KIP-555: Deprecate Direct Zookeeper access in Kafka Administrative Tools

Master KIP

KIP-500: Replace ZooKeeper with a Self-Managed Metadata Quorum (Accepted)

Status

Current state: *Accepted*

Discussion thread:

JIRA: KAFKA-9397

Motivation

As part of KIP-500, we would like to remove direct ZooKeeper access from the Kafka Administrative tools. We have many motivations for doing this. It improves security, decouples the server-side metadata format from the client, and is a necessary first step towards storing Kafka metadata in Kafka.

Before we can remove the --zookeeper flag from these tools, however, we need to first deprecate it. This KIP is about that deprecation process.

Public Interfaces

Command Name	Status	Changes Needed
kafka-acls.sh	Does not support --zookeeper	none
kafka-broker-api-versions.sh	Does not support --zookeeper	none
kafka-configs.sh	Supports both --zookeeper and --bootstrap-server	deprecate --zookeeper
kafka-consumer-groups.sh	Does not support --zookeeper	none
kafka-delegation-tokens.sh	Does not support --zookeeper	none
kafka-delete-records.sh	Does not support --zookeeper	none
kafka-dump-log.sh	Does not support --zookeeper	none
kafka-leader-election.sh	Supports both --zookeeper and --bootstrap-server, but --zookeeper is already deprecated	none
kafka-log-dirs.sh	Does not support --zookeeper	none
kafka-preferred-leader-election.sh	Supports both --zookeeper and --bootstrap-server, but --zookeeper is already deprecated	none
kafka-reassign-partitions.sh	Supports only --zookeeper now, but --bootstrap-server support is planned as part of the accepted KIP-455	deprecate --zookeeper
kafka-replica-verification.sh	Does not support --zookeeper	none
kafka-topics.sh	Supports both --zookeeper and --bootstrap-server, but --zookeeper is already deprecated	none
zookeeper-security-migration.sh	Supports only zookeeper	none

| zookeeper-shell.sh | Supports only zookeeper | none |

Proposed Changes

For the kafka-configs.sh and kafka-reassign-partitions.sh commands, the --zookeeper option description should begin with "DEPRECATED".

If the --zookeeper option is used, the following should be printed on the console:

```
Warning: --zookeeper is deprecated and will be removed in a future version of Kafka.
Use --bootstrap-server instead to specify a broker to connect to.
```

zookeeper-security-migration.sh and zookeeper-shell.sh won't be changed, since their functions are tightly tied to administering ZooKeeper itself.

Compatibility, Deprecation, and Migration Plan

Adding the new deprecations is a compatible operation.

Rejected Alternatives

There is no rejected alternatives.