INF/maven/commons-codec/commons-codec/pom.xml  
[WARNING] jakarta.activation-1.2.1.jar, jakarta.activation-api-1.2.1.jar,  
jakarta.xml.bind-api-2.3.2.jar define 2 overlapping resources:  
[WARNING]   - META-INF/LICENSE.md  
[WARNING]   - META-INF/NOTICE.md  
[WARNING] jakarta.activation-1.2.1.jar, jakarta.activation-api-1.2.1.jar define 31 overlapping classes:  
[WARNING]   - javax.activation.ActivationDataFlavor  
[WARNING]   - javax.activation.CommandInfo  
[WARNING]   - javax.activation.CommandInfo$Beans  
[WARNING]   - javax.activation.CommandInfo$Beans$1  
[WARNING]   - javax.activation.CommandMap  
[WARNING]   - javax.activation.CommandObject  
[WARNING]   - javax.activation.DataContentHandler  
[WARNING]   - javax.activation.DataContentHandlerFactory  
[WARNING]   - javax.activation.DataHandler  
[WARNING]   - javax.activation.DataHandler$1  
[WARNING]   - 21 more...  
[WARNING] commons-cli-1.4.jar, commons-codec-1.11.jar, commons-collections-3.2.2.jar,  
commons-compress-1.18.jar, commons-exec-1.3.jar, commons-fileupload-1.3.3.jar,  
commons-io-2.6.jar, commons-lang-2.6.jar, commons-logging-1.2.jar, hadoop-auth-2.8.5.jar,  
javax.annotation-api-1.3.2.jar, javax.servlet-api-3.1.0.jar, joda-time-2.3.jar,  
netty-3.7.0.Final.jar define 1 overlapping resource:
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[WARNING] - META-INF/LICENSE.txt
[WARNING] commons-cli-1.4.jar, commons-codec-1.11.jar, commons-collections-3.2.2.jar,
commons-compress-1.18.jar, commons-exec-1.3.jar, commons-fileupload-1.3.3.jar,
commons-io-2.6.jar, commons-lang-2.6.jar, commons-logging-1.2.jar, hadoop-auth-2.8.5.jar,
jetty-continuation-9.4.14.v20181114.jar, jetty-http-9.4.14.v20181114.jar,
jetty-io-9.4.14.v20181114.jar, jetty-security-9.4.14.v20181114.jar,
jetty-server-9.4.14.v20181114.jar, jetty-servlet-9.4.14.v20181114.jar,
jetty-servlets-9.4.14.v20181114.jar, jetty-util-9.4.14.v20181114.jar, joda-time-2.3.jar,
netty-3.7.0.Final.jar define 1 overlapping resource:
[WARNING] - META-INF/NOTICE.txt
[WARNING] log4j-slf4j-impl-2.11.2.jar, slf4j-log4j12-1.7.32.jar define 3 overlapping classes:
[WARNING] - org.slf4j.impl.StaticLoggerBinder
[WARNING] - org.slf4j.impl.StaticMDCBinder
[WARNING] - org.slf4j.impl.StaticMarkerBinder
[WARNING] log4j-1.2.17.jar, log4j-over-slf4j-1.7.26.jar define 29 overlapping classes:
[WARNING] - org.apache.log4j.Appender
[WARNING] - org.apache.log4j.AppenderSkeleton
[WARNING] - org.apache.log4j.BasicConfigurator
[WARNING] - org.apache.log4j.Category
[WARNING] - org.apache.log4j.ConsoleAppender
[WARNING] - org.apache.log4j.FileAppender
[WARNING] - org.apache.log4j.Layout
[WARNING] - org.apache.log4j.Level
[WARNING] - org.apache.log4j.LogManager
[WARNING] - org.apache.log4j.Logger
[WARNING] - 19 more...
[WARNING] jetty-continuation-9.4.14.v20181114.jar, jetty-http-9.4.14.v20181114.jar,
jetty-io-9.4.14.v20181114.jar, jetty-security-9.4.14.v20181114.jar,
jetty-server-9.4.14.v20181114.jar, jetty-servlet-9.4.14.v20181114.jar,
jetty-servlets-9.4.14.v20181114.jar, jetty-util-9.4.14.v20181114.jar define 1 overlapping
resource:
[WARNING] - about.html
[WARNING] jackson-core-2.9.8.jar, jackson-dataformat-smile-2.9.8.jar define 1 overlapping
resource:
[WARNING] - META-INF/services/com.fasterxml.jackson.core.JsonFactory
[WARNING] maven-shade-plugin has detected that some class files are
[WARNING] present in two or more JARs. When this happens, only one
[WARNING] single version of the class is copied to the uber jar.
[WARNING] Usually this is not harmful and you can skip these warnings,
[WARNING] otherwise try to manually exclude artifacts based on
[WARNING] mvn dependency:tree -Ddetail=true and the above output.
[WARNING] See http://maven.apache.org/plugins/maven-shade-plugin/
[INFO] Replacing original artifact with shaded artifact.
[INFO] Replacing
/home/hduser/word-count-storm/word-count-topology/target/word-count-topology-1.0-SNAPSHOT.jar
with
/home/hduser/word-count-storm/word-count-topology/target/word-count-topology-1.0-SNAPSHOT-shad
ed.jar
[INFO] -----
[INFO] BUILD SUCCESS
[INFO] -----
[INFO] Total time: 12.277 s
[INFO] Finished at: 2024-05-25T15:28:45+01:00
[INFO] -----
```

storm jar target/word-count-topology-1.0-SNAPSHOT.jar com.example.WordCountTopology

```
/home/hduser/bigdata/apache-storm-2.4.0/bin/storm jar
/home/hduser/word-count-storm/word-count-topology/target/word-count-topology-1.0-SNAPSHOT.jar
com.example.WordCountTopology

hduser@kavi-VirtualBox:~$ /home/hduser/bigdata/apache-storm-2.4.0/bin/storm jar
/home/hduser/bigdata/target/word-count-topology-1.0-SNAPSHOT.jar com.example.WordCountTopology
Running: /usr/bin/java -client -Ddaemon.name= -Dstorm.options=
-Dstorm.home=/home/hduser/bigdata/apache-storm-2.4.0
-Dstorm.log.dir=/home/hduser/bigdata/apache-storm-2.4.0/logs
-Djava.library.path=/usr/local/lib:/opt/local/lib:/usr/lib:/usr/lib64 -Dstorm.conf.file= -cp
/home/hduser/bigdata/apache-storm-2.4.0/*:/home/hduser/bigdata/apache-storm-2.4.0/lib-worker/*
:/home/hduser/bigdata/apache-storm-2.4.0/extlib/*:/home/hduser/bigdata/target/word-count-topol
ogy-1.0-SNAPSHOT.jar:/home/hduser/bigdata/apache-storm-2.4.0/conf:/home/hduser/bigdata/apache-
storm-2.4.0/bin: -Dstorm.jar=/home/hduser/bigdata/target/word-count-topology-1.0-SNAPSHOT.jar
-Dstorm.dependency.jars= -Dstorm.dependency.artifacts={} com.example.WordCountTopology
Error: Could not find or load main class com.example.WordCountTopology

jar tf /home/hduser/bigdata/target/word-count-topology-1.0-SNAPSHOT.jar | grep MANIFEST.MF

/home/hduser/bigdata/apache-storm-2.4.0/bin/storm jar
/home/hduser/word-count-storm/word-count-topology/target/word-count-topology-1.0-SNAPSHOT.jar
com.example.WordCountTopology

hduser@kavi-VirtualBox:~$ /home/hduser/bigdata/apache-storm-2.4.0/bin/storm jar
/home/hduser/word-count-storm/word-count-topology/target/word-count-topology-1.0-SNAPSHOT.jar
com.example.WordCountTopology
SLF4J: Class path contains multiple SLF4J bindings.
SLF4J: Found binding in
[jar:file:/home/hduser/bigdata/apache-storm-2.4.0/lib/log4j-slf4j-impl-2.17.1.jar!/org/slf4j/i
mpl/StaticLoggerBinder.class]
SLF4J: Found binding in
[jar:file:/home/hduser/word-count-storm/word-count-topology/target/word-count-topology-1.0-SNA
PSHOT.jar!/org/slf4j/impl/StaticLoggerBinder.class]
SLF4J: See http://www.slf4j.org/codes.html#multiple_bindings for an explanation.
SLF4J: Actual binding is of type [org.apache.logging.slf4j.Log4jLoggerFactory]
Exception in thread "main" java.lang.ExceptionInInitializerError
    at org.apache.storm.command.ConfigValue.main(ConfigValue.java:38)
Caused by: java.lang.RuntimeException: java.io.IOException: Found multiple defaults.yaml
resources. You're probably bundling the Storm jars with your topology jar.
[jar:file:/home/hduser/word-count-storm/word-count-topology/target/word-count-topology-1.0-SNA
PSHOT.jar!/defaults.yaml,
jar:file:/home/hduser/bigdata/apache-storm-2.4.0/lib/storm-client-2.4.0.jar!/defaults.yaml]
    at org.apache.storm.utils.Utils.findAndReadConfigFile(Utils.java:198)
    at org.apache.storm.utils.Utils.readDefaultConfig(Utils.java:241)
    at org.apache.storm.utils.Utils.readStormConfig(Utils.java:304)
    at org.apache.storm.utils.Utils.<clinit>(Utils.java:132)
    ... 1 more
Caused by: java.io.IOException: Found multiple defaults.yaml resources. You're probably
bundling the Storm jars with your topology jar.
[jar:file:/home/hduser/word-count-storm/word-count-topology/target/word-count-topology-1.0-SNA
PSHOT.jar!/defaults.yaml,
jar:file:/home/hduser/bigdata/apache-storm-2.4.0/lib/storm-client-2.4.0.jar!/defaults.yaml]
    at org.apache.storm.utils.Utils.getConfigFileInputStream(Utils.java:228)
```

```
at org.apache.storm.utils.Utils.findAndReadConfigFile(Utils.java:176)
... 4 more
Running: /usr/bin/java -client -Ddaemon.name= -Dstorm.options=
-Dstorm.home=/home/hduser/bigdata/apache-storm-2.4.0
-Dstorm.log.dir=/home/hduser/bigdata/apache-storm-2.4.0/logs -Djava.library.path=
-Dstorm.conf.file= -cp
/home/hduser/bigdata/apache-storm-2.4.0/*:/home/hduser/bigdata/apache-storm-2.4.0/lib-worker/*
:/home/hduser/bigdata/apache-storm-2.4.0/extlib/*:/home/hduser/word-count-storm/word-count-topology/target/word-count-topology-1.0-SNAPSHOT.jar:/home/hduser/bigdata/apache-storm-2.4.0/conf
:/home/hduser/bigdata/apache-storm-2.4.0/bin:
-Dstorm.jar=/home/hduser/word-count-storm/word-count-topology/target/word-count-topology-1.0-SNAPSHOT.jar -Dstorm.dependency.jars= -Dstorm.dependency.artifacts={}
com.example.WordCountTopology
SLF4J: Class path contains multiple SLF4J bindings.
SLF4J: Found binding in
[jar:file:/home/hduser/bigdata/apache-storm-2.4.0/lib-worker/log4j-slf4j-impl-2.17.1.jar!/org/slf4j/impl/StaticLoggerBinder.class]
SLF4J: Found binding in
[jar:file:/home/hduser/word-count-storm/word-count-topology/target/word-count-topology-1.0-SNAPSHOT.jar!/org/slf4j/impl/StaticLoggerBinder.class]
SLF4J: See http://www.slf4j.org/codes.html#multiple_bindings for an explanation.
SLF4J: Actual binding is of type [org.apache.logging.slf4j.Log4jLoggerFactory]
Exception in thread "main" java.lang.ExceptionInInitializerError
    at org.apache.storm.testing.TmpPath.localTempPath(TmpPath.java:35)
    at org.apache.storm.testing.TmpPath.<init>(TmpPath.java:26)
    at org.apache.storm.LocalCluster.<init>(LocalCluster.java:200)
    at org.apache.storm.LocalCluster.<init>(LocalCluster.java:159)
    at com.example.WordCountTopology.main(WordCountTopology.java:116)
Caused by: java.lang.RuntimeException: java.io.IOException: Found multiple defaults.yaml resources. You're probably bundling the Storm jars with your topology jar.
[jar:file:/home/hduser/word-count-storm/word-count-topology/target/word-count-topology-1.0-SNAPSHOT.jar!/defaults.yaml,
jar:file:/home/hduser/bigdata/apache-storm-2.4.0/lib-worker/storm-client-2.4.0.jar!/defaults.yaml]
    at org.apache.storm.utils.Utils.findAndReadConfigFile(Utils.java:198)
    at org.apache.storm.utils.Utils.readDefaultConfig(Utils.java:241)
    at org.apache.storm.utils.Utils.readStormConfig(Utils.java:304)
    at org.apache.storm.utils.Utils.<clinit>(Utils.java:132)
    ... 5 more
Caused by: java.io.IOException: Found multiple defaults.yaml resources. You're probably bundling the Storm jars with your topology jar.
[jar:file:/home/hduser/word-count-storm/word-count-topology/target/word-count-topology-1.0-SNAPSHOT.jar!/defaults.yaml,
jar:file:/home/hduser/bigdata/apache-storm-2.4.0/lib-worker/storm-client-2.4.0.jar!/defaults.yaml]
    at org.apache.storm.utils.Utils.getConfigFileInputStream(Utils.java:228)
    at org.apache.storm.utils.Utils.findAndReadConfigFile(Utils.java:176)
    ... 8 more

jar tf
/home/hduser/word-count-storm/word-count-topology/target/word-count-topology-1.0-SNAPSHOT.jar
| grep defaults.yaml

hduser@kavi-VirtualBox:~$ jar tf
/home/hduser/word-count-storm/word-count-topology/target/word-count-topology-1.0-SNAPSHOT.jar
| grep defaults.yaml
```

defaults.yaml

