Session 23:

KAFKA INTRODUCTION

Assignment 1

Assignment 23: Apache Kafka I Assignment Problems

Problem Statement :

Initial Execution :

```
[acadgild@localhost ~]$ jps
3109 Jps
[acadgild@localhost ~]$ sudo service sshd start
[sudo] password for acadgild:
[acadgild@localhost ~]$ start-all.sh
This script is Deprecated. Instead use start-dfs.sh and start-yarn.sh
18/09/11 23:39:27 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your
platform... using builtin-java classes where applicable
Starting namenodes on [localhost]
localhost: starting namenode, logging to
/home/acadgild/install/hadoop/hadoop-2.6.5/logs/hadoop-acadgild-namenode-localhost.localdomain.
out
localhost: starting datanode, logging to
/home/acadgild/install/hadoop/hadoop-2.6.5/logs/hadoop-acadgild-datanode-localhost.localdomain.o
ut
Starting secondary namenodes [0.0.0.0]
0.0.0.0: starting secondarynamenode, logging to
/home/acadgild/install/hadoop/hadoop-2.6.5/logs/hadoop-acadgild-secondarynamenode-localhost.loc
aldomain.out
18/09/11 23:40:18 WARN util.NativeCodeLoader: Unable to load native-hadoop library for your
platform... using builtin-java classes where applicable
starting yarn daemons
starting resourcemanager, logging to
/home/acadgild/install/hadoop/hadoop-2.6.5/logs/yarn-acadgild-resourcemanager-localhost.localdom
ain.out
localhost: starting nodemanager, logging to
/home/acadgild/install/hadoop/hadoop-2.6.5/logs/yarn-acadgild-nodemanager-localhost.localdomain.
out
[acadgild@localhost ~]$ jps
3698 ResourceManager
3491 SecondaryNameNode
3800 NodeManager
3259 NameNode
3355 DataNode
4735 Jps
[acadgild@localhost ~]$
```

// Now Starting the zookeeper :

[acadgild@localhost ~]$ /home/acadgild/install/zookeeper/zookeeper-3.4.12/bin/zkServer.sh start
ZooKeeper JMX enabled by default
Using config: /home/acadgild/install/zookeeper/zookeeper-3.4.12/bin/../conf/zoo.cfg
Starting zookeeper ... STARTED

[acadgild@localhost ~]$ jps
4001 Jps
3809 NodeManager
3543 SecondaryNameNode
3305 NameNode
3978 QuorumPeerMain
3406 DataNode
[acadgild@localhost ~]$

[acadgild@localhost ~]$ /home/acadgild/install/kafka/kafka_2.12-1.1.0/bin/kafka-server-start.sh
/home/acadgild/install/kafka/kafka_2.12-1.1.0/config/server.properties

4.jar:/home/acadgild/install/kafka/kafka_2.12-1.1.0/bin/../libs/slf4j-api-1.7.25.jar:/home/acadgild/inst
all/kafka/kafka_2.12-1.1.0/bin/../libs/slf4j-log4j12-1.7.25.jar:/home/acadgild/install/kafka/kafka_2.12
-1.1.0/bin/../libs/snappy-java-1.1.7.1.jar:/home/acadgild/install/kafka/kafka_2.12-1.1.0/bin/../libs/vali
dation-api-1.1.0.Final.jar:/home/acadgild/install/kafka/kafka_2.12-1.1.0/bin/../libs/zkclient-0.10.jar:/h
ome/acadgild/install/kafka/kafka_2.12-1.1.0/bin/../libs/zookeeper-3.4.10.jar
(org.apache.zookeeper.ZooKeeper)
[2018-09-16 00:21:26,989] INFO Client
environment:java.library.path=/usr/java/packages/lib/i386:/lib:/usr/lib
(org.apache.zookeeper.ZooKeeper)
[2018-09-16 00:21:26,989] INFO Client environment:java.io.tmpdir=/tmp
(org.apache.zookeeper.ZooKeeper)
[2018-09-16 00:21:26,989] INFO Client environment:java.compiler=<NA>
(org.apache.zookeeper.ZooKeeper)
[2018-09-16 00:21:26,989] INFO Client environment:os.name=Linux
(org.apache.zookeeper.ZooKeeper)
[2018-09-16 00:21:26,989] INFO Client environment:os.arch=i386
(org.apache.zookeeper.ZooKeeper)
[2018-09-16 00:21:26,989] INFO Client environment:os.version=2.6.32-696.28.1.el6.i686
(org.apache.zookeeper.ZooKeeper)
[2018-09-16 00:21:26,993] INFO Client environment:user.name=acadgild
(org.apache.zookeeper.ZooKeeper)
[2018-09-16 00:21:26,993] INFO Client environment:user.home=/home/acadgild
(org.apache.zookeeper.ZooKeeper)
[2018-09-16 00:21:26,994] INFO Client environment:user.dir=/home/acadgild
(org.apache.zookeeper.ZooKeeper)
[2018-09-16 00:21:26,998] INFO Initiating client connection, connectString=localhost:2181
sessionTimeout=6000
watcher=kafka.zookeeper.ZooKeeperClient$ZooKeeperClientWatcher$@1a9ad43
(org.apache.zookeeper.ZooKeeper)

