

KIP-543: Expand ConfigCommand's non-ZK functionality

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Master KIP

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

Status

Current state: Approved.

Discussion thread: [here](#)

JIRA: [KAFKA-9082](#)

Please keep the discussion on the mailing list rather than commenting on the wiki (wiki discussions get unwieldy fast).

Motivation

With work underway to migrate configuration metadata away from ZooKeeper ([KIP-500](#)), components and tools relying on direct ZK access must be updated to issue administrative calls through AK's broker via KafkaAdminClient. ConfigCommand, a tool used for describing and altering configs for various entities (topics, users, clients, brokers, and broker-loggers), is one such tool requiring update. Partial AK support has been implemented, however additional functionality is necessary to maintain ZK-parity. This KIP proposes to relax the --zookeeper restriction for all afflicted commands+flags.

In addition, the ConfigCommand tool would benefit from quality-of-life change to shorten entity specification on the command line.

Proposed Changes

There are 3 major functions of the config command:

1. Alter an entity's config by adding/updating/removing config entries. The given entity name may either be a specific entity (via --entity-name) or, if supported, the default config for all entities (via --entity-default).
2. Describing an entity's config. Like altering, the given entity name may either be a specific entity (via --entity-name) or, if supported, the default config for all entities (via --entity-default).
3. Describing all entity configs. This happens when no entity identifier is provided (i.e. --entity-name and --entity-default omitted).

Which functions are supported, and which are proposed by this KIP (green) is as follows:

ConfigCommand	ZK current	AK current	AK proposed
Topics: alter specific	+	-	+
Topics: describe specific	+	-	+
Topics: describe all	+	-	+
Users/clients: alter specific	+	-	+*
Users/clients: describe specific	+	-	+*
Users/clients: describe all	+	-	+*
Brokers: alter specific	+	+	+
Brokers: describe specific	+	+	+
Brokers: describe all	+	-	+
Broker loggers: alter specific	-	+	+

Broker loggers: describe specific	-	+	+
Broker loggers: describe all	-	-	+

*AK broker-side functionality requiring future KIP

For the quality-of-life change, proposed is the shortening of specifying entity type and name into a single flag:

- **--entity-type** <TYPES> **--entity-name** <NAME> can be shortened to **--<TYPE> <NAME>**
 - E.g. **--entity-type** *topics* **--entity-name** *some-topic* can be shortened to **--topic** *some-topic*
- **--entity-type** <TYPES> **--entity-default** can be shortened to **--<TYPE>-defaults**
 - E.g. **--entity-type** *brokers* **--entity-default** can be shortened to **--broker-defaults**

Note --entity-type, --entity-name, and --entity-default will NOT be deprecated/removed.

Public Interfaces

Summary of the public interfaces proposed. Note these are all additions, no existing commands/flags are removed or changed.

- Support all broker descriptions for AK:
 - `bin/kafka-configs.sh --bootstrap-server x --describe --entity-type brokers <note --entity-name omitted>`
- Support all broker-logger descriptions for AK:
 - `bin/kafka-configs.sh --bootstrap-server x --describe --entity-type broker-loggers <note --entity-name omitted>`
- Support topic config commands for AK:
 - Specific topic description:
 - `bin/kafka-configs.sh --bootstrap-server x --describe --entity-type topics --entity-name some-topic`
 - All topic descriptions:
 - `bin/kafka-configs.sh --bootstrap-server x --describe --entity-type topics <note --entity-name omitted>`
 - Altering topic config:
 - `bin/kafka-configs.sh --bootstrap-server x --alter --entity-type topics --entity-name topic <--add-config/--delete-config ...>`
- Support user/client config commands for AK:
 - Specific user/client descriptions:
 - `bin/kafka-configs.sh --bootstrap-server x --describe --entity-type users --entity-name some-user`
 - `bin/kafka-configs.sh --bootstrap-server x --describe --entity-type users --entity-default`
 - `bin/kafka-configs.sh --bootstrap-server x --describe --entity-type users --entity-name some-user --entity-type clients --entity-name some-client`
 - `bin/kafka-configs.sh --bootstrap-server x --describe --entity-type users --entity-name some-user --entity-type clients --entity-default`
 - `bin/kafka-configs.sh --bootstrap-server x --describe --entity-type users --entity-name default --entity-type clients --entity-name some-client`
 - `bin/kafka-configs.sh --bootstrap-server x --describe --entity-type users --entity-name default --entity-type clients --entity-default`
 - `bin/kafka-configs.sh --bootstrap-server x --describe --entity-type clients --entity-name some-client`
 - `bin/kafka-configs.sh --bootstrap-server x --describe --entity-type clients --entity-default`
 - All user/client descriptions:
 - `bin/kafka-configs.sh --bootstrap-server x --describe --entity-type users <note --entity-name omitted>`
 - `bin/kafka-configs.sh --bootstrap-server x --describe --entity-type clients <note --entity-name omitted>`
 - Altering user/client config:
 - `bin/kafka-configs.sh --bootstrap-server x --alter <same enumerations as user/client descriptions above>`
- Add abbreviation helper flags:
 - `--entity-type topics --entity-name some-topic => --topic some-topic`
 - `--entity-type users --entity-name some-user => --user some-user`
 - `--entity-type users --entity-default => --user-defaults`
 - `--entity-type clients --entity-name some-client => --client some-client`
 - `--entity-type clients --entity-default => --client-defaults`
 - `--entity-type brokers --entity-name 10 => --broker 10`
 - `--entity-type brokers --entity-default => --broker-defaults`
 - `--entity-type broker-loggers --entity-name 10 => --broker-logger 10`

Compatibility, Deprecation, and Migration Plan

There is no impact to current usage, the semantics of all existing combinations of flags remain unchanged.

Rejected Alternatives

None.