```
<build>
  <resources>
    <resource>
      <directory>${project.basedir}/src/main/resources</directory>
      <excludes>
        <exclude>defaults.yaml</exclude>
      </excludes>
    </resource>
  </resources>
</build>
```

```
hduser@kavi-VirtualBox:~$ /home/hduser/bigdata/apache-storm-2.4.0/bin/storm jar
/home/hduser/word-count-storm/word-count-topology/target/word-count-topology-1.0-SNAPSHOT.jar
com.example.WordCountTopology
SLF4J: Class path contains multiple SLF4J bindings.
SLF4J: Found binding in
[jar:file:/home/hduser/bigdata/apache-storm-2.4.0/lib/log4j-slf4j-impl-2.17.1.jar!/org/slf4j/i
mpl/StaticLoggerBinder.class]
SLF4J: Found binding in
[jar:file:/home/hduser/word-count-storm/word-count-topology/target/word-count-topology-1.0-SNA
PSHOT.jar!/org/slf4j/impl/StaticLoggerBinder.class]
SLF4J: See http://www.slf4j.org/codes.html#multiple_bindings for an explanation.
SLF4J: Actual binding is of type [org.apache.logging.slf4j.Log4jLoggerFactory]
Running: /usr/bin/java -client -Ddaemon.name= -Dstorm.options=
-Dstorm.home=/home/hduser/bigdata/apache-storm-2.4.0
-Dstorm.log.dir=/home/hduser/bigdata/apache-storm-2.4.0/logs
-Djava.library.path=/usr/local/lib:/opt/local/lib:/usr/lib:/usr/lib64 -Dstorm.conf.file= -cp
/home/hduser/bigdata/apache-storm-2.4.0/*:/home/hduser/bigdata/apache-storm-2.4.0/lib-worker/*
:/home/hduser/bigdata/apache-storm-2.4.0/extlib/*:/home/hduser/word-count-storm/word-count-top
ology/target/word-count-topology-1.0-SNAPSHOT.jar:/home/hduser/bigdata/apache-storm-2.4.0/conf
:/home/hduser/bigdata/apache-storm-2.4.0/bin:
-Dstorm.jar=/home/hduser/word-count-storm/word-count-topology/target/word-count-topology-1.0-S
NAPSHOT.jar -Dstorm.dependency.jars= -Dstorm.dependency.artifacts={}
com.example.WordCountTopology
SLF4J: Class path contains multiple SLF4J bindings.
SLF4J: Found binding in
[jar:file:/home/hduser/bigdata/apache-storm-2.4.0/lib-worker/log4j-slf4j-impl-2.17.1.jar!/org/
slf4j/impl/StaticLoggerBinder.class]
SLF4J: Found binding in
[jar:file:/home/hduser/word-count-storm/word-count-topology/target/word-count-topology-1.0-SNA
PSHOT.jar!/org/slf4j/impl/StaticLoggerBinder.class]
SLF4J: See http://www.slf4j.org/codes.html#multiple_bindings for an explanation.
SLF4J: Actual binding is of type [org.apache.logging.slf4j.Log4jLoggerFactory]
Exception in thread "main" java.lang.NoClassDefFoundError: org/apache/storm/LocalCluster
  at com.example.WordCountTopology.main(WordCountTopology.java:116)
Caused by: java.lang.ClassNotFoundException: org.apache.storm.LocalCluster
  at java.net.URLClassLoader.findClass(URLClassLoader.java:387)
  at java.lang.ClassLoader.loadClass(ClassLoader.java:418)
  at sun.misc.Launcher$AppClassLoader.loadClass(Launcher.java:352)
  at java.lang.ClassLoader.loadClass(ClassLoader.java:351)
  ... 1 more
```

```
<project xmlns="http://maven.apache.org/POM/4.0.0"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation="http://maven.apache.org/POM/4.0.0
  http://maven.apache.org/xsd/maven-4.0.0.xsd">
  <modelVersion>4.0.0</modelVersion>

  <groupId>com.example</groupId>
  <artifactId>word-count-topology</artifactId>
  <version>1.0-SNAPSHOT</version>
  <packaging>jar</packaging>

  <name>word-count-topology</name>
  <url>http://maven.apache.org</url>

  <properties>
    <project.build.sourceEncoding>UTF-8</project.build.sourceEncoding>
    <maven.compiler.source>1.8</maven.compiler.source>
    <maven.compiler.target>1.8</maven.compiler.target>
  </properties>

  <dependencies>
    <!-- Apache Storm dependencies -->
    <dependency>
      <groupId>org.apache.storm</groupId>
      <artifactId>storm-core</artifactId>
      <version>2.4.0</version>
      <scope>provided</scope>
    </dependency>
    <dependency>
      <groupId>org.apache.storm</groupId>
      <artifactId>storm-kafka-client</artifactId>
      <version>2.2.0</version>
    </dependency>
    <!-- Logging framework -->
    <dependency>
      <groupId>org.slf4j</groupId>
      <artifactId>slf4j-api</artifactId>
      <version>1.7.32</version>
    </dependency>
    <dependency>
      <groupId>org.slf4j</groupId>
      <artifactId>slf4j-log4j12</artifactId>
      <version>1.7.32</version>
    </dependency>
    <dependency>
      <groupId>log4j</groupId>
      <artifactId>log4j</artifactId>
      <version>1.2.17</version>
    </dependency>
    <dependency>
      <groupId>junit</groupId>
      <artifactId>junit</artifactId>
      <version>4.13.1</version>
      <scope>test</scope>
    </dependency>
  </dependencies>

```

```

</dependencies>

<build>
<plugins>
    <plugin>
        <groupId>org.apache.maven.plugins</groupId>
        <artifactId>maven-shade-plugin</artifactId>
        <version>3.2.4</version>
        <executions>
            <execution>
                <phase>package</phase>
                <goals>
                    <goal>shade</goal>
                </goals>
                <configuration>
                    <createDependencyReducedPom>false</createDependencyReducedPom>
                </configuration>
            </execution>
        </executions>
    </plugin>
</plugins>
<resources>
<resource>
    <directory>${project.basedir}/src/main/resources</directory>
    <excludes>
        <exclude>defaults.yaml</exclude>
    </excludes>
</resource>
</resources>

</build>
</project>

```

UPDATED POM

```

<project xmlns="http://maven.apache.org/POM/4.0.0"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="http://maven.apache.org/POM/4.0.0
http://maven.apache.org/xsd/maven-4.0.0.xsd">
<modelVersion>4.0.0</modelVersion>

<groupId>com.example</groupId>
<artifactId>word-count-topology</artifactId>
<version>1.0-SNAPSHOT</version>
<packaging>jar</packaging>

<name>word-count-topology</name>
<url>http://maven.apache.org</url>

<properties>
<project.build.sourceEncoding>UTF-8</project.build.sourceEncoding>
<maven.compiler.source>1.8</maven.compiler.source>
<maven.compiler.target>1.8</maven.compiler.target>

```

```
</properties>

<dependencies>
    <!-- Apache Storm dependencies -->
    <dependency>
        <groupId>org.apache.storm</groupId>
        <artifactId>storm-core</artifactId>
        <version>2.4.0</version>
        <scope>provided</scope>
    </dependency>
    <dependency>
        <groupId>org.apache.storm</groupId>
        <artifactId>storm-kafka-client</artifactId>
        <version>2.2.0</version>
    </dependency>
</dependencies>

<!-- Logging framework -->
<dependency>
    <groupId>org.slf4j</groupId>
    <artifactId>slf4j-api</artifactId>
    <version>1.7.32</version>
</dependency>
<dependency>
    <groupId>org.slf4j</groupId>
    <artifactId>slf4j-log4j12</artifactId>
    <version>1.7.32</version>
    <exclusions>
        <exclusion>
            <groupId>ch.qos.logback</groupId>
            <artifactId>logback-classic</artifactId>
        </exclusion>
    </exclusions>
</dependency>
<dependency>
    <groupId>log4j</groupId>
    <artifactId>log4j</artifactId>
    <version>1.2.17</version>
</dependency>
<dependency>
    <groupId>junit</groupId>
    <artifactId>junit</artifactId>
    <version>4.13.1</version>
    <scope>test</scope>
</dependency>
</dependencies>

<build>
    <plugins>
        <plugin>
            <groupId>org.apache.maven.plugins</groupId>
            <artifactId>maven-shade-plugin</artifactId>
            <version>3.2.4</version>
            <executions>
                <execution>
                    <phase>package</phase>
                    <goals>
```

```

        <goal>shade</goal>
    </goals>
    <configuration>
        <createDependencyReducedPom>false</createDependencyReducedPom>
    </configuration>
</execution>
</executions>
</plugin>
</plugins>
</build>
</project>

```

```

/home/hduser/bigdata/apache-storm-2.4.0/bin/storm jar
/home/hduser/word-count-storm/word-count-topology/target/word-count-topology-1.0-SNAPSHOT.jar
com.example.WordCountTopology

```

```

hduser@kavi-VirtualBox:~/word-count-storm/word-count-topology$ ls
input pom.xml src target
hduser@kavi-VirtualBox:~/word-count-storm/word-count-topology$ cd target
hduser@kavi-VirtualBox:~/word-count-storm/word-count-topology/target$ ls
classes          original-word-count-topology-1.0-SNAPSHOT.jar
generated-sources surefire-reports
generated-test-sources test-classes
maven-archiver   word-count-topology-1.0-SNAPSHOT.jar
maven-status
hduser@kavi-VirtualBox:~/word-count-storm/word-count-topology/target$ 

```

```

hduser@kavi-VirtualBox:~$ /home/hduser/bigdata/apache-storm-2.4.0/bin/storm jar
/home/hduser/word-count-storm/word-count-topology/target/word-count-topology-1.0-SNAPSHOT.jar
com.example.WordCountTopology
SLF4J: Class path contains multiple SLF4J bindings.
SLF4J: Found binding in
[jar:file:/home/hduser/bigdata/apache-storm-2.4.0/lib/log4j-slf4j-impl-2.17.1.jar!/org/slf4j/i
mpl/StaticLoggerBinder.class]
SLF4J: Found binding in
[jar:file:/home/hduser/word-count-storm/word-count-topology/target/word-count-topology-1.0-SNA
PSHOT.jar!/org/slf4j/impl/StaticLoggerBinder.class]
SLF4J: See http://www.slf4j.org/codes.html#multiple_bindings for an explanation.
SLF4J: Actual binding is of type [org.apache.logging.slf4j.Log4jLoggerFactory]
Running: /usr/bin/java -client -Ddaemon.name= -Dstorm.options=
-Dstorm.home=/home/hduser/bigdata/apache-storm-2.4.0
-Dstorm.log.dir=/home/hduser/bigdata/apache-storm-2.4.0/logs
-Djava.library.path=/usr/local/lib:/opt/local/lib:/usr/lib:/usr/lib64 -Dstorm.conf.file= -cp
/home/hduser/bigdata/apache-storm-2.4.0/*:/home/hduser/bigdata/apache-storm-2.4.0/lib-worker/*
:/home/hduser/bigdata/apache-storm-2.4.0/extlib/*:/home/hduser/word-count-storm/word-count-top
ology/target/word-count-topology-1.0-SNAPSHOT.jar:/home/hduser/bigdata/apache-storm-2.4.0/conf
:/home/hduser/bigdata/apache-storm-2.4.0/bin:
-Dstorm.jar=/home/hduser/word-count-storm/word-count-topology/target/word-count-topology-1.0-S
NAPSHOT.jar -Dstorm.dependency.jars= -Dstorm.dependency.artifacts={}
com.example.WordCountTopology
SLF4J: Class path contains multiple SLF4J bindings.
SLF4J: Found binding in
[jar:file:/home/hduser/bigdata/apache-storm-2.4.0/lib-worker/log4j-slf4j-impl-2.17.1.jar!/org/
slf4j/impl/StaticLoggerBinder.class]
SLF4J: Found binding in
[jar:file:/home/hduser/word-count-storm/word-count-topology/target/word-count-topology-1.0-SNA
PSHOT.jar!/org/slf4j/impl/StaticLoggerBinder.class]
SLF4J: See http://www.slf4j.org/codes.html#multiple_bindings for an explanation.
SLF4J: Actual binding is of type [org.apache.logging.slf4j.Log4jLoggerFactory]
Exception in thread "main" java.lang.NoClassDefFoundError: org/apache/storm/LocalCluster

```