[2018-09-16 00:21:27,060] INFO [ZooKeeperClient] Waiting until connected.
(kafka.zookeeper.ZooKeeperClient)
[2018-09-16 00:21:27,063] INFO Opening socket connection to server
localhost/0:0:0:0:0:0:0:1:2181. Will not attempt to authenticate using SASL (unknown error)
(org.apache.zookeeper.ClientCnxn)
[2018-09-16 00:21:27,097] INFO Socket connection established to localhost/0:0:0:0:0:0:0:1:2181,
initiating session (org.apache.zookeeper.ClientCnxn)
[2018-09-16 00:21:27,237] INFO Session establishment complete on server
localhost/0:0:0:0:0:0:0:1:2181, sessionid = 0x100001b71370000, negotiated timeout = 6000
(org.apache.zookeeper.ClientCnxn)
[2018-09-16 00:21:27,284] INFO [ZooKeeperClient] Connected.
(kafka.zookeeper.ZooKeeperClient)
[2018-09-16 00:21:29,076] INFO Cluster ID = Pg4HjbU2QsCYvLeOzIVQkA
(kafka.server.KafkaServer)
[2018-09-16 00:21:29,462] INFO KafkaConfig values:
	advertised.host.name = null
	advertised.listeners = null
	advertised.port = null
	alter.config.policy.class.name = null
	alter.log.dirs.replication.quota.window.num = 11
	alter.log.dirs.replication.quota.window.size.seconds = 1
	authorizer.class.name =
	auto.create.topics.enable = true
	auto.leader.rebalance.enable = true
	background.threads = 10
	broker.id = 0
	broker.id.generation.enable = true
	broker.rack = null
	compression.type = producer
	connections.max.idle.ms = 600000
	controlled.shutdown.enable = true
	controlled.shutdown.max.retries = 3
	controlled.shutdown.retry.backoff.ms = 5000
	controller.socket.timeout.ms = 30000
	create.topic.policy.class.name = null
	default.replication.factor = 1
	delegation.token.expiry.check.interval.ms = 3600000
	delegation.token.expiry.time.ms = 86400000
	delegation.token.master.key = null
	delegation.token.max.lifetime.ms = 604800000
	delete.records.purgatory.purge.interval.requests = 1
	delete.topic.enable = true
	fetch.purgatory.purge.interval.requests = 1000
	group.initial.rebalance.delay.ms = 0
	group.max.session.timeout.ms = 300000
	group.min.session.timeout.ms = 6000
	host.name =
	inter.broker.listener.name = null
	inter.broker.protocol.version = 1.1-IV0

leader.imbalance.check.interval.seconds = 300
leader.imbalance.per.broker.percentage = 10
listener.security.protocol.map =
PLAINTEXT:PLAINTEXT,SSL:SSL,SASL_PLAINTEXT:SASL_PLAINTEXT,SASL_SSL:SASL_
SSL
listeners = null
log.cleaner.backoff.ms = 15000
log.cleaner.dedupe.buffer.size = 134217728
log.cleaner.delete.retention.ms = 86400000
log.cleaner.enable = true
log.cleaner.io.buffer.load.factor = 0.9
log.cleaner.io.buffer.size = 524288
log.cleaner.io.max.bytes.per.second = 1.7976931348623157E308
log.cleaner.min.cleanable.ratio = 0.5
log.cleaner.min.compaction.lag.ms = 0
log.cleaner.threads = 1
log.cleanup.policy = [delete]
log.dir = /tmp/kafka-logs
log.dirs = /tmp/kafka-logs
log.flush.interval.messages = 9223372036854775807
log.flush.interval.ms = null
log.flush.offset.checkpoint.interval.ms = 60000
log.flush.scheduler.interval.ms = 9223372036854775807
log.flush.start.offset.checkpoint.interval.ms = 60000
log.index.interval.bytes = 4096
log.index.size.max.bytes = 10485760
log.message.format.version = 1.1-IV0
log.message.timestamp.difference.max.ms = 9223372036854775807
log.message.timestamp.type = CreateTime
log.preallocate = false
log.retention.bytes = -1
log.retention.check.interval.ms = 300000
log.retention.hours = 168
log.retention.minutes = null
log.retention.ms = null
log.roll.hours = 168
log.roll.jitter.hours = 0
log.roll.jitter.ms = null
log.roll.ms = null
log.segment.bytes = 1073741824
log.segment.delete.delay.ms = 60000
max.connections.per.ip = 2147483647
max.connections.per.ip.overrides =
max.incremental.fetch.session.cache.slots = 1000
message.max.bytes = 1000012
metric.reporters = []
metrics.num.samples = 2
metrics.recording.level = INFO
metrics.sample.window.ms = 30000

min.insync.replicas = 1
num.io.threads = 8
num.network.threads = 3
num.partitions = 1
num.recovery.threads.per.data.dir = 1
num.replica.alter.log.dirs.threads = null
num.replica.fetchers = 1
offset.metadata.max.bytes = 4096
offsets.commit.required.acks = -1
offsets.commit.timeout.ms = 5000
offsets.load.buffer.size = 5242880
offsets.retention.check.interval.ms = 600000
offsets.retention.minutes = 1440
offsets.topic.compression.codec = 0
offsets.topic.num.partitions = 50
offsets.topic.replication.factor = 1
offsets.topic.segment.bytes = 104857600
password.encoder.cipher.algorithm = AES/CBC/PKCS5Padding
password.encoder.iterations = 4096
password.encoder.key.length = 128
password.encoder.keyfactory.algorithm = null
password.encoder.old.secret = null
password.encoder.secret = null
port = 9092
principal.builder.class = null
producer.purgatory.purge.interval.requests = 1000
queued.max.request.bytes = -1
queued.max.requests = 500
quota.consumer.default = 9223372036854775807
quota.producer.default = 9223372036854775807
quota.window.num = 11
quota.window.size.seconds = 1
replica.fetch.backoff.ms = 1000
replica.fetch.max.bytes = 1048576
replica.fetch.min.bytes = 1
replica.fetch.response.max.bytes = 10485760
replica.fetch.wait.max.ms = 500
replica.high.watermark.checkpoint.interval.ms = 5000
replica.lag.time.max.ms = 10000
replica.socket.receive.buffer.bytes = 65536
replica.socket.timeout.ms = 30000
replication.quota.window.num = 11
replication.quota.window.size.seconds = 1
request.timeout.ms = 30000
reserved.broker.max.id = 1000
sasl.enabled.mechanisms = [GSSAPI]
sasl.jaas.config = null
sasl.kerberos.kinit.cmd = /usr/bin/kinit
sasl.kerberos.min.time.before.relogin = 60000

