

System Tools

The source code for Apache Kafka System Tools are located <https://github.com/apache/kafka/tree/0.8/core/src/main/scala/kafka/tools>

If you are looking for the replication related tools then please check out the wiki page on [Replication tools](#)

- [Consumer Offset Checker](#)
- [Dump Log Segment](#)
- [Export Zookeeper Offsets](#)
- [Get Offset Shell](#)
- [Import Zookeeper Offsets](#)
- [JMX Tool](#)
- [Kafka Migration Tool](#)
- [Mirror Maker](#)
- [Replay Log Producer](#)
- [Simple Consumer Shell](#)
- [State Change Log Merger](#)
- [Update Offsets In Zookeeper](#)
- [Verify Consumer Rebalance](#)

System tools can be run from the command line using the run class script (i.e. bin/kafka-run-class.sh package.class --options)

Consumer Offset Checker

This tool has been removed in Kafka 1.0.0. Use kafka-consumer-groups.sh to get consumer group details.

Displays the: Consumer Group, Topic, Partitions, Offset, logSize, Lag, Owner for the specified set of Topics and Consumer Group

```
bin/kafka-run-class.sh kafka.tools.ConsumerOffsetChecker
```

required argument: [group]

Option Description

--broker-info Print broker info

--group Consumer group.

--help Print this message.

--topic Comma-separated list of consumer

topics (all topics if absent).

--zkconnect ZooKeeper connect string. (default: [localhost:2181](#))

Dump Log Segment

This can print the messages directly from the log files or just verify the indexes correct for the logs

```
bin/kafka-run-class.sh kafka.tools.DumpLogSegments
```

required argument "[files]"

Option Description

--deep-iteration if set, uses deep instead of shallow iteration

--files <file1, file2, ...> REQUIRED: The comma separated list of data and index log files to be dumped

--max-message-size <Integer: size> Size of largest message. (default: 5242880)

--print-data-log if set, printing the messages content when dumping data logs

--verify-index-only if set, just verify the index log without printing its content

Export Zookeeper Offsets

A utility that retrieves the offsets of broker partitions in ZK and prints to an output file in the following format:

```
/consumers/group1/offsets/topic1/1-0:286894308
```

```
/consumers/group1/offsets/topic1/2-0:284803985
```

```
bin/kafka-run-class.sh kafka.tools.ExportZkOffsets
```

required argument: [zkconnect]

Option Description

--group Consumer group.

--help Print this message.

--output-file Output file

--zkconnect ZooKeeper connect string. (default: [localhost:2181](#))

Get Offset Shell

get offsets for a topic

```
bin/kafka-run-class.sh kafka.tools.GetOffsetShell
```

required argument [broker-list], [topic]

Option Description

--broker-list <hostname:port,...> REQUIRED: The list of hostname and [hostname:port](#) port of the server to connect to.

--max-wait-ms <Integer: ms> The max amount of time each fetch request waits. (default: 1000)

--offsets <Integer: count> number of offsets returned (default: 1)

--partitions <partition ids> comma separated list of partition ids. If not specified, will find offsets for all partitions (default)

--time <Long: timestamp in milliseconds / -1(latest) / -2 (earliest) timestamp; offsets will come before this timestamp, as in getOffsetsBefore >

--topic <topic> REQUIRED: The topic to get offsets from.

Import Zookeeper Offsets

can import offsets for a topic partitions

file format is the same as for the export

```
/consumers/group1/offsets/topic1/1-0:286894308
```

```
/consumers/group1/offsets/topic1/2-0:284803985
```

```
bin/kafka-run-class.sh kafka.tools.ImportZkOffsets
```

required argument: [input-file]

Option Description

--help Print this message.

--input-file Input file

--zkconnect ZooKeeper connect string. (default: [localhost:2181](#))

JMX Tool

prints metrics via JMX

```
bin/kafka-run-class.sh kafka.tools.JmxTool
```

Option Description

--attributes <name> The whitelist of attributes to query. This is a comma-separated list. If no attributes are specified all objects will be queried.

--date-format <format> The date format to use for formatting the time field. See java.text. SimpleDateFormat for options.

--help Print usage information.

--jmx-url <service-url> The url to connect to to poll JMX data. See Oracle javadoc for JMXServiceURL for details. (default: [service:jmx:rmi:///jndi/rmi://:9999/jmxrmi](#))

--object-name <name> A JMX object name to use as a query. This can contain wild cards, and this option can be given multiple times to specify more than one query. If no objects are specified all objects will be queried.

--reporting-interval <Integer: ms> Interval in MS with which to poll jmx stats. (default: 2000)

Kafka Migration Tool

Migrates a 0.7 broker to 0.8

```
bin/kafka-run-class.sh kafka.tools.KafkaMigrationTool
```

Missing required argument "[consumer.config]"

Option Description

--blacklist <Java regex (String)> Blacklist of topics to migrate from the 0.7 cluster
--consumer.config <config file> Kafka 0.7 consumer config to consume from the source 0.7 cluster. You may specify multiple of these.
--help Print this message.
--kafka.0.7.jar <kafka 0.7 jar> Kafka 0.7 jar file
--num.producers <Integer: Number of Number of producer instances (default: producers> 1)
--num.streams <Integer: Number of Number of consumer streams (default: 1)consumer threads>
--producer.config <config file> Producer config.
--queue.size <Integer: Queue size in Number of messages that are buffered terms of number of messages> between the 0.7 consumer and 0.8 producer (default: 10000)
--whitelist <Java regex (String)> Whitelist of topics to migrate from the 0.7 cluster
--zkclient.0.1.jar <zkClient 0.1 jar zkClient 0.1 jar file file required by Kafka 0.7>