```
    at com.example.WordCountTopology.main(WordCountTopology.java:116)
Caused by: java.lang.ClassNotFoundException: org.apache.storm.LocalCluster
    at java.net.URLClassLoader.findClass(URLClassLoader.java:387)
    at java.lang.ClassLoader.loadClass(ClassLoader.java:418)
    at sun.misc.Launcher$AppClassLoader.loadClass(Launcher.java:352)
    at java.lang.ClassLoader.loadClass(ClassLoader.java:351)
    ... 1 more
```

```
/home/hduser/bigdata/apache-storm-2.4.0/bin/storm jar
/home/hduser/word-count-storm/word-count-topology/target/word-count-topology-1.0-SNAPSHOT.jar
--jars /home/hduser/bigdata/apache-storm-2.4.0/lib/* com.example.WordCountTopology
```

```
hduser@kavi-VirtualBox:~$ /home/hduser/bigdata/apache-storm-2.4.0/bin/storm jar
/home/hduser/word-count-storm/word-count-topology/target/word-count-topology-1.0-SNAPSHOT.jar
--jars /home/hduser/bigdata/apache-storm-2.4.0/lib/* com.example.WordCountTopology
SLF4J: Class path contains multiple SLF4J bindings.
SLF4J: Found binding in
[jar:file:/home/hduser/bigdata/apache-storm-2.4.0/lib/log4j-slf4j-impl-2.17.1.jar!/org/slf4j/i
mpl/StaticLoggerBinder.class]
SLF4J: Found binding in
[jar:file:/home/hduser/word-count-storm/word-count-topology/target/word-count-topology-1.0-SNA
PSHOT.jar!/org/slf4j/impl/StaticLoggerBinder.class]
SLF4J: See http://www.slf4j.org/codes.html#multiple_bindings for an explanation.
SLF4J: Actual binding is of type [org.apache.logging.slf4j.Log4jLoggerFactory]
Running: /usr/bin/java -client -Ddaemon.name= -Dstorm.options=
-Dstorm.home=/home/hduser/bigdata/apache-storm-2.4.0
-Dstorm.log.dir=/home/hduser/bigdata/apache-storm-2.4.0/logs
-Djava.library.path=/usr/local/lib:/opt/local/lib:/usr/lib:/usr/lib64 -Dstorm.conf.file= -cp
/home/hduser/bigdata/apache-storm-2.4.0/*:/home/hduser/bigdata/apache-storm-2.4.0/lib-worker/*
:/home/hduser/bigdata/apache-storm-2.4.0/extlib/*:/home/hduser/word-count-storm/word-count-top
ology/target/word-count-topology-1.0-SNAPSHOT.jar:/home/hduser/bigdata/apache-storm-2.4.0/conf
:/home/hduser/bigdata/apache-storm-2.4.0/bin:/home/hduser/bigdata/apache-storm-2.4.0/lib/acces
sors-smart-1.2.jar
-Dstorm.jar=/home/hduser/word-count-storm/word-count-topology/target/word-count-topology-1.0-S
NAPSHOT.jar
-Dstorm.dependency.jars=/home/hduser/bigdata/apache-storm-2.4.0/lib/accessors-smart-1.2.jar
-Dstorm.dependency.artifacts={}
/home/hduser/bigdata/apache-storm-2.4.0/lib/animal-sniffer-annotations-1.17.jar
/home/hduser/bigdata/apache-storm-2.4.0/lib/asm-5.0.3.jar
/home/hduser/bigdata/apache-storm-2.4.0/lib/audience-annotations-0.5.0.jar
/home/hduser/bigdata/apache-storm-2.4.0/lib/carbonite-1.5.0.jar
/home/hduser/bigdata/apache-storm-2.4.0/lib/checker-qual-2.5.2.jar
/home/hduser/bigdata/apache-storm-2.4.0/lib/chill-java-0.8.0.jar
/home/hduser/bigdata/apache-storm-2.4.0/lib/clojure-1.10.0.jar
/home/hduser/bigdata/apache-storm-2.4.0/lib/commons-cli-1.4.jar
/home/hduser/bigdata/apache-storm-2.4.0/lib/commons-codec-1.11.jar
/home/hduser/bigdata/apache-storm-2.4.0/lib/commons-collections-3.2.2.jar
/home/hduser/bigdata/apache-storm-2.4.0/lib/commons-compress-1.18.jar
/home/hduser/bigdata/apache-storm-2.4.0/lib/commons-exec-1.3.jar
/home/hduser/bigdata/apache-storm-2.4.0/lib/commons-fileupload-1.3.3.jar
/home/hduser/bigdata/apache-storm-2.4.0/lib/commons-io-2.6.jar
/home/hduser/bigdata/apache-storm-2.4.0/lib/commons-lang-2.6.jar
/home/hduser/bigdata/apache-storm-2.4.0/lib/commons-logging-1.2.jar
/home/hduser/bigdata/apache-storm-2.4.0/lib/core.specs.alpha-0.2.44.jar
/home/hduser/bigdata/apache-storm-2.4.0/lib/curator-client-4.3.0.jar
```

/home/hduser/bigdata/apache-storm-2.4.0/lib/curator-framework-4.3.0.jar
/home/hduser/bigdata/apache-storm-2.4.0/lib/error_prone_annotations-2.2.0.jar
/home/hduser/bigdata/apache-storm-2.4.0/lib/failureaccess-1.0.1.jar
/home/hduser/bigdata/apache-storm-2.4.0/lib/guava-27.0.1-jre.jar
/home/hduser/bigdata/apache-storm-2.4.0/lib/hadoop-auth-2.8.5.jar
/home/hduser/bigdata/apache-storm-2.4.0/lib/httpclient-4.5.6.jar
/home/hduser/bigdata/apache-storm-2.4.0/lib/httpcore-4.4.10.jar
/home/hduser/bigdata/apache-storm-2.4.0/lib/j2objc-annotations-1.1.jar
/home/hduser/bigdata/apache-storm-2.4.0/lib/jackson-annotations-2.10.0.jar
/home/hduser/bigdata/apache-storm-2.4.0/lib/jackson-core-2.10.0.jar
/home/hduser/bigdata/apache-storm-2.4.0/lib/jackson-databind-2.10.0.jar
/home/hduser/bigdata/apache-storm-2.4.0/lib/jackson-dataformat-smile-2.10.0.jar
/home/hduser/bigdata/apache-storm-2.4.0/lib/jakarta.activation-1.2.1.jar
/home/hduser/bigdata/apache-storm-2.4.0/lib/jakarta.activation-api-1.2.1.jar
/home/hduser/bigdata/apache-storm-2.4.0/lib/jakarta.xml.bind-api-2.3.2.jar
/home/hduser/bigdata/apache-storm-2.4.0/lib/javax.annotation-api-1.3.2.jar
/home/hduser/bigdata/apache-storm-2.4.0/lib/javax.servlet-api-3.1.0.jar
/home/hduser/bigdata/apache-storm-2.4.0/lib/jcip-annotations-1.0-1.jar
/home/hduser/bigdata/apache-storm-2.4.0/lib/jetty-continuation-9.4.14.v20181114.jar
/home/hduser/bigdata/apache-storm-2.4.0/lib/jetty-http-9.4.14.v20181114.jar
/home/hduser/bigdata/apache-storm-2.4.0/lib/jetty-io-9.4.14.v20181114.jar
/home/hduser/bigdata/apache-storm-2.4.0/lib/jetty-security-9.4.14.v20181114.jar
/home/hduser/bigdata/apache-storm-2.4.0/lib/jetty-server-9.4.14.v20181114.jar
/home/hduser/bigdata/apache-storm-2.4.0/lib/jetty-servlet-9.4.14.v20181114.jar
/home/hduser/bigdata/apache-storm-2.4.0/lib/jetty-servlets-9.4.14.v20181114.jar
/home/hduser/bigdata/apache-storm-2.4.0/lib/jetty-util-9.4.14.v20181114.jar
/home/hduser/bigdata/apache-storm-2.4.0/lib/jline-0.9.94.jar
/home/hduser/bigdata/apache-storm-2.4.0/lib/joda-time-2.3.jar
/home/hduser/bigdata/apache-storm-2.4.0/lib/json-simple-1.1.jar
/home/hduser/bigdata/apache-storm-2.4.0/lib/json-smart-2.3.jar
/home/hduser/bigdata/apache-storm-2.4.0/lib/jsr305-3.0.2.jar
/home/hduser/bigdata/apache-storm-2.4.0/lib/kryo-3.0.3.jar
/home/hduser/bigdata/apache-storm-2.4.0/lib/kryo-shaded-3.0.3.jar
/home/hduser/bigdata/apache-storm-2.4.0/lib/listenablefuture-9999.0-empty-to-avoid-conflict-with-guava.jar /home/hduser/bigdata/apache-storm-2.4.0/lib/log4j-api-2.17.1.jar
/home/hduser/bigdata/apache-storm-2.4.0/lib/log4j-core-2.17.1.jar
/home/hduser/bigdata/apache-storm-2.4.0/lib/log4j-over-slf4j-1.7.36.jar
/home/hduser/bigdata/apache-storm-2.4.0/lib/log4j-slf4j-impl-2.17.1.jar
/home/hduser/bigdata/apache-storm-2.4.0/lib/metrics-core-3.2.6.jar
/home/hduser/bigdata/apache-storm-2.4.0/lib/metrics-graphite-3.2.6.jar
/home/hduser/bigdata/apache-storm-2.4.0/lib/metrics-jvm-3.2.6.jar
/home/hduser/bigdata/apache-storm-2.4.0/lib/minlog-1.3.0.jar
/home/hduser/bigdata/apache-storm-2.4.0/lib/netty-buffer-4.1.30.Final.jar
/home/hduser/bigdata/apache-storm-2.4.0/lib/netty-codec-4.1.30.Final.jar
/home/hduser/bigdata/apache-storm-2.4.0/lib/netty-common-4.1.30.Final.jar
/home/hduser/bigdata/apache-storm-2.4.0/lib/netty-handler-4.1.30.Final.jar
/home/hduser/bigdata/apache-storm-2.4.0/lib/netty-resolver-4.1.30.Final.jar
/home/hduser/bigdata/apache-storm-2.4.0/lib/netty-transport-4.1.30.Final.jar
/home/hduser/bigdata/apache-storm-2.4.0/lib/netty-transport-native-epoll-4.1.30.Final.jar
/home/hduser/bigdata/apache-storm-2.4.0/lib/netty-transport-native-unix-common-4.1.30.Final.jar /home/hduser/bigdata/apache-storm-2.4.0/lib/nimbus-jose-jwt-4.41.1.jar
/home/hduser/bigdata/apache-storm-2.4.0/lib/objenesis-2.1.jar
/home/hduser/bigdata/apache-storm-2.4.0/lib/reflectasm-1.10.1.jar
/home/hduser/bigdata/apache-storm-2.4.0/lib/rocksdbjni-5.18.4.jar
/home/hduser/bigdata/apache-storm-2.4.0/lib/slf4j-api-1.7.36.jar
/home/hduser/bigdata/apache-storm-2.4.0/lib/snakeyaml-1.26.jar

```
/home/hduser/bigdata/apache-storm-2.4.0/lib/spec.alpha-0.2.176.jar
/home/hduser/bigdata/apache-storm-2.4.0/lib/storm-client-2.4.0.jar
/home/hduser/bigdata/apache-storm-2.4.0/lib/storm-clojure-2.4.0.jar
/home/hduser/bigdata/apache-storm-2.4.0/lib/storm-core-2.4.0.jar
/home/hduser/bigdata/apache-storm-2.4.0/lib/storm-server-2.4.0.jar
/home/hduser/bigdata/apache-storm-2.4.0/lib/storm-shaded-deps-2.4.0.jar
/home/hduser/bigdata/apache-storm-2.4.0/lib/tools.logging-0.2.3.jar
/home/hduser/bigdata/apache-storm-2.4.0/lib/zookeeper-3.5.9.jar
/home/hduser/bigdata/apache-storm-2.4.0/lib/zookeeper-jute-3.5.9.jar
com.example.WordCountTopology
Error: Could not find or load main class
/home.hduser.bigdata.apache-storm-2.4.0.lib.animal-sniffer-annotations-1.17.jar