sasl.kerberos.principal.to.local.rules = [DEFAULT]
sasl.kerberos.service.name = null
sasl.kerberos.ticket.renew.jitter = 0.05
sasl.kerberos.ticket.renew.window.factor = 0.8
sasl.mechanism.inter.broker.protocol = GSSAPI
security.inter.broker.protocol = PLAINTEXT
socket.receive.buffer.bytes = 102400
socket.request.max.bytes = 104857600
socket.send.buffer.bytes = 102400
ssl.cipher.suites = []
ssl.client.auth = none
ssl.enabled.protocols = [TLSv1.2, TLSv1.1, TLSv1]
ssl.endpoint.identification.algorithm = null
ssl.key.password = null
ssl.keymanager.algorithm = SunX509
ssl.keystore.location = null
ssl.keystore.password = null
ssl.keystore.type = JKS
ssl.protocol = TLS
ssl.provider = null
ssl.secure.random.implementation = null
ssl.trustmanager.algorithm = PKIX
ssl.truststore.location = null
ssl.truststore.password = null
ssl.truststore.type = JKS
transaction.abort.timed.out.transaction.cleanup.interval.ms = 60000
transaction.max.timeout.ms = 900000
transaction.remove.expired.transaction.cleanup.interval.ms = 3600000
transaction.state.log.load.buffer.size = 5242880
transaction.state.log.min.isr = 1
transaction.state.log.num.partitions = 50
transaction.state.log.replication.factor = 1
transaction.state.log.segment.bytes = 104857600
transactional.id.expiration.ms = 604800000
unclean.leader.election.enable = false
zookeeper.connect = localhost:2181
zookeeper.connection.timeout.ms = 6000
zookeeper.max.in.flight.requests = 10
zookeeper.session.timeout.ms = 6000
zookeeper.set.acl = false
zookeeper.sync.time.ms = 2000
(kafka.server.KafkaConfig)
[2018-09-16 00:21:29,562] INFO KafkaConfig values:
advertised.host.name = null
advertised.listeners = null
advertised.port = null
alter.config.policy.class.name = null
alter.log.dirs.replication.quota.window.num = 11
alter.log.dirs.replication.quota.window.size.seconds = 1

```
	authorizer.class.name =
	auto.create.topics.enable = true
	auto.leader.rebalance.enable = true
	background.threads = 10
	broker.id = 0
	broker.id.generation.enable = true
	broker.rack = null
	compression.type = producer
	connections.max.idle.ms = 600000
	controlled.shutdown.enable = true
	controlled.shutdown.max.retries = 3
	controlled.shutdown.retry.backoff.ms = 5000
	controller.socket.timeout.ms = 30000
	create.topic.policy.class.name = null
	default.replication.factor = 1
	delegation.token.expiry.check.interval.ms = 3600000
	delegation.token.expiry.time.ms = 86400000
	delegation.token.master.key = null
	delegation.token.max.lifetime.ms = 604800000
	delete.records.purgatory.purge.interval.requests = 1
	delete.topic.enable = true
	fetch.purgatory.purge.interval.requests = 1000
	group.initial.rebalance.delay.ms = 0
	group.max.session.timeout.ms = 300000
	group.min.session.timeout.ms = 6000
	host.name =
	inter.broker.listener.name = null
	inter.broker.protocol.version = 1.1-IV0
	leader.imbalance.check.interval.seconds = 300
	leader.imbalance.per.broker.percentage = 10
	listener.security.protocol.map =
PLAINTEXT:PLAINTEXT,SSL:SSL,SASL_PLAINTEXT:SASL_PLAINTEXT,SASL_SSL:SASL_
SSL
	listeners = null
	log.cleaner.backoff.ms = 15000
	log.cleaner.dedupe.buffer.size = 134217728
	log.cleaner.delete.retention.ms = 86400000
	log.cleaner.enable = true
	log.cleaner.io.buffer.load.factor = 0.9
	log.cleaner.io.buffer.size = 524288
	log.cleaner.io.max.bytes.per.second = 1.7976931348623157E308
	log.cleaner.min.cleanable.ratio = 0.5
	log.cleaner.min.compaction.lag.ms = 0
	log.cleaner.threads = 1
	log.cleanup.policy = [delete]
	log.dir = /tmp/kafka-logs
	log.dirs = /tmp/kafka-logs
	log.flush.interval.messages = 9223372036854775807
	log.flush.interval.ms = null
```

log.flush.offset.checkpoint.interval.ms = 60000
log.flush.scheduler.interval.ms = 9223372036854775807
log.flush.start.offset.checkpoint.interval.ms = 60000
log.index.interval.bytes = 4096
log.index.size.max.bytes = 10485760
log.message.format.version = 1.1-IV0
log.message.timestamp.difference.max.ms = 9223372036854775807
log.message.timestamp.type = CreateTime
log.preallocate = false
log.retention.bytes = -1
log.retention.check.interval.ms = 300000
log.retention.hours = 168
log.retention.minutes = null
log.retention.ms = null
log.roll.hours = 168
log.roll.jitter.hours = 0
log.roll.jitter.ms = null
log.roll.ms = null
log.segment.bytes = 1073741824
log.segment.delete.delay.ms = 60000
max.connections.per.ip = 2147483647
max.connections.per.ip.overrides =
max.incremental.fetch.session.cache.slots = 1000
message.max.bytes = 1000012
metric.reporters = []
metrics.num.samples = 2
metrics.recording.level = INFO
metrics.sample.window.ms = 30000
min.insync.replicas = 1
num.io.threads = 8
num.network.threads = 3
num.partitions = 1
num.recovery.threads.per.data.dir = 1
num.replica.alter.log.dirs.threads = null
num.replica.fetchers = 1
offset.metadata.max.bytes = 4096
offsets.commit.required.acks = -1
offsets.commit.timeout.ms = 5000
offsets.load.buffer.size = 5242880
offsets.retention.check.interval.ms = 600000
offsets.retention.minutes = 1440
offsets.topic.compression.codec = 0
offsets.topic.num.partitions = 50
offsets.topic.replication.factor = 1
offsets.topic.segment.bytes = 104857600
password.encoder.cipher.algorithm = AES/CBC/PKCS5Padding
password.encoder.iterations = 4096
password.encoder.key.length = 128
password.encoder.keyfactory.algorithm = null