Mirror Maker

Provides mirroring of one Kafka cluster to another, for more info check out the wiki page on [Kafka mirroring \(MirrorMaker\)](#)

```
bin/kafka-run-class.sh kafka.tools.MirrorMaker
```

required argument [consumer.config]

Option Description

--blacklist <Java regex (String)> Blacklist of topics to mirror.
--consumer.config <config file> Consumer config to consume from a source cluster. You may specify multiple of these.
--help Print this message.
--num.producers <Integer: Number of Number of producer instances (default: producers> 1)
--num.streams <Integer: Number of Number of consumption streams. threads> (default: 1)
--producer.config <config file> Embedded producer config.
--queue.size <Integer: Queue size in Number of messages that are buffered terms of number of messages> between the consumer and producer (default: 10000)
--whitelist <Java regex (String)> Whitelist of topics to mirror.

Replay Log Producer

Consume from one topic and replay those messages and produce to another topic

```
bin/kafka-run-class.sh kafka.tools.ReplayLogProducer
```

required argument [broker-list], [input-topic], [output-topic], [zookeeper]

Option Description

--async If set, messages are sent asynchronously.
--batch-size <Integer: batch size> Number of messages to send in a single batch. (default: 200)
--broker-list <hostname:port> REQUIRED: the broker list must be specified.
--compression-codec <Integer: If set, messages are sent compressed compression codec > (default: 0)
--delay-btw-batch-ms <Long: ms> Delay in ms between 2 batch sends. (default: 0)
--inputtopic <input-topic> REQUIRED: The topic to consume from.
--messages <Integer: count> The number of messages to send. (default: -1)
--outputtopic <output-topic> REQUIRED: The topic to produce to
--reporting-interval <Integer: size> Interval at which to print progress info. (default: 5000)
--threads <Integer: threads> Number of sending threads. (default: 1)
--zookeeper <zookeeper url> REQUIRED: The connection string for the zookeeper connection in the form [host:port](#). Multiple URLs can be given to allow fail-over. (default: 127.0.0.1:2181)

Simple Consumer Shell

Dumps out consumed messages to the console using the Simple Consumer

```
bin/kafka-run-class.sh kafka.tools.SimpleConsumerShell
```

required argument [broker-list], [topic]

Option Description

--broker-list <hostname:port,...> REQUIRED: The list of hostname and [hostname:port](#) port of the server to connect to.
--clientId <clientId> The ID of this client. (default: SimpleConsumerShell)
--fetchsize <Integer: fetchsize> The fetch size of each request. (default: 1048576)
--formatter <class> The name of a class to use for formatting kafka messages for display. (default: kafka.consumer.DefaultMessageFormatter)
--max-messages <Integer: max-messages> The number of messages to consume (default: 2147483647)
--max-wait-ms <Integer: ms> The max amount of time each fetch request waits. (default: 1000)
--no-wait-at-logend If set, when the simple consumer reaches the end of the Log, it will stop, not waiting for new produced messages
--offset <Long: consume offset> The offset id to consume from, default to -2 which means from beginning; while value -1 means from end (default: -2)
--partition <Integer: partition> The partition to consume from. (default: 0)
--print-offsets Print the offsets returned by the iterator
--property <prop>
--replica <Integer: replica id> The replica id to consume from, default -1 means leader broker. (default: -1)
--skip-message-on-error If there is an error when processing a message, skip it instead of halt.
--topic <topic> REQUIRED: The topic to consume from.

State Change Log Merger

A utility that merges the state change logs (possibly obtained from different brokers and over multiple days).

```
bin/kafka-run-class.sh kafka.tools.StateChangeLogMerger
```

Provide arguments to exactly one of the two options "[logs]" or "[logs-regex]"

Option Description

--end-time <end timestamp in the The latest timestamp of state change format java.text. log entries to be merged (default: SimpleDateFormat@f17a63e7> 9999-12-31 23:59:59,999)
--logs <file1,file2,...> Comma separated list of state change logs or a regex for the log file names
--logs-regex <for example: /tmp/state- Regex to match the state change log change.log*> files to be merged
--partitions <0,1,2,...> Comma separated list of partition ids whose state change logs should be merged
--start-time <start timestamp in the The earliest timestamp of state change format java.text. log entries to be merged (default: SimpleDateFormat@f17a63e7> 0000-00-00 00:00:00,000)
--topic <topic> The topic whose state change logs should be merged

Update Offsets In Zookeeper

A utility that updates the offset of every broker partition to the offset of earliest or latest log segment file, in ZK.

```
bin/kafka-run-class.sh kafka.tools.UpdateOffsetsInZK
```

USAGE: kafka.tools.UpdateOffsetsInZK\$ [earliest | latest] consumer.properties topic

Verify Consumer Rebalance

Make sure there is an owner for every partition. A successful rebalancing operation would select an owner for each available partition.

This means that for each partition registered under /brokers/topics/[topic]/[broker-id], an owner exists under /consumers/[consumer_group]/owners/[topic]/[broker_id-partition_id]

```
bin/kafka-run-class.sh kafka.tools.VerifyConsumerRebalance
```

required argument: [group]

Option Description

--group Consumer group.
--help Print this message.
--zookeeper.connect ZooKeeper connect string. (default: [localhost:2181](#))