/home/hduser/bigdata/apache-storm-2.4.0/bin/storm jar
/home/hduser/word-count-storm/word-count-topology/target/word-count-topology-1.0-SNAPSHOT.jar
--jars "/home/hduser/bigdata/apache-storm-2.4.0/lib/*" com.example.WordCountTopology

hduser@kavi-VirtualBox:~$ /home/hduser/bigdata/apache-storm-2.4.0/bin/storm jar
/home/hduser/word-count-storm/word-count-topology/target/word-count-topology-1.0-SNAPSHOT.jar
--jars "/home/hduser/bigdata/apache-storm-2.4.0/lib/*" com.example.WordCountTopology
SLF4J: Class path contains multiple SLF4J bindings.
SLF4J: Found binding in
[jar:file:/home/hduser/bigdata/apache-storm-2.4.0/lib/log4j-slf4j-impl-2.17.1.jar!/org/slf4j/i
mpl/StaticLoggerBinder.class]
SLF4J: Found binding in
[jar:file:/home/hduser/word-count-storm/word-count-topology/target/word-count-topology-1.0-SNA
PSHOT.jar!/org/slf4j/impl/StaticLoggerBinder.class]
SLF4J: See http://www.slf4j.org/codes.html#multiple_bindings for an explanation.
SLF4J: Actual binding is of type [org.apache.logging.slf4j.Log4jLoggerFactory]
Running: /usr/bin/java -client -Ddaemon.name= -Dstorm.options=
-Dstorm.home=/home/hduser/bigdata/apache-storm-2.4.0
-Dstorm.log.dir=/home/hduser/bigdata/apache-storm-2.4.0/logs
-Djava.library.path=/usr/local/lib:/opt/local/lib:/usr/lib:/usr/lib64 -Dstorm.conf.file= -cp
/home/hduser/bigdata/apache-storm-2.4.0/*:/home/hduser/bigdata/apache-storm-2.4.0/lib-worker/*
:/home/hduser/bigdata/apache-storm-2.4.0/extlib/*:/home/hduser/word-count-storm/word-count-top
ology/target/word-count-topology-1.0-SNAPSHOT.jar:/home/hduser/bigdata/apache-storm-2.4.0/conf
:/home/hduser/bigdata/apache-storm-2.4.0/bin:/home/hduser/bigdata/apache-storm-2.4.0/lib/*
-Dstorm.jar=/home/hduser/word-count-storm/word-count-topology/target/word-count-topology-1.0-S
NAPSHOT.jar -Dstorm.dependency.jars=/home/hduser/bigdata/apache-storm-2.4.0/lib/*
-Dstorm.dependency.artifacts={} com.example.WordCountTopology
SLF4J: Class path contains multiple SLF4J bindings.
SLF4J: Found binding in
[jar:file:/home/hduser/bigdata/apache-storm-2.4.0/lib-worker/log4j-slf4j-impl-2.17.1.jar!/org/
slf4j/impl/StaticLoggerBinder.class]
SLF4J: Found binding in
[jar:file:/home/hduser/word-count-storm/word-count-topology/target/word-count-topology-1.0-SNA
PSHOT.jar!/org/slf4j/impl/StaticLoggerBinder.class]
SLF4J: Found binding in
[jar:file:/home/hduser/bigdata/apache-storm-2.4.0/lib/log4j-slf4j-impl-2.17.1.jar!/org/slf4j/i
mpl/StaticLoggerBinder.class]
SLF4J: See http://www.slf4j.org/codes.html#multiple_bindings for an explanation.
SLF4J: Actual binding is of type [org.apache.logging.slf4j.Log4jLoggerFactory]
Exception in thread "main" java.lang.ExceptionInInitializerError
    at org.apache.storm.testing.TmpPath.localTempPath(TmpPath.java:35)
    at org.apache.storm.testing.TmpPath.<init>(TmpPath.java:26)
```

```
at org.apache.storm.LocalCluster.<init>(LocalCluster.java:201)
at org.apache.storm.LocalCluster.<init>(LocalCluster.java:160)
at com.example.WordCountTopology.main(WordCountTopology.java:116)
Caused by: java.lang.RuntimeException: java.io.IOException: Found multiple defaults.yaml
resources. You're probably bundling the Storm jars with your topology jar.
[jar:file:/home/hduser/bigdata/apache-storm-2.4.0/lib-worker/storm-client-2.4.0.jar!/defaults.
yaml,
jar:file:/home/hduser/bigdata/apache-storm-2.4.0/lib/storm-client-2.4.0.jar!/defaults.yaml]
    at org.apache.storm.utils.Utils.findAndReadConfigFile(Utils.java:198)
    at org.apache.storm.utils.Utils.readDefaultConfig(Utils.java:241)
    at org.apache.storm.utils.Utils.readStormConfig(Utils.java:304)
    at org.apache.storm.utils.Utils.<clinit>(Utils.java:132)
    ... 5 more
Caused by: java.io.IOException: Found multiple defaults.yaml resources. You're probably
bundling the Storm jars with your topology jar.
[jar:file:/home/hduser/bigdata/apache-storm-2.4.0/lib-worker/storm-client-2.4.0.jar!/defaults.
yaml,
jar:file:/home/hduser/bigdata/apache-storm-2.4.0/lib/storm-client-2.4.0.jar!/defaults.yaml]
    at org.apache.storm.utils.Utils.getConfigFileInputStream(Utils.java:228)
    at org.apache.storm.utils.Utils.findAndReadConfigFile(Utils.java:176)
    ... 8 more

<project xmlns="http://maven.apache.org/POM/4.0.0"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="http://maven.apache.org/POM/4.0.0
http://maven.apache.org/xsd/maven-4.0.0.xsd">
    <modelVersion>4.0.0</modelVersion>

    <groupId>com.example</groupId>
    <artifactId>word-count-topology</artifactId>
    <version>1.0-SNAPSHOT</version>
    <packaging>jar</packaging>

    <name>word-count-topology</name>
    <url>http://maven.apache.org</url>

    <properties>
        <project.build.sourceEncoding>UTF-8</project.build.sourceEncoding>
        <maven.compiler.source>1.8</maven.compiler.source>
        <maven.compiler.target>1.8</maven.compiler.target>
    </properties>

    <dependencies>
        <!-- Apache Storm dependencies -->
        <dependency>
            <groupId>org.apache.storm</groupId>
            <artifactId>storm-core</artifactId>
            <version>2.4.0</version>
            <scope>provided</scope>
        </dependency>
        <dependency>
            <groupId>org.apache.storm</groupId>
            <artifactId>storm-kafka-client</artifactId>
            <version>2.2.0</version>
        </dependency>
    </dependencies>

```

```
<!-- Logging framework -->
<dependency>
    <groupId>org.slf4j</groupId>
    <artifactId>slf4j-api</artifactId>
    <version>1.7.32</version>
</dependency>
<dependency>
    <groupId>org.slf4j</groupId>
    <artifactId>slf4j-log4j12</artifactId>
    <version>1.7.32</version>
</dependency>
<dependency>
    <groupId>log4j</groupId>
    <artifactId>log4j</artifactId>
    <version>1.2.17</version>
</dependency>
<dependency>
    <groupId>junit</groupId>
    <artifactId>junit</artifactId>
    <version>4.13.1</version>
    <scope>test</scope>
</dependency>
</dependencies>

<build>
    <plugins>
        <plugin>
            <groupId>org.apache.maven.plugins</groupId>
            <artifactId>maven-shade-plugin</artifactId>
            <version>3.2.4</version>
            <configuration>
                <createDependencyReducedPom>false</createDependencyReducedPom>
                <filters>
                    <filter>
                        <artifact>*:*</artifact>
                        <excludes>
                            <!-- Exclude Apache Storm dependencies -->
                            <exclude>org.apache.storm:*</exclude>
                        </excludes>
                    </filter>
                </filters>
            </configuration>
            <executions>
                <execution>
                    <phase>package</phase>
                    <goals>
                        <goal>shade</goal>
                    </goals>
                </execution>
            </executions>
        </plugin>
    </plugins>
</build>
</project>
```

```
/home/hduser/bigdata/apache-storm-2.4.0/bin/storm jar
/home/hduser/word-count-storm/word-count-topology/target/word-count-topology-1.0-SNAPSHOT.jar
--jars "/home/hduser/bigdata/apache-storm-2.4.0/lib/*" com.example.WordCountTopology

hduser@kavi-VirtualBox:~$ /home/hduser/bigdata/apache-storm-2.4.0/bin/storm jar
/home/hduser/word-count-storm/word-count-topology/target/word-count-topology-1.0-SNAPSHOT.jar
--jars "/home/hduser/bigdata/apache-storm-2.4.0/lib/*" com.example.WordCountTopology
SLF4J: Class path contains multiple SLF4J bindings.
SLF4J: Found binding in
[jar:file:/home/hduser/bigdata/apache-storm-2.4.0/lib/log4j-slf4j-impl-2.17.1.jar!/org/slf4j/i
mpl/StaticLoggerBinder.class]
SLF4J: Found binding in
[jar:file:/home/hduser/word-count-storm/word-count-topology/target/word-count-topology-1.0-SNA
PSHOT.jar!/org/slf4j/impl/StaticLoggerBinder.class]
SLF4J: See http://www.slf4j.org/codes.html#multiple_bindings for an explanation.
SLF4J: Actual binding is of type [org.apache.logging.slf4j.Log4jLoggerFactory]
Running: /usr/bin/java -client -Ddaemon.name= -Dstorm.options=
-Dstorm.home=/home/hduser/bigdata/apache-storm-2.4.0
-Dstorm.log.dir=/home/hduser/bigdata/apache-storm-2.4.0/logs
-Djava.library.path=/usr/local/lib:/opt/local/lib:/usr/lib:/usr/lib64 -Dstorm.conf.file= -cp
/home/hduser/bigdata/apache-storm-2.4.0/*:/home/hduser/bigdata/apache-storm-2.4.0/lib-worker/*
:/home/hduser/bigdata/apache-storm-2.4.0/extlib/*:/home/hduser/word-count-storm/word-count-top
ology/target/word-count-topology-1.0-SNAPSHOT.jar:/home/hduser/bigdata/apache-storm-2.4.0/conf
:/home/hduser/bigdata/apache-storm-2.4.0/bin:/home/hduser/bigdata/apache-storm-2.4.0/lib/*
-Dstorm.jar=/home/hduser/word-count-storm/word-count-topology/target/word-count-topology-1.0-S
NAPSHOT.jar -Dstorm.dependency.jars=/home/hduser/bigdata/apache-storm-2.4.0/lib/*
-Dstorm.dependency.artifacts={} com.example.WordCountTopology
SLF4J: Class path contains multiple SLF4J bindings.
SLF4J: Found binding in
[jar:file:/home/hduser/bigdata/apache-storm-2.4.0/lib-worker/log4j-slf4j-impl-2.17.1.jar!/org/
slf4j/impl/StaticLoggerBinder.class]
SLF4J: Found binding in
[jar:file:/home/hduser/word-count-storm/word-count-topology/target/word-count-topology-1.0-SNA
PSHOT.jar!/org/slf4j/impl/StaticLoggerBinder.class]
SLF4J: Found binding in
[jar:file:/home/hduser/bigdata/apache-storm-2.4.0/lib/log4j-slf4j-impl-2.17.1.jar!/org/slf4j/i
mpl/StaticLoggerBinder.class]
SLF4J: See http://www.slf4j.org/codes.html#multiple_bindings for an explanation.
SLF4J: Actual binding is of type [org.apache.logging.slf4j.Log4jLoggerFactory]
Exception in thread "main" java.lang.ExceptionInInitializerError
    at org.apache.storm.testing.TmpPath.localTempPath(TmpPath.java:35)
    at org.apache.storm.testing.TmpPath.<init>(TmpPath.java:26)
    at org.apache.storm.LocalCluster.<init>(LocalCluster.java:201)
    at org.apache.storm.LocalCluster.<init>(LocalCluster.java:160)
    at com.example.WordCountTopology.main(WordCountTopology.java:116)
Caused by: java.lang.RuntimeException: java.io.IOException: Found multiple defaults.yaml
resources. You're probably bundling the Storm jars with your topology jar.
[jar:file:/home/hduser/bigdata/apache-storm-2.4.0/lib-worker/storm-client-2.4.0.jar!/defaults.y
aml,
jar:file:/home/hduser/bigdata/apache-storm-2.4.0/lib/storm-client-2.4.0.jar!/defaults.yaml]
    at org.apache.storm.utils.Utils.findAndReadConfigFile(Utils.java:198)
    at org.apache.storm.utils.Utils.readDefaultConfig(Utils.java:241)
    at org.apache.storm.utils.Utils.readStormConfig(Utils.java:304)
    at org.apache.storm.utils.Utils.<clinit>(Utils.java:132)
    ... 5 more
```

```
Caused by: java.io.IOException: Found multiple defaults.yaml resources. You're probably
bundling the Storm jars with your topology jar.
[jar:file:/home/hduser/bigdata/apache-storm-2.4.0/lib-worker/storm-client-2.4.0.jar!/defaults.
yaml,
jar:file:/home/hduser/bigdata/apache-storm-2.4.0/lib/storm-client-2.4.0.jar!/defaults.yaml]
    at org.apache.storm.utils.Utils.getConfigFileInputStream(Utils.java:228)
    at org.apache.storm.utils.Utils.findAndReadConfigFile(Utils.java:176)
    ... 8 more
```

```
<project xmlns="http://maven.apache.org/POM/4.0.0"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation="http://maven.apache.org/POM/4.0.0
  http://maven.apache.org/xsd/maven-4.0.0.xsd">
  <modelVersion>4.0.0</modelVersion>

  <groupId>com.example</groupId>
  <artifactId>word-count-topology</artifactId>
  <version>1.0-SNAPSHOT</version>
  <packaging>jar</packaging>

  <name>word-count-topology</name>
  <url>http://maven.apache.org</url>

  <properties>
    <project.build.sourceEncoding>UTF-8</project.build.sourceEncoding>
    <maven.compiler.source>1.8</maven.compiler.source>
    <maven.compiler.target>1.8</maven.compiler.target>
  </properties>