password.encoder.old.secret = null
password.encoder.secret = null
port = 9092
principal.builder.class = null
producer.purgatory.purge.interval.requests = 1000
queued.max.request.bytes = -1
queued.max.requests = 500
quota.consumer.default = 9223372036854775807
quota.producer.default = 9223372036854775807
quota.window.num = 11
quota.window.size.seconds = 1
replica.fetch.backoff.ms = 1000
replica.fetch.max.bytes = 1048576
replica.fetch.min.bytes = 1
replica.fetch.response.max.bytes = 10485760
replica.fetch.wait.max.ms = 500
replica.high.watermark.checkpoint.interval.ms = 5000
replica.lag.time.max.ms = 10000
replica.socket.receive.buffer.bytes = 65536
replica.socket.timeout.ms = 30000
replication.quota.window.num = 11
replication.quota.window.size.seconds = 1
request.timeout.ms = 30000
reserved.broker.max.id = 1000
sasl.enabled.mechanisms = [GSSAPI]
sasl.jaas.config = null
sasl.kerberos.kinit.cmd = /usr/bin/kinit
sasl.kerberos.min.time.before.relogin = 60000
sasl.kerberos.principal.to.local.rules = [DEFAULT]
sasl.kerberos.service.name = null
sasl.kerberos.ticket.renew.jitter = 0.05
sasl.kerberos.ticket.renew.window.factor = 0.8
sasl.mechanism.inter.broker.protocol = GSSAPI
security.inter.broker.protocol = PLAINTEXT
socket.receive.buffer.bytes = 102400
socket.request.max.bytes = 104857600
socket.send.buffer.bytes = 102400
ssl.cipher.suites = []
ssl.client.auth = none
ssl.enabled.protocols = [TLSv1.2, TLSv1.1, TLSv1]
ssl.endpoint.identification.algorithm = null
ssl.key.password = null
ssl.keymanager.algorithm = SunX509
ssl.keystore.location = null
ssl.keystore.password = null
ssl.keystore.type = JKS
ssl.protocol = TLS
ssl.provider = null
ssl.secure.random.implementation = null

ssl.trustmanager.algorithm = PKIX
ssl.truststore.location = null
ssl.truststore.password = null
ssl.truststore.type = JKS
transaction.abort.timed.out.transaction.cleanup.interval.ms = 60000
transaction.max.timeout.ms = 900000
transaction.remove.expired.transaction.cleanup.interval.ms = 3600000
transaction.state.log.load.buffer.size = 5242880
transaction.state.log.min.isr = 1
transaction.state.log.num.partitions = 50
transaction.state.log.replication.factor = 1
transaction.state.log.segment.bytes = 104857600
transactional.id.expiration.ms = 604800000
unclean.leader.election.enable = false
zookeeper.connect = localhost:2181
zookeeper.connection.timeout.ms = 6000
zookeeper.max.in.flight.requests = 10
zookeeper.session.timeout.ms = 6000
zookeeper.set.acl = false
zookeeper.sync.time.ms = 2000
(kafka.server.KafkaConfig)
[2018-09-16 00:21:29,789] INFO [ThrottledRequestReaper-Fetch]: Starting (kafka.server.ClientQuotaManager$ThrottledRequestReaper)
[2018-09-16 00:21:29,789] INFO [ThrottledRequestReaper-Produce]: Starting (kafka.server.ClientQuotaManager$ThrottledRequestReaper)
[2018-09-16 00:21:29,798] INFO [ThrottledRequestReaper-Request]: Starting (kafka.server.ClientQuotaManager$ThrottledRequestReaper)
[2018-09-16 00:21:30,056] INFO Loading logs. (kafka.log.LogManager)
[2018-09-16 00:21:30,404] WARN [Log partition=TestTopic1-0, dir=/tmp/kafka-logs] Found a corrupted index file corresponding to log file /tmp/kafka-logs/TestTopic1-0/00000000000000000000.log due to Corrupt index found, index file (/tmp/kafka-logs/TestTopic1-0/00000000000000000000.index) has non-zero size but the last offset is 0 which is no greater than the base offset 0.}, recovering segment and rebuilding index files... (kafka.log.Log)
[2018-09-16 00:21:30,643] INFO [ProducerStateManager partition=TestTopic1-0] Writing producer snapshot at offset 3 (kafka.log.ProducerStateManager)
[2018-09-16 00:21:30,651] INFO [Log partition=TestTopic1-0, dir=/tmp/kafka-logs] Recovering unflushed segment 0 (kafka.log.Log)
[2018-09-16 00:21:30,660] INFO [ProducerStateManager partition=TestTopic1-0] Writing producer snapshot at offset 3 (kafka.log.ProducerStateManager)
[2018-09-16 00:21:30,735] INFO [Log partition=TestTopic1-0, dir=/tmp/kafka-logs] Loading producer state from offset 3 with message format version 2 (kafka.log.Log)
[2018-09-16 00:21:30,743] INFO [ProducerStateManager partition=TestTopic1-0] Loading producer state from snapshot file '/tmp/kafka-logs/TestTopic1-0/00000000000000000003.snapshot' (kafka.log.ProducerStateManager)
[2018-09-16 00:21:30,801] INFO [Log partition=TestTopic1-0, dir=/tmp/kafka-logs] Completed load of log with 1 segments, log start offset 0 and log end offset 3 in 501 ms (kafka.log.Log)
[2018-09-16 00:21:30,899] WARN [Log partition=TestTopic-0, dir=/tmp/kafka-logs] Found a corrupted index file corresponding to log file

