

# Kafka Improvement Proposals

This page describes a proposed Kafka Improvement Proposal (KIP) process for proposing a major change to Kafka.

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## Getting Started

If this is your first time contributing:

1. Sign up for the Developer mailing list [dev@kafka.apache.org](mailto:dev@kafka.apache.org) . The instructions to sign up are here: <http://kafka.apache.org/contact>
2. Create a wiki ID (<https://cwiki.apache.org/confluence/signup.action>)
3. Create a Jira ID (It's a different system than the wiki) using the ASF Self-serve Portal (<https://selfserve.apache.org/jira-account.html>)
4. Send an email to the dev mailing list ([dev@kafka.apache.org](mailto:dev@kafka.apache.org)) containing your wiki ID and Jira ID requesting permissions to contribute to Apache Kafka.

## Purpose

We want to make Kafka a core architectural component for users. We also support a large number of integrations with other tools, systems, and clients. Keeping this kind of usage health requires a high level of compatibility between releases — core architectural elements can't break compatibility or shift functionality from release to release. As a result each new major feature or public api has to be done in a way that we can stick with it going forward.

This means when making this kind of change we need to think through what we are doing as best we can prior to release. And as we go forward we need to stick to our decisions as much as possible. All technical decisions have pros and cons so it is important we capture the thought process that lead to a decision or design to avoid flip-flopping needlessly.

Hopefully we can make these proportional in effort to their magnitude — small changes should just need a couple brief paragraphs, whereas large changes need detailed design discussions.

This process also isn't meant to discourage incompatible changes — proposing an incompatible change is totally legitimate. Sometimes we will have made a mistake and the best path forward is a clean break that cleans things up and gives us a good foundation going forward. Rather this is intended to avoid accidentally introducing half thought-out interfaces and protocols that cause needless heartburn when changed. Likewise the definition of "compatible" is itself squishy: small details like which errors are thrown when are clearly part of the contract but may need to change in some circumstances, likewise performance isn't part of the public contract but dramatic changes may break use cases. So we just need to use good judgement about how big the impact of an incompatibility will be and how big the payoff is.

## What is considered a "major change" that needs a KIP?

Any of the following should be considered a major change:

- Any major new feature, subsystem, or piece of functionality
- Any change that impacts the public interfaces of the project

What are the "public interfaces" of the project?

All of the following are public interfaces that people build around:

- Binary log format
- The network protocol and api behavior
- Any class for which the build generates Javadoc. This includes (but is not limited to; look for javadoc `{}` sections in `build.gradle` for the complete list):
  - `org/apache/kafka/common/serialization`
  - `org/apache/kafka/common`
  - `org/apache/kafka/common/errors`
  - `org/apache/kafka/clients/producer`
  - `org/apache/kafka/clients/consumer` (eventually, once stable)
- Configuration, especially client configuration
- Monitoring
- Command line tools and arguments

Not all compatibility commitments are the same. We need to spend significantly more time on log format and protocol as these break code in lots of clients, cause downtime releases, etc. Public apis are next as they cause people to rebuild code and lead to compatibility issues in large multi-dependency projects (which end up requiring multiple incompatible versions). Configuration, monitoring, and command line tools can be faster and looser — changes here will break monitoring dashboards and require a bit of care during upgrades but aren't a huge burden.

For the most part monitoring, command line tool changes, and configs are added with new features so these can be done with a single KIP.

## What should be included in a KIP?

A KIP should contain the following sections:

- **Motivation:** describe the problem to be solved
- **Proposed Change:** describe the new thing you want to do. This may be fairly extensive and have large subsections of its own. Or it may be a few sentences, depending on the scope of the change.
- **New or Changed Public Interfaces:** impact to any of the "compatibility commitments" described above. We want to call these out in particular so everyone thinks about them.
- **Migration Plan and Compatibility:** if this feature requires additional support for a no-downtime upgrade describe how that will work
- **Rejected Alternatives:** What are the other alternatives you considered and why are they worse? The goal of this section is to help people understand why this is the best solution now, and also to prevent churn in the future when old alternatives are reconsidered.

## Who should initiate the KIP?

Anyone can initiate a KIP but you shouldn't do it unless you have an intention of getting the work done to implement it (otherwise it is silly).