  <dependencies>
    <!-- Apache Storm dependencies -->
    <dependency>
      <groupId>org.apache.storm</groupId>
      <artifactId>storm-core</artifactId>
      <version>2.4.0</version>
      <scope>provided</scope>
    </dependency>
    <dependency>
      <groupId>org.apache.storm</groupId>
      <artifactId>storm-kafka-client</artifactId>
      <version>2.2.0</version>
    </dependency>

    <!-- Logging framework -->
    <dependency>
      <groupId>org.slf4j</groupId>
      <artifactId>slf4j-api</artifactId>
      <version>1.7.32</version>
    </dependency>
```

```
<!-- Exclude slf4j-log4j12 -->
<dependency>
    <groupId>org.slf4j</groupId>
    <artifactId>slf4j-log4j12</artifactId>
    <version>1.7.32</version>
    <scope>provided</scope>
</dependency>
<dependency>
    <groupId>log4j</groupId>
    <artifactId>log4j</artifactId>
    <version>1.2.17</version>
</dependency>
<dependency>
    <groupId>junit</groupId>
    <artifactId>junit</artifactId>
    <version>4.13.1</version>
    <scope>test</scope>
</dependency>
</dependencies>

<build>
    <plugins>
        <plugin>
            <groupId>org.apache.maven.plugins</groupId>
            <artifactId>maven-shade-plugin</artifactId>
            <version>3.2.4</version>
            <configuration>
                <createDependencyReducedPom>false</createDependencyReducedPom>
                <filters>
                    <filter>
                        <artifact>*:*</artifact>
                        <excludes>
                            <!-- Exclude SLF4J binding -->
                            <exclude>org.slf4j:slf4j-log4j12</exclude>
                        </excludes>
                    </filter>
                    <filter>
                        <artifact>*:*</artifact>
                        <excludes>
                            <!-- Exclude Apache Storm dependencies -->
                            <exclude>org.apache.storm:</exclude>
                        </excludes>
                    </filter>
                </filters>
            </configuration>
            <executions>
                <execution>
                    <phase>package</phase>
                    <goals>
                        <goal>shade</goal>
                    </goals>
                </execution>
            </executions>
        </plugin>
    </plugins>
</build>
```

```
</project>
```

```
hduser@kavi-VirtualBox:~/word-count-storm/word-count-topology$ cd target
hduser@kavi-VirtualBox:~/word-count-storm/word-count-topology/target$ ls
classes           original-word-count-topology-1.0-SNAPSHOT.jar
generated-sources   surefire-reports
generated-test-sources test-classes
maven-archiver      word-count-topology-1.0-SNAPSHOT.jar
maven-status
```

```
/home/hduser/word-count-storm/word-count-topology/target/word-count-topology-1.0-SNAPSHOT.jar
com.example.WordCountTopology
```

```
hduser@kavi-VirtualBox:~$ 
/home/hduser/word-count-storm/word-count-topology/target/word-count-topology-1.0-SNAPSHOT.jar
com.example.WordCountTopology
bash:
/home/hduser/word-count-storm/word-count-topology/target/word-count-topology-1.0-SNAPSHOT.jar:
Permission denied
```

```
java -jar
/home/hduser/word-count-storm/word-count-topology/target/word-count-topology-1.0-SNAPSHOT.jar
```

```
hduser@kavi-VirtualBox:~$ java -jar
/home/hduser/word-count-storm/word-count-topology/target/word-count-topology-1.0-SNAPSHOT.jar
no main manifest attribute, in
/home/hduser/word-count-storm/word-count-topology/target/word-count-topology-1.0-SNAPSHOT.jar
```

```
<project xmlns="http://maven.apache.org/POM/4.0.0"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="http://maven.apache.org/POM/4.0.0
http://maven.apache.org/xsd/maven-4.0.0.xsd">
<modelVersion>4.0.0</modelVersion>

<groupId>com.example</groupId>
<artifactId>word-count-topology</artifactId>
<version>1.0-SNAPSHOT</version>
<packaging>jar</packaging>

<name>word-count-topology</name>
<url>http://maven.apache.org</url>

<properties>
    <project.build.sourceEncoding>UTF-8</project.build.sourceEncoding>
    <maven.compiler.source>1.8</maven.compiler.source>
    <maven.compiler.target>1.8</maven.compiler.target>
</properties>
```

```
<dependencies>
    <!-- Apache Storm dependencies -->
    <dependency>
        <groupId>org.apache.storm</groupId>
        <artifactId>storm-core</artifactId>
        <version>2.4.0</version>
        <scope>provided</scope>
    </dependency>
    <dependency>
        <groupId>org.apache.storm</groupId>
        <artifactId>storm-kafka-client</artifactId>
        <version>2.2.0</version>
    </dependency>

    <!-- Logging framework -->
    <dependency>
        <groupId>org.slf4j</groupId>
        <artifactId>slf4j-api</artifactId>
        <version>1.7.32</version>
    </dependency>
    <dependency>
        <groupId>org.slf4j</groupId>
        <artifactId>slf4j-log4j12</artifactId>
        <version>1.7.32</version>
    </dependency>
    <dependency>
        <groupId>log4j</groupId>
        <artifactId>log4j</artifactId>
        <version>1.2.17</version>
    </dependency>
    <dependency>
        <groupId>junit</groupId>
        <artifactId>junit</artifactId>
        <version>4.13.1</version>
        <scope>test</scope>
    </dependency>
</dependencies>

<build>
    <plugins>
        <plugin>
            <groupId>org.apache.maven.plugins</groupId>
            <artifactId>maven-shade-plugin</artifactId>
            <version>3.2.4</version>
            <configuration>
                <createDependencyReducedPom>false</createDependencyReducedPom>
                <filters>
                    <filter>
                        <artifact>*:*</artifact>
                        <excludes>
                            <!-- Exclude Apache Storm dependencies -->
                            <exclude>org.apache.storm:*</exclude>
                        </excludes>
                    </filter>
                </filters>
                <!-- Add main class to the manifest -->
            </configuration>
        </plugin>
    </plugins>

```

```

<transformers>
    <transformer
implementation="org.apache.maven.plugins.shade.resource.ManifestResourceTransformer">
        <mainClass>com.example.WordCountTopology</mainClass>
    </transformer>
</transformers>
</configuration>
<executions>
    <execution>
        <phase>package</phase>
        <goals>
            <goal>shade</goal>
        </goals>
    </execution>
</executions>
</plugin>
</plugins>
</build>
</project>

```

```

hduser@kavi-VirtualBox:~$ java -jar
/home/hduser/word-count-storm/word-count-topology/target/word-count-topology-1.0-SNAPSHOT.jar
Error: A JNI error has occurred, please check your installation and try again
Exception in thread "main" java.lang.NoClassDefFoundError:
org/apache/storm/topology/IRichSpout
    at java.lang.Class.getDeclaredMethods0(Native Method)
    at java.lang.Class.privateGetDeclaredMethods(Class.java:2701)
    at java.lang.Class.privateGetMethodRecursive(Class.java:3048)
    at java.lang.Class.getMethod0(Class.java:3018)
    at java.lang.Class.getMethod(Class.java:1784)
    at sun.launcher.LauncherHelper.validateMainClass(LauncherHelper.java:670)
    at sun.launcher.LauncherHelper.checkAndLoadMain(LauncherHelper.java:652)
Caused by: java.lang.ClassNotFoundException: org.apache.storm.topology.IRichSpout
    at java.net.URLClassLoader.findClass(URLClassLoader.java:387)
    at java.lang.ClassLoader.loadClass(ClassLoader.java:418)
    at sun.misc.Launcher$AppClassLoader.loadClass(Launcher.java:352)
    at java.lang.ClassLoader.loadClass(ClassLoader.java:351)
    ... 7 more

```

```

[WARNING] - META-INF/MANIFEST.MF
[WARNING] jackson-annotations-2.9.0.jar, jackson-core-2.10.0.jar, jackson-databind-2.9.8.jar,
log4j-1.2.17.jar, storm-kafka-client-2.2.0.jar define 1 overlapping resource:
[WARNING] - META-INF/LICENSE
[WARNING] jackson-core-2.10.0.jar, jackson-databind-2.9.8.jar, log4j-1.2.17.jar,
storm-kafka-client-2.2.0.jar define 1 overlapping resource:
[WARNING] - META-INF/NOTICE
[WARNING] maven-shade-plugin has detected that some class files are
[WARNING] present in two or more JARs. When this happens, only one
[WARNING] single version of the class is copied to the uber jar.

```

```
[WARNING] Usually this is not harmful and you can skip these warnings,  
[WARNING] otherwise try to manually exclude artifacts based on  
[WARNING] mvn dependency:tree -Ddetail=true and the above output.  
[WARNING] See http://maven.apache.org/plugins/maven-shade-plugin/  
[INFO] Replacing original artifact with shaded artifact.  
[INFO] Replacing  
/home/hduser/word-count-storm/word-count-topology/target/word-count-topology-1.0-SNAPSHOT.jar  
with  
/home/hduser/word-count-storm/word-count-topology/target/word-count-topology-1.0-SNAPSHOT-shad  
ed.jar  
[INFO] -----  
[INFO] BUILD SUCCESS  
[INFO] -----  
[INFO] Total time: 3.947 s  
[INFO] Finished at: 2024-05-25T17:05:33+01:00  
[INFO] -----  
hduser@kavi-VirtualBox:~/word-count-storm/word-count-topology$ ls  
input pom.xml src target  
hduser@kavi-VirtualBox:~/word-count-storm/word-count-topology$ cd target  
hduser@kavi-VirtualBox:~/word-count-storm/word-count-topology/target$ ls  
classes          original-word-count-topology-1.0-SNAPSHOT.jar  
generated-sources    surefire-reports  
generated-test-sources test-classes  
maven-archiver      word-count-topology-1.0-SNAPSHOT.jar  
Maven-status
```

```
hduser@kavi-VirtualBox:~$ java -jar  
/home/hduser/word-count-storm/word-count-topology/target/word-count-topology-1.0-SNAPSHOT.jar  
Error: A JNI error has occurred, please check your installation and try again  
Exception in thread "main" java.lang.NoClassDefFoundError:  
org/apache/storm/topology/IRichSpout  
    at java.lang.Class.getDeclaredMethods0(Native Method)  
    at java.lang.Class.privateGetDeclaredMethods(Class.java:2701)  
    at java.lang.Class.privateGetMethodRecursive(Class.java:3048)  
    at java.lang.Class.getMethod0(Class.java:3018)  
    at java.lang.Class.getMethod(Class.java:1784)  
    at sun.launcher.LauncherHelper.validateMainClass(LauncherHelper.java:670)  
    at sun.launcher.LauncherHelper.checkAndLoadMain(LauncherHelper.java:652)  
Caused by: java.lang.ClassNotFoundException: org.apache.storm.topology.IRichSpout  
    at java.net.URLClassLoader.findClass(URLClassLoader.java:387)  
    at java.lang.ClassLoader.loadClass(ClassLoader.java:418)  
    at sun.misc.Launcher$AppClassLoader.loadClass(Launcher.java:352)  
    at java.lang.ClassLoader.loadClass(ClassLoader.java:351)  
    ... 7 more
```

```
<?xml version="1.0" encoding="UTF-8"?>  
<project xmlns="http://maven.apache.org/POM/4.0.0"  
         xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"  
         xsi:schemaLocation="http://maven.apache.org/POM/4.0.0  
                           http://maven.apache.org/xsd/maven-4.0.0.xsd">  
    <modelVersion>4.0.0</modelVersion>  
  
    <groupId>admicloud</groupId>
```

```
<artifactId>storm-example</artifactId>
<version>1.0</version>

<properties>
<project.build.sourceEncoding>UTF-8</project.build.sourceEncoding>
<!-- see comment below... This fixes an annoyance with intellij -->
<provided.scope>provided</provided.scope>
<hbase.version>0.98.4-hadoop2</hbase.version>
</properties>

<profiles>
<profile>
    <id>intellij</id>
    <properties>
        <provided.scope>compile</provided.scope>
    </properties>
</profile>
</profiles>

<dependencies>
<dependency>
    <groupId>org.slf4j</groupId>
    <artifactId>slf4j-api</artifactId>
    <version>1.7.6</version>
</dependency>

<dependency>
    <groupId>org.apache.logging.log4j</groupId>
    <artifactId>log4j-slf4j-impl</artifactId>
    <version>2.0-rc1</version>
</dependency>
<dependency>
    <groupId>org.apache.storm</groupId>
    <artifactId>storm-core</artifactId>
    <scope>provided</scope>
    <version>1.0.1</version>
</dependency>
</dependencies>

<build>
<plugins>
    <plugin>
        <artifactId>maven-assembly-plugin</artifactId>
        <configuration>
            <descriptorRefs>
                <descriptorRef>jar-with-dependencies</descriptorRef>
            </descriptorRefs>
            <archive>
                <manifest>
                </manifest>
            </archive>
        </configuration>
        <executions>
            <execution>
                <id>make-assembly</id>
                <phase>package</phase>
            </execution>
        </executions>
    </plugin>
</plugins>

```