/tmp/kafka-logs/TestTopic-0/00000000000000000000.log due to Corrupt index found, index file (/tmp/kafka-logs/TestTopic-0/00000000000000000000.index) has non-zero size but the last offset is 0 which is no greater than the base offset 0.}, recovering segment and rebuilding index files... (kafka.log.Log)
[2018-09-16 00:21:30,903] INFO [ProducerStateManager partition=TestTopic-0] Writing producer snapshot at offset 1 (kafka.log.ProducerStateManager)
[2018-09-16 00:21:30,905] INFO [Log partition=TestTopic-0, dir=/tmp/kafka-logs] Recovering unflushed segment 0 (kafka.log.Log)
[2018-09-16 00:21:30,925] INFO [ProducerStateManager partition=TestTopic-0] Writing producer snapshot at offset 1 (kafka.log.ProducerStateManager)
[2018-09-16 00:21:30,931] INFO [Log partition=TestTopic-0, dir=/tmp/kafka-logs] Loading producer state from offset 1 with message format version 2 (kafka.log.Log)
[2018-09-16 00:21:30,937] INFO [ProducerStateManager partition=TestTopic-0] Loading producer state from snapshot file '/tmp/kafka-logs/TestTopic-0/00000000000000000001.snapshot' (kafka.log.ProducerStateManager)
[2018-09-16 00:21:30,942] INFO [Log partition=TestTopic-0, dir=/tmp/kafka-logs] Completed load of log with 1 segments, log start offset 0 and log end offset 1 in 45 ms (kafka.log.Log)
[2018-09-16 00:21:30,975] INFO Logs loading complete in 917 ms. (kafka.log.LogManager)
[2018-09-16 00:21:31,041] INFO Starting log cleanup with a period of 300000 ms. (kafka.log.LogManager)
[2018-09-16 00:21:31,050] INFO Starting log flusher with a default period of 9223372036854775807 ms. (kafka.log.LogManager)
[2018-09-16 00:21:35,586] INFO Awaiting socket connections on 0.0.0.0:9092. (kafka.network.Acceptor)
[2018-09-16 00:21:35,733] INFO [SocketServer brokerId=0] Started 1 acceptor threads (kafka.network.SocketServer)
[2018-09-16 00:21:35,856] INFO [ExpirationReaper-0-Produce]: Starting (kafka.server.DelayedOperationPurgatory$ExpiredOperationReaper)
[2018-09-16 00:21:35,857] INFO [ExpirationReaper-0-Fetch]: Starting (kafka.server.DelayedOperationPurgatory$ExpiredOperationReaper)
[2018-09-16 00:21:35,858] INFO [ExpirationReaper-0-DeleteRecords]: Starting (kafka.server.DelayedOperationPurgatory$ExpiredOperationReaper)
[2018-09-16 00:21:35,977] INFO [LogDirFailureHandler]: Starting (kafka.server.ReplicaManager$LogDirFailureHandler)
[2018-09-16 00:21:36,285] INFO Creating /brokers/ids/0 (is it secure? false) (kafka.zk.KafkaZkClient)
[2018-09-16 00:21:36,293] INFO Result of znode creation at /brokers/ids/0 is: OK (kafka.zk.KafkaZkClient)
[2018-09-16 00:21:36,304] INFO Registered broker 0 at path /brokers/ids/0 with addresses: ArrayBuffer(EndPoint(localhost,9092,ListenerName(PLAINTEXT),PLAINTEXT)) (kafka.zk.KafkaZkClient)
[2018-09-16 00:21:36,510] INFO [ExpirationReaper-0-topic]: Starting (kafka.server.DelayedOperationPurgatory$ExpiredOperationReaper)
[2018-09-16 00:21:36,511] INFO Creating /controller (is it secure? false) (kafka.zk.KafkaZkClient)
[2018-09-16 00:21:36,530] INFO Result of znode creation at /controller is: OK (kafka.zk.KafkaZkClient)
[2018-09-16 00:21:36,548] INFO [ExpirationReaper-0-Heartbeat]: Starting (kafka.server.DelayedOperationPurgatory$ExpiredOperationReaper)
[2018-09-16 00:21:36,551] INFO [ExpirationReaper-0-Rebalance]: Starting

(kafka.server.DelayedOperationPurgatory$ExpiredOperationReaper)
[2018-09-16 00:21:36,753] INFO [GroupCoordinator 0]: Starting up.
(kafka.coordinator.group.GroupCoordinator)
[2018-09-16 00:21:36,763] INFO [GroupCoordinator 0]: Startup complete.
(kafka.coordinator.group.GroupCoordinator)
[2018-09-16 00:21:36,815] INFO [GroupMetadataManager brokerId=0] Removed 0 expired offsets in 48 milliseconds. (kafka.coordinator.group.GroupMetadataManager)
[2018-09-16 00:21:36,878] INFO [ProducerId Manager 0]: Acquired new producerId block (brokerId:0,blockStartProducerId:1000,blockEndProducerId:1999) by writing to Zk with path version 2 (kafka.coordinator.transaction.ProducerIdManager)
[2018-09-16 00:21:37,100] INFO [TransactionCoordinator id=0] Starting up.
(kafka.coordinator.transaction.TransactionCoordinator)
[2018-09-16 00:21:37,116] INFO [TransactionCoordinator id=0] Startup complete.
(kafka.coordinator.transaction.TransactionCoordinator)
[2018-09-16 00:21:37,121] INFO [Transaction Marker Channel Manager 0]: Starting
(kafka.coordinator.transaction.TransactionMarkerChannelManager)
[2018-09-16 00:21:37,841] INFO [/config/changes-event-process-thread]: Starting
(kafka.common.ZkNodeChangeNotificationListener$ChangeEventProcessThread)
[2018-09-16 00:21:38,026] INFO Kafka version : 1.1.0
(org.apache.kafka.common.utils.AppInfoParser)
[2018-09-16 00:21:38,043] INFO Kafka commitId : fdcf75ea326b8e07
(org.apache.kafka.common.utils.AppInfoParser)
[2018-09-16 00:21:38,076] INFO [KafkaServer id=0] started (kafka.server.KafkaServer)
[2018-09-16 00:21:38,113] INFO [ReplicaFetcherManager on broker 0] Removed fetcher for partitions TestTopic-0,TestTopic1-0 (kafka.server.ReplicaFetcherManager)
[2018-09-16 00:21:38,299] INFO Replica loaded for partition TestTopic-0 with initial high watermark 1 (kafka.cluster.Replica)
[2018-09-16 00:21:38,352] INFO [Partition TestTopic-0 broker=0] TestTopic-0 starts at Leader Epoch 0 from offset 1. Previous Leader Epoch was: -1 (kafka.cluster.Partition)
[2018-09-16 00:21:38,494] INFO Replica loaded for partition TestTopic1-0 with initial high watermark 3 (kafka.cluster.Replica)
[2018-09-16 00:21:38,494] INFO [Partition TestTopic1-0 broker=0] TestTopic1-0 starts at Leader Epoch 0 from offset 3. Previous Leader Epoch was: -1 (kafka.cluster.Partition)
[2018-09-16 00:21:38,575] INFO [ReplicaAlterLogDirsManager on broker 0] Added fetcher for partitions List() (kafka.server.ReplicaAlterLogDirsManager)

Task 1:

Create a kafka topic named KeyLessTopic.