## Process

Here is the process for making a KIP:

1. Click [Create KIP](#). Take the next available KIP number and give your proposal a descriptive heading. e.g. "KIP 42: Allow Infinite Retention With Bounded Disk Usage".
2. Update the next available KIP number below.
3. Fill in the sections as described above
4. Also add an entry to the table [KIPs under discussion](#) (for Streams API KIPs, please also add it to [Kafka Streams sub page](#)).
5. Start a [DISCUSS] thread on the Apache mailing list. Please ensure that the subject of the thread is of the format *[DISCUSS] KIP-{your KIP number} {your KIP heading}* and the body contains a link to your new KIP. The discussion should happen on the mailing list, not on the wiki, since the wiki comment system doesn't work well for larger discussions. In the process of the discussion you may update the proposal. You should let people know the changes you are making. When you feel you have a finalized proposal
6. Once the proposal is finalized call a [VOTE] to have the proposal adopted. These proposals are more serious than code changes and more serious even than release votes. The criteria for acceptance is [lazy majority](#). The vote should remain open for at least 72 hours.
7. **Please** update the KIP wiki page, and the index below, to reflect the current stage of the KIP after a vote. This acts as the permanent record indicating the result of the KIP (e.g., Accepted or Rejected). Also report the result of the KIP vote to the voting thread on the mailing list so the conclusion is clear.e

## KIP round-up

**Next KIP Number: 1020**

Use this number as the identifier for your KIP and increment this value.

## Adopted KIPs

Please insert new rows in **sorted order** (descending by KIP number).

| KIP (please keep this sorted by KIP number)                                                         | Release                     |
|-----------------------------------------------------------------------------------------------------|-----------------------------|
| <a href="#">KIP-1013: Drop broker and tools support for Java 11 in Kafka 4.0 (deprecate in 3.7)</a> | 4.0.0                       |
| <a href="#">KIP-1012: The need for a Kafka 3.8.x release</a>                                        | 3.8.0                       |
| <a href="#">KIP-1007: Introduce Remote Storage Not Ready Exception</a>                              | 3.8.0                       |
| <a href="#">KIP-1005: Expose EarliestLocalOffset and TieredOffset</a>                               | 3.8.0                       |
| <a href="#">KIP-1004: Enforce tasks.max property in Kafka Connect</a>                               | 3.8.0                       |
| <a href="#">KIP-1001: Add CurrentControllerId Metric</a>                                            | 3.7.0                       |
| <a href="#">KIP-1000: List Client Metrics Configuration Resources</a>                               | 3.7.0                       |
| <a href="#">KIP-996: Pre-Vote</a>                                                                   | TBD (targeting 3.8.0/4.0.0) |

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|--------------------------------------------------------------------------------------------------------------|----------------------------------------------------|
| KIP-994: Minor Enhancements to ListTransactions and DescribeTransactions APIs                                | TBD (targeting 3.8.0)                              |
| KIP-993: Allow restricting files accessed by File and Directory ConfigProviders                              | 3.8.0                                              |
| KIP-992: Proposal to introduce IQv2 Query Types: TimestampedKeyQuery and TimestampedRangeQuery               | 3.7.0                                              |
| KIP-988: Streams Standby Task Update Listener                                                                | 3.7.0                                              |
| KIP-985: Add reverseRange and reverseAll query over kv-store in IQv2                                         | 3.7.0                                              |
| KIP-980: Allow creating connectors in a stopped state                                                        | TBD (targeting 3.7.0)                              |
| KIP-979: Allow independently stop KRaft processes                                                            | TBD (targeting 3.7.0)                              |
| KIP-978: Allow dynamic reloading of certificates with different DN / SANs                                    | 3.7.0                                              |
| KIP-977: Partition-level Throughput Metrics                                                                  | TBD (targeting 3.8.0)                              |
| KIP-976: Cluster-wide dynamic log adjustment for Kafka Connect                                               | 3.7.0                                              |
| KIP-975: Docker Image for Apache Kafka                                                                       | TBD (targeting 3.7.0)                              |
| KIP-974: Docker Image for GraalVM based Native Kafka Broker                                                  | TBD (targeting 3.7.0)                              |
| KIP-970: Deprecate and remove Connect's redundant task configurations endpoint                               | 3.7.0 (deprecation)<br>4.0.0 (removal)             |
| KIP-968: Support single-key_multi-timestamp Interactive Queries (IQv2) for Versioned State Stores            | 3.7.0                                              |
| KIP-966: Eligible Leader Replicas                                                                            | TBD                                                |
| KIP-963: Additional metrics in Tiered Storage                                                                | 3.7.0                                              |
| KIP-962: Relax non-null key requirement in Kafka Streams                                                     | 3.7.0                                              |
| KIP-960: Support single-key_single-timestamp Interactive Queries (IQv2) for Versioned State Stores           | 3.7.0                                              |
| KIP-959: Add BooleanConverter to Kafka Connect                                                               | 3.7.0                                              |
| KIP-954: expand default DSL store configuration to custom types                                              | 3.7.0                                              |
| KIP-951: Leader discovery optimisations for the client                                                       | 3.7.0                                              |
| KIP-949: Add flag to enable the usage of topic separator in MM2 DefaultReplicationPolicy                     | Adopted, targeting 3.6                             |
| KIP-942: Add Power(ppc64le) support                                                                          | TBD                                                |
| KIP-941: Range queries to accept null lower and upper bounds                                                 | 3.6.0                                              |
| KIP-938: Add more metrics for measuring KRaft performance                                                    | TBD                                                |
| KIP-937: Improve Message Timestamp Validation                                                                | 3.6.0                                              |
| KIP-927: Improve the kafka-metadata-quorum output                                                            | 3.6.0                                              |
| KIP-925: Rack aware task assignment in Kafka Streams                                                         | 3.7.0 (completed)<br>3.6.0 (partially implemented) |
| KIP-923: Add A Grace Period to Stream Table Join                                                             | 3.6.0                                              |
| KIP-919: Allow AdminClient to Talk Directly with the KRaft Controller Quorum and add Controller Registration | 3.7.0                                              |
| KIP-917: Additional custom metadata for remote log segment                                                   | 3.6.0                                              |
| KIP-915: Txn and Group Coordinator Downgrade Foundation                                                      | 3.5.0                                              |
| KIP-914: DSL Processor Semantics for Versioned Stores                                                        | 3.5.0                                              |
| KIP-911: Add source tag to Mirror source metric                                                              | 3.5.0                                              |
| KIP-909: DNS Resolution Failure Should Not Fail the Clients                                                  | TBD                                                |
| KIP-907: Add Boolean Serde to public interface                                                               | 3.5.0                                              |