```

        <goals>
            <goal>single</goal>
        </goals>
    </execution>
</executions>
</plugin>
<plugin>
    <groupId>org.apache.maven.plugins</groupId>
    <artifactId>maven-compiler-plugin</artifactId>
    <version>3.1</version>
    <configuration>
        <source>1.8</source>
        <target>1.8</target>
    </configuration>
</plugin>
</plugins>
</build>
</project>

```

```

<?xml version="1.0" encoding="UTF-8"?>
<project xmlns="http://maven.apache.org/POM/4.0.0"
    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xsi:schemaLocation="http://maven.apache.org/POM/4.0.0
http://maven.apache.org/xsd/maven-4.0.0.>
<modelVersion>4.0.0</modelVersion>

<groupId>com.example</groupId>
<artifactId>word-count-topology</artifactId>
<version>1.0-SNAPSHOT</version>
<packaging>jar</packaging>

<properties>
    <project.build.sourceEncoding>UTF-8</project.build.sourceEncoding>
    <!-- see comment below... This fixes an annoyance with intellij -->
    <provided.scope>provided</provided.scope>
    <hbase.version>0.98.4-hadoop2</hbase.version>
    <storm.version>1.0.1</storm.version>
</properties>

<dependencies>
    <dependency>
        <groupId>org.slf4j</groupId>
        <artifactId>slf4j-api</artifactId>
        <version>1.7.6</version>
    </dependency>

    <dependency>
        <groupId>org.apache.logging.log4j</groupId>
        <artifactId>log4j-slf4j-impl</artifactId>
        <version>2.0-rc1</version>
    </dependency>
    <dependency>
        <groupId>org.apache.storm</groupId>

```

```

<artifactId>storm-core</artifactId>
<scope>provided</scope>
<version>1.0.1</version>
</dependency>
</dependencies>

<build>
  <plugins>
    <plugin>
      <artifactId>maven-assembly-plugin</artifactId>
      <version>3.1.0</version>
      <configuration>
        <descriptorRefs>
          <descriptorRef>jar-with-dependencies</descriptorRef>
        </descriptorRefs>
        <archive>
          <manifest>
            </manifest>
        </archive>
      </configuration>
      <executions>
        <execution>
          <id>make-assembly</id>
          <phase>package</phase>
          <goals>
            <goal>single</goal>
          </goals>
        </execution>
      </executions>
    </plugin>
    <plugin>
      <groupId>org.apache.maven.plugins</groupId>
      <artifactId>maven-compiler-plugin</artifactId>
      <version>3.1</version>
      <configuration>
        <source>1.8</source>
        <target>1.8</target>
      </configuration>
    </plugin>
  </plugins>
</build>
</project>
```

```

hduser@kavi-VirtualBox:~/word-count-storm/word-count-topology$ mvn clean install
[INFO] Scanning for projects...
[ERROR] [ERROR] Some problems were encountered while processing the POMs:
[FATAL] Non-parseable POM /home/hduser/word-count-storm/word-count-topology/pom.xml: markup
not allowed inside attribute value - illegal < (position: START_DOCUMENT seen
...ache.org/POM/4.0.0 http://maven.apache.org/xsd/maven-4.0.0.>\n      <... @4:6)  @ line 4,
column 6
@
[ERROR] The build could not read 1 project -> [Help 1]
[ERROR]
[ERROR]   The project (/home/hduser/word-count-storm/word-count-topology/pom.xml) has 1 error
[ERROR]     Non-parseable POM /home/hduser/word-count-storm/word-count-topology/pom.xml: markup
not allowed inside attribute value - illegal < (position: START_DOCUMENT seen
```

```
...ache.org/POM/4.0.0 http://maven.apache.org/xsd/maven-4.0.0.>\n      <... @4:6)  @ line 4,\ncolumn 6 -> [Help 2]\n[ERROR]\n[ERROR] To see the full stack trace of the errors, re-run Maven with the -e switch.\n[ERROR] Re-run Maven using the -X switch to enable full debug logging.\n[ERROR]\n[ERROR] For more information about the errors and possible solutions, please read the\nfollowing articles:\n[ERROR] [Help 1] http://cwiki.apache.org/confluence/display/MAVEN/ProjectBuildingException\n[ERROR] [Help 2] http://cwiki.apache.org/confluence/display/MAVEN/ModelParseException
```

```
<?xml version="1.0" encoding="UTF-8"?>\n<project xmlns="http://maven.apache.org/POM/4.0.0"\n          xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"\n          xsi:schemaLocation="http://maven.apache.org/POM/4.0.0\nhttp://maven.apache.org/xsd/maven-4.0.0.xsd">\n    <modelVersion>4.0.0</modelVersion>\n\n    <groupId>com.example</groupId>\n    <artifactId>word-count-topology</artifactId>\n    <version>1.0-SNAPSHOT</version>\n    <packaging>jar</packaging>\n\n    <name>word-count-topology</name>\n    <url>http://maven.apache.org</url>\n\n    <properties>\n        <project.build.sourceEncoding>UTF-8</project.build.sourceEncoding>\n        <maven.compiler.source>1.8</maven.compiler.source>\n        <maven.compiler.target>1.8</maven.compiler.target>\n        <!-- Add any additional properties here -->\n    </properties>\n\n    <dependencies>\n        <!-- Apache Storm dependencies -->\n        <dependency>\n            <groupId>org.apache.storm</groupId>\n            <artifactId>storm-core</artifactId>\n            <version>2.4.0</version>\n            <scope>provided</scope>\n        </dependency>\n        <dependency>\n            <groupId>org.apache.storm</groupId>\n            <artifactId>storm-kafka-client</artifactId>\n            <version>2.2.0</version>\n        </dependency>\n\n        <!-- Logging framework -->\n        <dependency>\n            <groupId>org.slf4j</groupId>\n            <artifactId>slf4j-api</artifactId>\n            <version>1.7.32</version>\n        </dependency>
```

```

<dependency>
    <groupId>org.slf4j</groupId>
    <artifactId>slf4j-log4j12</artifactId>
    <version>1.7.32</version>
</dependency>
<dependency>
    <groupId>log4j</groupId>
    <artifactId>log4j</artifactId>
    <version>1.2.17</version>
</dependency>
<dependency>
    <groupId>junit</groupId>
    <artifactId>junit</artifactId>
    <version>4.13.1</version>
    <scope>test</scope>
</dependency>
<!-- Add any additional dependencies here -->
</dependencies>

<build>
    <plugins>
        <!-- Maven Shade Plugin to create a fat/uber JAR -->
        <plugin>
            <groupId>org.apache.maven.plugins</groupId>
            <artifactId>maven-shade-plugin</artifactId>
            <version>3.2.4</version>
            <configuration>
                <createDependencyReducedPom>false</createDependencyReducedPom>
                <filters>
                    <filter>
                        <artifact>*:*</artifact>
                        <excludes>
                            <!-- Exclude Apache Storm dependencies -->
                            <exclude>org.apache.storm:*</exclude>
                        </excludes>
                    </filter>
                </filters>
            </configuration>
            <executions>
                <execution>
                    <phase>package</phase>
                    <goals>
                        <goal>shade</goal>
                    </goals>
                </execution>
            </executions>
        </plugin>
    </plugins>
</build>
</project>

```

java -jar word-count-topology-1.0-SNAPSHOT.jar com.example.WordCountTopology

```
hduser@kavi-VirtualBox:~/word-count-storm/word-count-topology/target$ java -jar  
word-count-topology-1.0-SNAPSHOT.jar com.example.WordCountTopology  
no main manifest attribute, in word-count-topology-1.0-SNAPSHOT.jar
```

```
<project xmlns="http://maven.apache.org/POM/4.0.0"  
    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"  
    xsi:schemaLocation="http://maven.apache.org/POM/4.0.0  
http://maven.apache.org/xsd/maven-4.0.0.xsd">  
    <modelVersion>4.0.0</modelVersion>  
  
    <groupId>com.example</groupId>  
    <artifactId>word-count-topology</artifactId>  
    <version>1.0-SNAPSHOT</version>  
    <packaging>jar</packaging>  
  
    <name>word-count-topology</name>  
    <url>http://maven.apache.org</url>  
  
    <properties>  
        <project.build.sourceEncoding>UTF-8</project.build.sourceEncoding>  
        <maven.compiler.source>1.8</maven.compiler.source>  
        <maven.compiler.target>1.8</maven.compiler.target>  
    </properties>  
  
    <dependencies>  
        <!-- Apache Storm dependencies -->  
        <dependency>  
            <groupId>org.apache.storm</groupId>  
            <artifactId>storm-core</artifactId>  
            <version>2.4.0</version>  
            <scope>provided</scope>  
        </dependency>  
        <dependency>  
            <groupId>org.apache.storm</groupId>  
            <artifactId>storm-kafka-client</artifactId>  
            <version>2.2.0</version>  
        </dependency>  
  
        <!-- Logging framework -->  
        <dependency>  
            <groupId>org.slf4j</groupId>  
            <artifactId>slf4j-api</artifactId>  
            <version>1.7.32</version>  
        </dependency>  
        <dependency>  
            <groupId>org.slf4j</groupId>  
            <artifactId>slf4j-log4j12</artifactId>  
            <version>1.7.32</version>  
        </dependency>  
        <dependency>  
            <groupId>log4j</groupId>  
            <artifactId>log4j</artifactId>  
            <version>1.2.17</version>  
        </dependency>  
    </dependencies>
```

```

<dependency>
    <groupId>junit</groupId>
    <artifactId>junit</artifactId>
    <version>4.13.1</version>
    <scope>test</scope>
</dependency>
</dependencies>

<build>
    <plugins>
        <plugin>
            <groupId>org.apache.maven.plugins</groupId>
            <artifactId>maven-shade-plugin</artifactId>
            <version>3.2.4</version>
            <configuration>
                <createDependencyReducedPom>false</createDependencyReducedPom>
                <filters>
                    <filter>
                        <artifact>*:*</artifact>
                        <excludes>
                            <!-- Exclude Apache Storm dependencies -->
                            <exclude>org.apache.storm:*</exclude>
                        </excludes>
                    </filter>
                </filters>
                <transformers>
                    <transformer
implementation="org.apache.maven.plugins.shade.resource.ManifestResourceTransformer">
                        <mainClass>com.example.WordCountTopology</mainClass>
                    </transformer>
                </transformers>
            </configuration>
            <executions>
                <execution>
                    <phase>package</phase>
                    <goals>
                        <goal>shade</goal>
                    </goals>
                </execution>
            </executions>
        </plugin>
    </plugins>
</build>
</project>

```

```

hduser@kavi-VirtualBox:~/word-count-storm/word-count-topology/target$ java -jar
word-count-topology-1.0-SNAPSHOT.jar com.example.WordCountTopology
Error: A JNI error has occurred, please check your installation and try again
Exception in thread "main" java.lang.NoClassDefFoundError:
org/apache/storm/topology/IRichSpout
at java.lang.Class.getDeclaredMethods0(Native Method)
at java.lang.Class.privateGetDeclaredMethods(Class.java:2701)
at java.lang.Class.privateGetMethodRecursive(Class.java:3048)
at java.lang.Class.getMethod0(Class.java:3018)

```

```
at java.lang.Class.getMethod(Class.java:1784)
at sun.launcher.LauncherHelper.validateMainClass(LauncherHelper.java:670)
at sun.launcher.LauncherHelper.checkAndLoadMain(LauncherHelper.java:652)
Caused by: java.lang.ClassNotFoundException: org.apache.storm.topology.IRichSpout
at java.net.URLClassLoader.findClass(URLClassLoader.java:387)
at java.lang.ClassLoader.loadClass(ClassLoader.java:418)
at sun.misc.Launcher$AppClassLoader.loadClass(Launcher.java:352)
at java.lang.ClassLoader.loadClass(ClassLoader.java:351)
... 7 more
```

```
<?xml version="1.0" encoding="UTF-8"?>
<project xmlns="http://maven.apache.org/POM/4.0.0"
      xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
      xsi:schemaLocation="http://maven.apache.org/POM/4.0.0
http://maven.apache.org/xsd/maven-4.0.0.xsd">
    <modelVersion>4.0.0</modelVersion>

    <groupId>com.example</groupId>
    <artifactId>word-count-topology</artifactId>
    <version>1.0-SNAPSHOT</version>
    <packaging>jar</packaging>

    <name>word-count-topology</name>
    <url>http://maven.apache.org</url>

    <properties>
        <project.build.sourceEncoding>UTF-8</project.build.sourceEncoding>
        <maven.compiler.source>1.8</maven.compiler.source>
        <maven.compiler.target>1.8</maven.compiler.target>
        <!-- Actual versions -->
        <storm.version>2.4.0</storm.version>
        <slf4j.version>1.7.32</slf4j.version>
        <log4j.version>1.2.17</log4j.version>
    </properties>

    <dependencies>
        <!-- Apache Storm dependencies -->
        <dependency>
            <groupId>org.apache.storm</groupId>
            <artifactId>storm-core</artifactId>
            <version>${storm.version}</version>
            <scope>provided</scope>
        </dependency>
        <dependency>
            <groupId>org.apache.storm</groupId>
            <artifactId>storm-kafka-client</artifactId>
            <version>2.2.0</version>
        </dependency>