Inside KeyLessTopic insert following data:
{"name":"John", "exp":16}
{"name":"Finn", "exp":20}
{"name":"Cylin", "exp":18}
{"name":"Mark", "exp":2}
{"name":"Akshay", "exp":14}

Terminal Execution :

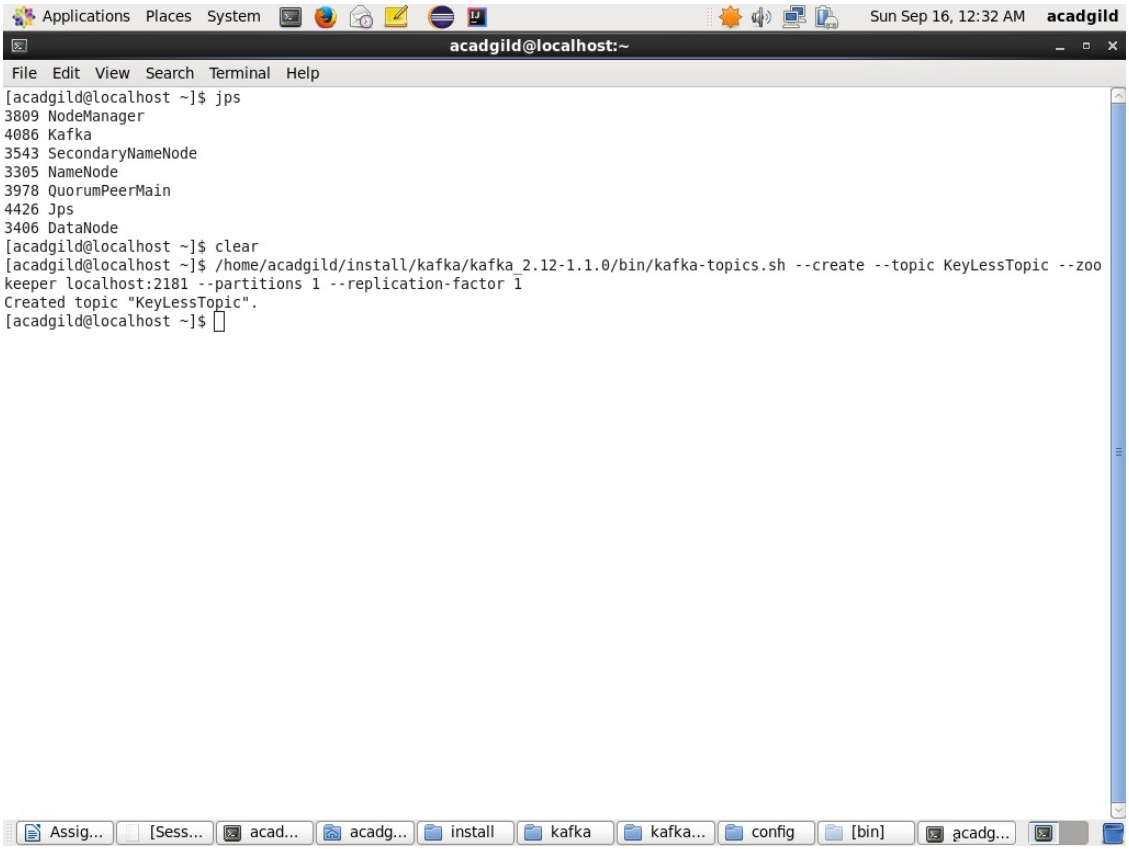
1. Creating topic

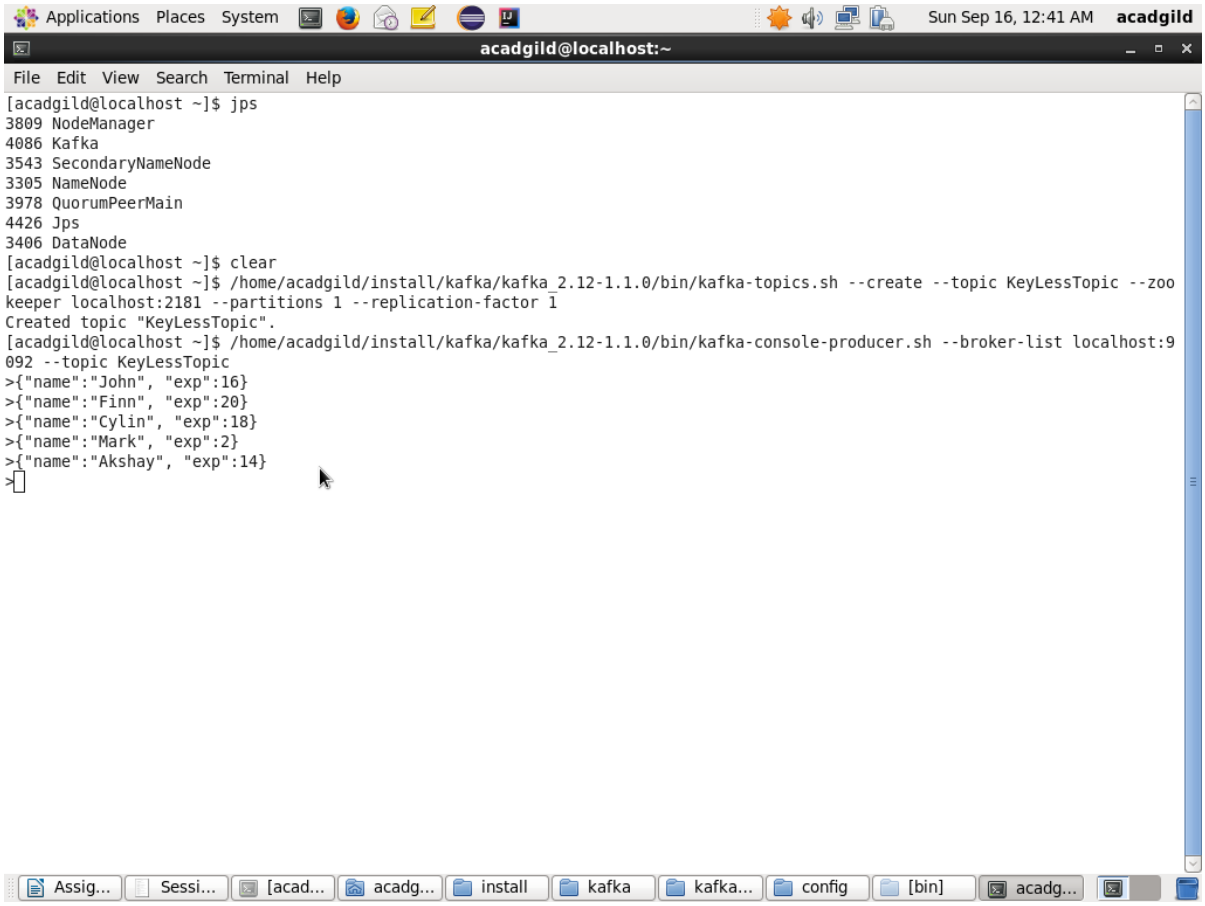
[acadgild@localhost ~]$ /home/acadgild/install/kafka/kafka_2.12-1.1.0/bin/kafka-topics.sh --create --topic KeyLessTopic --zookeeper localhost:2181 --partitions 1 --replication-factor 1
Created topic "KeyLessTopic".

2. Running a console producer

[acadgild@localhost ~]$ /home/acadgild/install/kafka/kafka_2.12-1.1.0/bin/kafka-console-producer.sh --broker-list localhost:9092 --topic KeyLessTopic
>{"name":"John", "exp":16}
>{"name":"Finn", "exp":20}
>{"name":"Cylin", "exp":18}
>{"name":"Mark", "exp":2}
>{"name":"Akshay", "exp":14}

OUTPUT :





Task 2:
Create a console consumer that reads KeyLessTopic from beginning

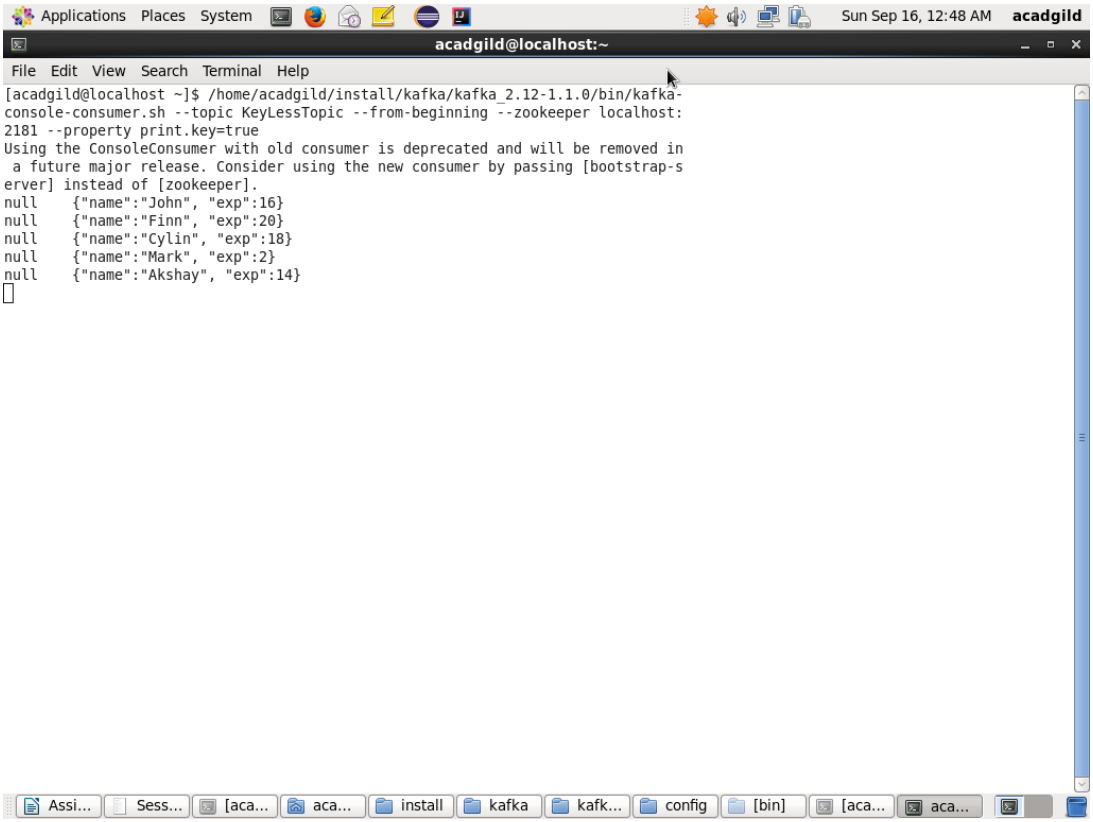
Terminal Execution :

1. Running a console consumer :

[acadgild@localhost ~]$
/home/acadgild/install/kafka/kafka_2.12-1.1.0/bin/kafka-console-consumer.sh --topic KeyLessTopic --from-beginning --zookeeper localhost:2181 --property print.key=true

Using the ConsoleConsumer with old consumer is deprecated and will be removed in a future major release. Consider using the new consumer by passing [bootstrap-server] instead of [zookeeper].
null {"name":"John", "exp":16}
null {"name":"Finn", "exp":20}
null {"name":"Cylin", "exp":18}
null {"name":"Mark", "exp":2}
null {"name":"Akshay", "exp":14}