        <!-- Logging framework -->
        <dependency>
            <groupId>org.slf4j</groupId>
```

```

<artifactId>slf4j-api</artifactId>
<version>${slf4j.version}</version>
</dependency>
<dependency>
    <groupId>org.slf4j</groupId>
    <artifactId>slf4j-log4j12</artifactId>
    <version>${slf4j.version}</version>
</dependency>
<dependency>
    <groupId>log4j</groupId>
    <artifactId>log4j</artifactId>
    <version>${log4j.version}</version>
</dependency>
<dependency>
    <groupId>junit</groupId>
    <artifactId>junit</artifactId>
    <version>4.13.1</version>
    <scope>test</scope>
</dependency>
</dependencies>

<build>
    <plugins>
        <plugin>
            <groupId>org.apache.maven.plugins</groupId>
            <artifactId>maven-shade-plugin</artifactId>
            <version>3.2.4</version>
            <configuration>
                <createDependencyReducedPom>false</createDependencyReducedPom>
                <filters>
                    <filter>
                        <artifact>*:*</artifact>
                        <excludes>
                            <!-- Exclude Apache Storm dependencies -->
                            <exclude>org.apache.storm:*</exclude>
                        </excludes>
                    </filter>
                </filters>
            </configuration>
            <executions>
                <execution>
                    <phase>package</phase>
                    <goals>
                        <goal>shade</goal>
                    </goals>
                </execution>
            </executions>
        </plugin>
    </plugins>
</build>
</project>

```

```

hduser@kavi-VirtualBox:~/word-count-storm/word-count-topology/target$ java -jar
word-count-topology-1.0-SNAPSHOT.jar com.example.WordCountTopology
no main manifest attribute, in word-count-topology-1.0-SNAPSHOT.jar

```

```

<build>
    <plugins>
        <plugin>
            <groupId>org.apache.maven.plugins</groupId>
            <artifactId>maven-shade-plugin</artifactId>
            <version>3.2.4</version>
            <configuration>
                <createDependencyReducedPom>false</createDependencyReducedPom>
                <filters>
                    <filter>
                        <artifact>*:*</artifact>
                        <excludes>
                            <!-- Exclude Apache Storm dependencies -->
                            <exclude>org.apache.storm:*</exclude>
                        </excludes>
                    </filter>
                </filters>
                <transformers>
                    <transformer
implementation="org.apache.maven.plugins.shade.resource.ManifestResourceTransformer">
                        <mainClass>com.example.WordCountTopology</mainClass>
                    </transformer>
                </transformers>
            </configuration>
            <executions>
                <execution>
                    <phase>package</phase>
                    <goals>
                        <goal>shade</goal>
                    </goals>
                </execution>
            </executions>
        </plugin>
    </plugins>
</build>

```

```

hduser@kavi-VirtualBox:~/word-count-storm/word-count-topology/target$ java -jar
word-count-topology-1.0-SNAPSHOT.jar com.example.WordCountTopology
Error: A JNI error has occurred, please check your installation and try again
Exception in thread "main" java.lang.NoClassDefFoundError:
org/apache/storm/topology/IRichSpout
    at java.lang.Class.getDeclaredMethods0(Native Method)
    at java.lang.Class.privateGetDeclaredMethods(Class.java:2701)
    at java.lang.Class.privateGetMethodRecursive(Class.java:3048)
    at java.lang.Class.getMethod0(Class.java:3018)
    at java.lang.Class.getMethod(Class.java:1784)
    at sun.launcher.LauncherHelper.validateMainClass(LauncherHelper.java:670)
    at sun.launcher.LauncherHelper.checkAndLoadMain(LauncherHelper.java:652)
Caused by: java.lang.ClassNotFoundException: org.apache.storm.topology.IRichSpout
    at java.net.URLClassLoader.findClass(URLClassLoader.java:387)
    at java.lang.ClassLoader.loadClass(ClassLoader.java:418)
    at sun.misc.Launcher$AppClassLoader.loadClass(Launcher.java:352)
    at java.lang.ClassLoader.loadClass(ClassLoader.java:351)
    ... 7 more

```

```

<build>
  <plugins>
    <plugin>
      <groupId>org.apache.maven.plugins</groupId>
      <artifactId>maven-shade-plugin</artifactId>
      <version>3.2.4</version>
      <configuration>
        <createDependencyReducedPom>false</createDependencyReducedPom>
        <filters>
          <filter>
            <artifact>*:*</artifact>
            <excludes>
              <!-- Exclude Apache Storm dependencies -->
              <exclude>org.apache.storm:*</exclude>
            </excludes>
          </filter>
        </filters>
        <transformers>
          <transformer
implementation="org.apache.maven.plugins.shade.resource.ManifestResourceTransformer">
            <mainClass>com.example.WordCountTopology</mainClass>
          </transformer>
        </transformers>
        <dependencies>
          <!-- Include Apache Storm dependencies -->
          <dependency>
            <groupId>org.apache.storm</groupId>
            <artifactId>storm-core</artifactId>
            <version>2.4.0</version> <!-- Update to the appropriate version -->
          </dependency>
          <dependency>
            <groupId>org.apache.storm</groupId>
            <artifactId>storm-kafka-client</artifactId>
            <version>2.2.0</version> <!-- Update to the appropriate version -->
          </dependency>
        </dependencies>
      </configuration>
      <executions>
        <execution>
          <phase>package</phase>
          <goals>
            <goal>shade</goal>
          </goals>
        </execution>
      </executions>
    </plugin>
  </plugins>
</build>

```

hduser@kavi-VirtualBox:~/word-count-storm/word-count-topology/target\$ java -jar word-count-topology-1.0-SNAPSHOT.jar com.example.WordCountTopology

Error: A JNI error has occurred, please check your installation and try again

Exception in thread "main" java.lang.NoClassDefFoundError: org/apache/storm/topology/IRichSpout

at java.lang.Class.getDeclaredMethods0(Native Method)
at java.lang.Class.privateGetDeclaredMethods(Class.java:2701)
at java.lang.Class.privateGetMethodRecursive(Class.java:3048)
at java.lang.Class.getMethod0(Class.java:3018)
at java.lang.Class.getMethod(Class.java:1784)
at sun.launcher.LauncherHelper.validateMainClass(LauncherHelper.java:670)
at sun.launcher.LauncherHelper.checkAndLoadMain(LauncherHelper.java:652)

Caused by: java.lang.ClassNotFoundException: org.apache.storm.topology.IRichSpout

at java.net.URLClassLoader.findClass(URLClassLoader.java:387)
at java.lang.ClassLoader.loadClass(ClassLoader.java:418)
at sun.misc.Launcher\$AppClassLoader.loadClass(Launcher.java:352)
at java.lang.ClassLoader.loadClass(ClassLoader.java:351)

... 7 more

```
<project xmlns="http://maven.apache.org/POM/4.0.0"
    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xsi:schemaLocation="http://maven.apache.org/POM/4.0.0
http://maven.apache.org/xsd/maven-4.0.0.xsd">
    <modelVersion>4.0.0</modelVersion>

    <groupId>com.example</groupId>
    <artifactId>word-count-topology</artifactId>
    <version>1.0-SNAPSHOT</version>
    <packaging>jar</packaging>

    <name>word-count-topology</name>
    <url>http://maven.apache.org</url>

    <properties>
        <project.build.sourceEncoding>UTF-8</project.build.sourceEncoding>
        <maven.compiler.source>1.8</maven.compiler.source>
        <maven.compiler.target>1.8</maven.compiler.target>
    </properties>

    <dependencies>
        <!-- Apache Storm dependencies -->
        <dependency>
            <groupId>org.apache.storm</groupId>
            <artifactId>storm-core</artifactId>
            <version>2.4.0</version>
            <scope>provided</scope>
        </dependency>
        <dependency>
            <groupId>org.apache.storm</groupId>
            <artifactId>storm-kafka-client</artifactId>
            <version>2.2.0</version>
        </dependency>

        <!-- Logging framework -->
        <dependency>
            <groupId>org.slf4j</groupId>
```

```

<artifactId>slf4j-api</artifactId>
<version>1.7.32</version>
</dependency>
<dependency>
    <groupId>org.slf4j</groupId>
    <artifactId>slf4j-log4j12</artifactId>
    <version>1.7.32</version>
</dependency>
<dependency>
    <groupId>log4j</groupId>
    <artifactId>log4j</artifactId>
    <version>1.2.17</version>
</dependency>
</dependencies>

<build>
    <plugins>
        <plugin>
            <artifactId>maven-assembly-plugin</artifactId>
            <version>3.3.0</version>
            <configuration>
                <archive>
                    <manifest>
                        <mainClass>com.example.WordCountTopology</mainClass>
                    </manifest>
                </archive>
                <descriptorRefs>
                    <descriptorRef>jar-with-dependencies</descriptorRef>
                </descriptorRefs>
            </configuration>
            <executions>
                <execution>
                    <id>make-assembly</id>
                    <phase>package</phase>
                    <goals>
                        <goal>single</goal>
                    </goals>
                </execution>
            </executions>
        </plugin>
    </plugins>
</build>
</project>

```

hduser@kavi-VirtualBox:~/word-count-storm/word-count-topology\$ mvn clean install
[INFO] Scanning for projects...
[INFO]
[INFO] -----< com.example:word-count-topology >-----
[INFO] Building word-count-topology 1.0-SNAPSHOT
[INFO] -----[jar]-----
[INFO]
[INFO] --- maven-clean-plugin:2.5:clean (default-clean) @ word-count-topology ---
[INFO] Deleting /home/hduser/word-count-storm/word-count-topology/target

```
[INFO]
[INFO] --- maven-resources-plugin:2.6:resources (default-resources) @ word-count-topology ---
[INFO] Using 'UTF-8' encoding to copy filtered resources.
[INFO] skip non existing resourceDirectory /home/hduser/word-count-storm/word-count-topology/src/main/resources
[INFO]
[INFO] --- maven-compiler-plugin:3.1:compile (default-compile) @ word-count-topology ---
[INFO] Changes detected - recompiling the module!
[INFO] Compiling 2 source files to /home/hduser/word-count-storm/word-count-topology/target/classes
[INFO]
[INFO] --- maven-resources-plugin:2.6:testResources (default-testResources) @ word-count-topology ---
[INFO] Using 'UTF-8' encoding to copy filtered resources.
[INFO] skip non existing resourceDirectory /home/hduser/word-count-storm/word-count-topology/src/test/resources
[INFO]
[INFO] --- maven-compiler-plugin:3.1:testCompile (default-testCompile) @ word-count-topology ---
[INFO] Changes detected - recompiling the module!
[INFO] Compiling 1 source file to /home/hduser/word-count-storm/word-count-topology/target/test-classes
[INFO] -----
[ERROR] COMPILATION ERROR :
[INFO] -----
[ERROR] /home/hduser/word-count-storm/word-count-topology/src/test/java/com/example/AppTest.java:[3,23] package
junit.framework does not exist
[ERROR] /home/hduser/word-count-storm/word-count-topology/src/test/java/com/example/AppTest.java:[4,23] package
junit.framework does not exist
[ERROR] /home/hduser/word-count-storm/word-count-topology/src/test/java/com/example/AppTest.java:[5,23] package
junit.framework does not exist
[ERROR] /home/hduser/word-count-storm/word-count-topology/src/test/java/com/example/AppTest.java:[11,13] cannot find
symbol
    symbol: class TestCase
[ERROR] /home/hduser/word-count-storm/word-count-topology/src/test/java/com/example/AppTest.java:[26,19] cannot find
symbol
    symbol: class Test
    location: class com.example.AppTest
[INFO] 5 errors
[INFO] -----
[INFO] -----
[INFO] BUILD FAILURE
[INFO] -----
[INFO] Total time: 2.236 s
[INFO] Finished at: 2024-05-25T18:02:59+01:00
[INFO] -----
[ERROR] Failed to execute goal org.apache.maven.plugins:maven-compiler-plugin:3.1:testCompile (default-testCompile)
on project word-count-topology: Compilation failure: Compilation failure:
[ERROR] /home/hduser/word-count-storm/word-count-topology/src/test/java/com/example/AppTest.java:[3,23] package
junit.framework does not exist
[ERROR] /home/hduser/word-count-storm/word-count-topology/src/test/java/com/example/AppTest.java:[4,23] package
junit.framework does not exist
[ERROR] /home/hduser/word-count-storm/word-count-topology/src/test/java/com/example/AppTest.java:[5,23] package
junit.framework does not exist
[ERROR] /home/hduser/word-count-storm/word-count-topology/src/test/java/com/example/AppTest.java:[11,13] cannot find
symbol
[ERROR] symbol: class TestCase
[ERROR] /home/hduser/word-count-storm/word-count-topology/src/test/java/com/example/AppTest.java:[26,19] cannot find
symbol
```

[ERROR] symbol: class Test
[ERROR] location: class com.example.AppTest
[ERROR] -> [Help 1]
[ERROR]
[ERROR] To see the full stack trace of the errors, re-run Maven with the -e switch.
[ERROR] Re-run Maven using the -X switch to enable full debug logging.
[ERROR]
[ERROR] For more information about the errors and possible solutions, please read the following articles:
[ERROR] [Help 1] <http://cwiki.apache.org/confluence/display/MAVEN/MojoFailureException>