OUTPUT :



Task 3:

Create a kafka topic named KeyedTopic. Inside KeyedTopic insert following data:
The part before comma(,) should be treated as key and after comma(,) should be treated as value
{"name":"John"},{"exp":16}
{"name":"Finn"},{"exp":20}
{"name":"Cylin"},{"exp":18}
{"name":"Mark"},{"exp":2}
{"name":"Akshay"},{"exp":14}

Terminal Execution :

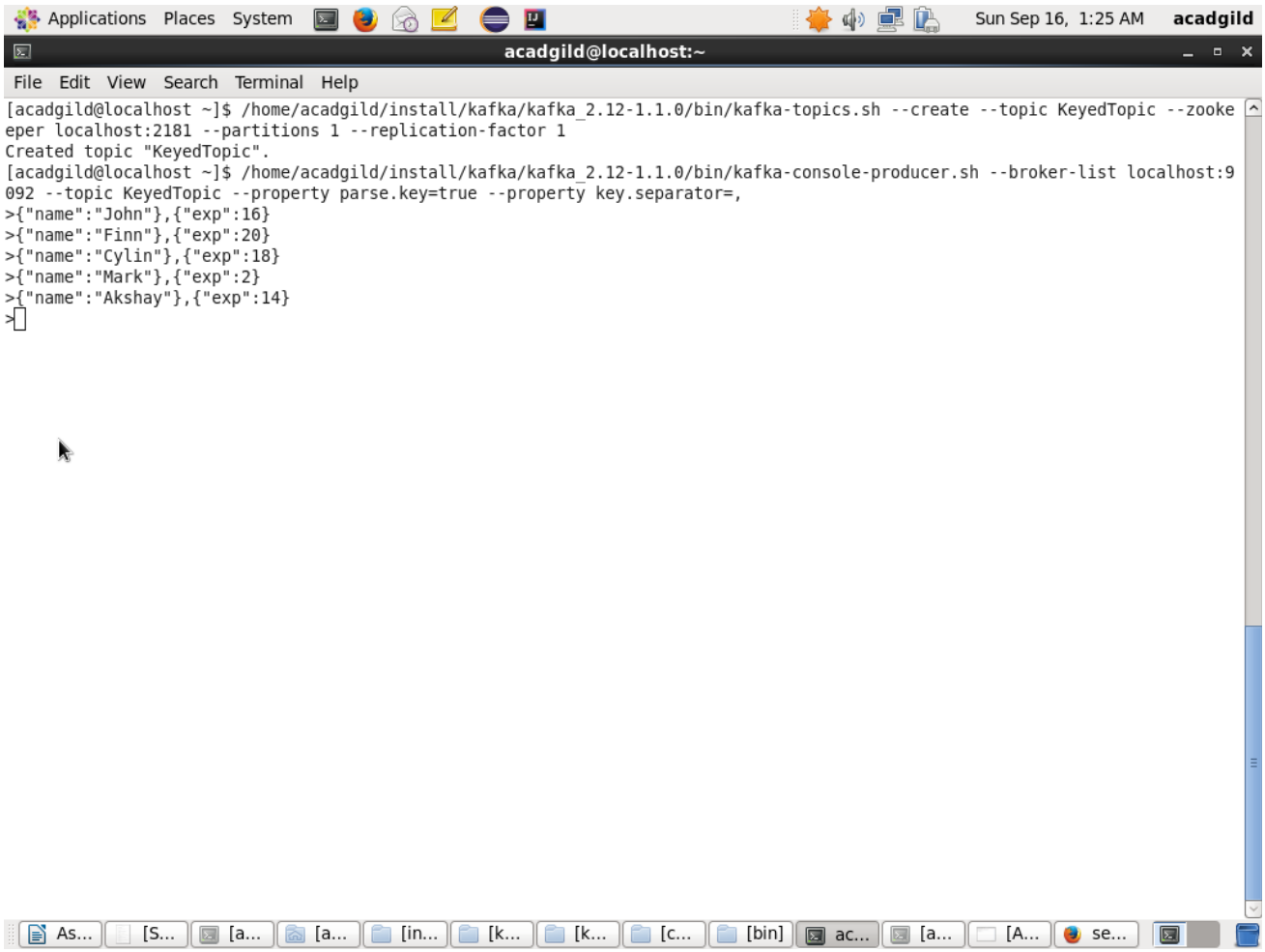
1. Creating topic :

[acadgild@localhost ~]$ /home/acadgild/install/kafka/kafka_2.12-1.1.0/bin/kafka-topics.sh --create --topic KeyedTopic --zookeeper localhost:2181 --partitions 1 --replication-factor 1
Created topic "KeyedTopic".

2. Running a console producer :

[acadgild@localhost ~]$
/home/acadgild/install/kafka/kafka_2.12-1.1.0/bin/kafka-console-producer.sh --broker-list localhost:9092 --topic KeyedTopic --property parse.key=true --property key.separator=,
>{"name":"John"},{"exp":16}
>{"name":"Finn"},{"exp":20}
>{"name":"Cylin"},{"exp":18}
>{"name":"Mark"},{"exp":2}
>{"name":"Akshay"},{"exp":14}

OUTPUT :



Task 4:
Create a console consumer that reads KeyedTopic from beginning
The key and value should be separated by '-'

Terminal Execution :

1. Running a console consumer :

[acadgild@localhost ~]$ /home/acadgild/install/kafka/kafka_2.12-1.1.0/bin/kafka-console-consumer.sh --topic KeyedTopic --from-beginning --zookeeper localhost:2181 --property print.key=true
Using the ConsoleConsumer with old consumer is deprecated and will be removed in a future major release. Consider using the new consumer by passing [bootstrap-server] instead of [zookeeper].
{"name":"John"} {"exp":16}
{"name":"Finn"} {"exp":20}
{"name":"Cylin"} {"exp":18}
{"name":"Mark"} {"exp":2}
{"name":"Akshay"} {"exp":14}

OUTPUT :