```
<project xmlns="http://maven.apache.org/POM/4.0.0"
         xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
         xsi:schemaLocation="http://maven.apache.org/POM/4.0.0
http://maven.apache.org/xsd/maven-4.0.0.xsd">
    <modelVersion>4.0.0</modelVersion>

    <groupId>com.example</groupId>
    <artifactId>word-count-topology</artifactId>
    <version>1.0-SNAPSHOT</version>
    <packaging>jar</packaging>

    <name>word-count-topology</name>
    <url>http://maven.apache.org</url>

    <properties>
        <project.build.sourceEncoding>UTF-8</project.build.sourceEncoding>
        <maven.compiler.source>1.8</maven.compiler.source>
        <maven.compiler.target>1.8</maven.compiler.target>
    </properties>

    <dependencies>
        <!-- Apache Storm dependencies -->
        <dependency>
            <groupId>org.apache.storm</groupId>
            <artifactId>storm-core</artifactId>
            <version>2.4.0</version>
            <scope>provided</scope>
        </dependency>
        <dependency>
            <groupId>org.apache.storm</groupId>
            <artifactId>storm-kafka-client</artifactId>
            <version>2.2.0</version>
        </dependency>

        <!-- Logging framework -->
        <dependency>
            <groupId>org.slf4j</groupId>
            <artifactId>slf4j-api</artifactId>
            <version>1.7.32</version>
        </dependency>
        <dependency>
            <groupId>org.slf4j</groupId>
            <artifactId>slf4j-log4j12</artifactId>
            <version>1.7.32</version>
        </dependency>
        <dependency>
```

```

<groupId>log4j</groupId>
<artifactId>log4j</artifactId>
<version>1.2.17</version>
</dependency>

<!-- JUnit -->
<dependency>
    <groupId>junit</groupId>
    <artifactId>junit</artifactId>
    <version>4.13.1</version>
    <scope>test</scope>
</dependency>
</dependencies>

<build>
    <plugins>
        <plugin>
            <artifactId>maven-assembly-plugin</artifactId>
            <version>3.3.0</version>
            <configuration>
                <archive>
                    <manifest>
                        <mainClass>com.example.WordCountTopology</mainClass>
                    </manifest>
                </archive>
                <descriptorRefs>
                    <descriptorRef>jar-with-dependencies</descriptorRef>
                </descriptorRefs>
            </configuration>
            <executions>
                <execution>
                    <id>make-assembly</id>
                    <phase>package</phase>
                    <goals>
                        <goal>single</goal>
                    </goals>
                </execution>
            </executions>
        </plugin>
    </plugins>
</build>
</project>

```

hduser@kavi-VirtualBox:~/word-count-storm/word-count-topology/target\$ java -jar word-count-topology-1.0-SNAPSHOT.jar com.example.WordCountTopology
no main manifest attribute, in word-count-topology-1.0-SNAPSHOT.jar

```

<project xmlns="http://maven.apache.org/POM/4.0.0"
    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xsi:schemaLocation="http://maven.apache.org/POM/4.0.0
http://maven.apache.org/xsd/maven-4.0.0.xsd">
    <modelVersion>4.0.0</modelVersion>

```

```
<groupId>com.example</groupId>
<artifactId>word-count-topology</artifactId>
<version>1.0-SNAPSHOT</version>
<packaging>jar</packaging>

<name>word-count-topology</name>
<url>http://maven.apache.org</url>

<properties>
    <project.build.sourceEncoding>UTF-8</project.build.sourceEncoding>
    <maven.compiler.source>1.8</maven.compiler.source>
    <maven.compiler.target>1.8</maven.compiler.target>
</properties>

<dependencies>
    <!-- Apache Storm dependencies -->
    <dependency>
        <groupId>org.apache.storm</groupId>
        <artifactId>storm-core</artifactId>
        <version>2.4.0</version>
        <scope>provided</scope>
    </dependency>
    <dependency>
        <groupId>org.apache.storm</groupId>
        <artifactId>storm-kafka-client</artifactId>
        <version>2.2.0</version>
    </dependency>
    <!-- Logging framework -->
    <dependency>
        <groupId>org.slf4j</groupId>
        <artifactId>slf4j-api</artifactId>
        <version>1.7.32</version>
    </dependency>
    <dependency>
        <groupId>org.slf4j</groupId>
        <artifactId>slf4j-log4j12</artifactId>
        <version>1.7.32</version>
    </dependency>
    <dependency>
        <groupId>log4j</groupId>
        <artifactId>log4j</artifactId>
        <version>1.2.17</version>
    </dependency>
    <!-- JUnit -->
    <dependency>
        <groupId>junit</groupId>
        <artifactId>junit</artifactId>
        <version>4.13.1</version>
        <scope>test</scope>
    </dependency>
</dependencies>

<build>
    <plugins>
```

```

<plugin>
    <artifactId>maven-assembly-plugin</artifactId>
    <version>3.3.0</version>
    <configuration>
        <archive>
            <manifest>
                <mainClass>com.example.WordCountTopology</mainClass>
            </manifest>
        </archive>
        <descriptorRefs>
            <descriptorRef>jar-with-dependencies</descriptorRef>
        </descriptorRefs>
    </configuration>
    <executions>
        <execution>
            <id>make-assembly</id>
            <phase>package</phase>
            <goals>
                <goal>single</goal>
            </goals>
        </execution>
    </executions>
</plugin>
</plugins>
</build>
</project>

```

```

hduser@kavi-VirtualBox:~/word-count-storm/word-count-topology/target$ java -jar
word-count-topology-1.0-SNAPSHOT.jar com.example.WordCountTopology
no main manifest attribute, in word-count-topology-1.0-SNAPSHOT.jar

```

```

<project xmlns="http://maven.apache.org/POM/4.0.0"
    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xsi:schemaLocation="http://maven.apache.org/POM/4.0.0
http://maven.apache.org/xsd/maven-4.0.0.xsd">
    <modelVersion>4.0.0</modelVersion>

    <groupId>com.example</groupId>
    <artifactId>word-count-topology</artifactId>
    <version>1.0-SNAPSHOT</version>
    <packaging>jar</packaging>

    <name>word-count-topology</name>
    <url>http://maven.apache.org</url>

    <properties>
        <project.build.sourceEncoding>UTF-8</project.build.sourceEncoding>
        <maven.compiler.source>1.8</maven.compiler.source>
        <maven.compiler.target>1.8</maven.compiler.target>
    </properties>

    <dependencies>
        <!-- Apache Storm dependencies -->

```

```
<dependency>
    <groupId>org.apache.storm</groupId>
    <artifactId>storm-core</artifactId>
    <version>2.4.0</version>
    <scope>provided</scope>
</dependency>
<dependency>
    <groupId>org.apache.storm</groupId>
    <artifactId>storm-kafka-client</artifactId>
    <version>2.2.0</version>
</dependency>

<!-- Logging framework -->
<dependency>
    <groupId>org.slf4j</groupId>
    <artifactId>slf4j-api</artifactId>
    <version>1.7.32</version>
</dependency>
<dependency>
    <groupId>org.slf4j</groupId>
    <artifactId>slf4j-log4j12</artifactId>
    <version>1.7.32</version>
</dependency>
<dependency>
    <groupId>log4j</groupId>
    <artifactId>log4j</artifactId>
    <version>1.2.17</version>
</dependency>

<!-- JUnit -->
<dependency>
    <groupId>junit</groupId>
    <artifactId>junit</artifactId>
    <version>4.13.1</version>
    <scope>test</scope>
</dependency>
</dependencies>

<build>
    <plugins>
        <!-- Maven Compiler Plugin -->
        <plugin>
            <groupId>org.apache.maven.plugins</groupId>
            <artifactId>maven-compiler-plugin</artifactId>
            <version>3.1</version>
            <configuration>
                <source>1.8</source>
                <target>1.8</target>
            </configuration>
        </plugin>
        <!-- Maven Shade Plugin -->
        <plugin>
            <groupId>org.apache.maven.plugins</groupId>
            <artifactId>maven-shade-plugin</artifactId>
            <version>3.2.4</version>
            <executions>
```

```

<execution>
    <phase>package</phase>
    <goals>
        <goal>shade</goal>
    </goals>
    <configuration>
        <transformers>
            <transformer
implementation="org.apache.maven.plugins.shade.resource.ManifestResourceTransformer">
                <mainClass>com.example.WordCountTopology</mainClass>
            </transformer>
        </transformers>
    </configuration>
</execution>
</executions>
</plugin>
<!-- Maven Jar Plugin -->
<plugin>
    <groupId>org.apache.maven.plugins</groupId>
    <artifactId>maven-jar-plugin</artifactId>
    <version>3.2.0</version>
    <configuration>
        <archive>
            <manifest>
                <mainClass>com.example.WordCountTopology</mainClass>
            </manifest>
        </archive>
    </configuration>
</plugin>
</plugins>
</build>
</project>

```

```

hduser@kavi-VirtualBox:~/word-count-storm/word-count-topology/target$ java -jar
word-count-topology-1.0-SNAPSHOT.jar com.example.WordCountTopology
Error: A JNI error has occurred, please check your installation and try again
Exception in thread "main" java.lang.NoClassDefFoundError:
org/apache/storm/topology/IRichSpout
    at java.lang.Class.getDeclaredMethods0(Native Method)
    at java.lang.Class.privateGetDeclaredMethods(Class.java:2701)
    at java.lang.Class.privateGetMethodRecursive(Class.java:3048)
    at java.lang.Class.getMethod0(Class.java:3018)
    at java.lang.Class.getMethod(Class.java:1784)
    at sun.launcher.LauncherHelper.validateMainClass(LauncherHelper.java:670)
    at sun.launcher.LauncherHelper.checkAndLoadMain(LauncherHelper.java:652)
Caused by: java.lang.ClassNotFoundException: org.apache.storm.topology.IRichSpout
    at java.net.URLClassLoader.findClass(URLClassLoader.java:387)
    at java.lang.ClassLoader.loadClass(ClassLoader.java:418)
    at sun.misc.Launcher$AppClassLoader.loadClass(Launcher.java:352)
    at java.lang.ClassLoader.loadClass(ClassLoader.java:351)
    ... 7 more

```

```
<project xmlns="http://maven.apache.org/POM/4.0.0"
    xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
    xsi:schemaLocation="http://maven.apache.org/POM/4.0.0
http://maven.apache.org/xsd/maven-4.0.0.xsd">
    <modelVersion>4.0.0</modelVersion>

    <groupId>com.example</groupId>
    <artifactId>word-count-topology</artifactId>
    <version>1.0-SNAPSHOT</version>
    <packaging>jar</packaging>

    <name>word-count-topology</name>
    <url>http://maven.apache.org</url>

    <properties>
        <project.build.sourceEncoding>UTF-8</project.build.sourceEncoding>
        <maven.compiler.source>1.8</maven.compiler.source>
        <maven.compiler.target>1.8</maven.compiler.target>
    </properties>

    <dependencies>
        <!-- Apache Storm dependencies -->
        <dependency>
            <groupId>org.apache.storm</groupId>
            <artifactId>storm-core</artifactId>
            <version>2.2.0</version>
            <scope>provided</scope>
        </dependency>
        <dependency>
            <groupId>org.apache.storm</groupId>
            <artifactId>storm-kafka-client</artifactId>
            <version>2.2.0</version>
        </dependency>
        <!-- Logging framework -->
        <dependency>
            <groupId>org.slf4j</groupId>
            <artifactId>slf4j-api</artifactId>
            <version>1.7.32</version>
        </dependency>
        <dependency>
            <groupId>org.slf4j</groupId>
            <artifactId>slf4j-log4j12</artifactId>
            <version>1.7.32</version>
        </dependency>
        <dependency>
            <groupId>log4j</groupId>
            <artifactId>log4j</artifactId>
            <version>1.2.17</version>
        </dependency>
        <!-- JUnit -->
```

```
<dependency>
    <groupId>junit</groupId>
    <artifactId>junit</artifactId>
    <version>4.13.1</version>
    <scope>test</scope>
</dependency>
</dependencies>

<build>
    <plugins>
        <!-- Maven Compiler Plugin -->
        <plugin>
            <groupId>org.apache.maven.plugins</groupId>
            <artifactId>maven-compiler-plugin</artifactId>
            <version>3.1</version>
            <configuration>
                <source>1.8</source>
                <target>1.8</target>
            </configuration>
        </plugin>
        <!-- Maven Shade Plugin -->
        <plugin>
            <groupId>org.apache.maven.plugins</groupId>
            <artifactId>maven-shade-plugin</artifactId>
            <version>3.2.4</version>
            <executions>
                <execution>
                    <phase>package</phase>
                    <goals>
                        <goal>shade</goal>
                    </goals>
                    <configuration>
                        <createDependencyReducedPom>false</createDependencyReducedPom>
                        <transformers>
                            <transformer
implementation="org.apache.maven.plugins.shade.resource.ManifestResourceTransformer">
                                <mainClass>com.example.WordCountTopology</mainClass>
                            </transformer>
                        </transformers>
                    </configuration>
                </execution>
            </executions>
        </plugin>
    </plugins>
</build>
</project>
```