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| KIP-906: Tools migration guidelines                                                         | 3.5.0                                                                       |
| KIP-904: Kafka Streams - Guarantee subtractor is called before adder if key has not changed | 3.5.0                                                                       |
| KIP-903: Replicas with stale broker epoch should not be allowed to join the ISR             | 3.5.0                                                                       |
| KIP-902: Upgrade Zookeeper to 3.8.2                                                         | 3.6.0                                                                       |
| KIP-900: KRaft kafka-storage.sh API additions to support SCRAM for Kafka Brokers            | 3.5.0                                                                       |
| KIP-898: Modernize Connect plugin discovery                                                 | 3.6.0                                                                       |
| KIP-896: Remove old client protocol API versions in Kafka 4.0                               | 3.7.0 - new metric & request log attribute<br>4.0.0 - actual removal        |
| KIP-894: Use incrementalAlterConfig for syncing topic configurations                        | 3.5.0                                                                       |
| KIP-893: The Kafka protocol should support nullable structs                                 | 3.5.0                                                                       |
| KIP-892: Transactional Semantics for StateStores                                            | TBD (targeting 3.7.0)                                                       |
| KIP-890: Transactions Server-Side Defense                                                   | TDB                                                                         |
| KIP-889: Versioned State Stores                                                             | 3.5.0                                                                       |
| KIP-887: Add ConfigProvider to make use of environment variables                            | 3.5.0                                                                       |
| KIP-884: Add config to configure KafkaClientSupplier in Kafka Streams                       | 3.5.0                                                                       |
| KIP-881: Rack-aware Partition Assignment for Kafka Consumers                                | 3.4.0 (protocol)<br>3.5.0 (assignors)                                       |
| KIP-878: Autoscaling for Stateless & Statically Partitioned Streams                         | TBD                                                                         |
| KIP-876: Time based cluster metadata snapshots                                              | 3.4.0                                                                       |
| KIP-875: First-class offsets support in Kafka Connect                                       | 3.5.0 (STOPPED state, offsets read API)<br>3.6.0 (offsets alter/reset APIs) |
| KIP-872: Add Serializer#serializeToByteBuffer() to reduce memory copying                    | Accepted                                                                    |
| KIP-869: Improve Streams State Restoration Visibility                                       | 3.5.0 (partially implemented) / TDB                                         |
| KIP-868 Metadata Transactions                                                               | 3.6.0                                                                       |
| KIP-866 ZooKeeper to KRaft Migration                                                        | 3.4.0                                                                       |
| KIP-865: Support --bootstrap-server in kafka-streams-application-reset                      | 3.4.0                                                                       |
| KIP-863: Reduce CompletedFetch#parseRecord() memory copy                                    | TBD                                                                         |
| KIP-862: Self-join optimization for stream-stream joins                                     | 3.4.0                                                                       |
| KIP-859: Add Metadata Log Processing Error Related Metrics                                  | 3.3.0                                                                       |
| KIP-858: Handle JBOD broker disk failure in KRaft                                           | 3.7.0                                                                       |
| KIP-854 Separate configuration for producer ID expiry                                       | 3.4.0                                                                       |
| KIP-852: Optimize calculation of size for log in remote tier                                | Accepted. Targeting 3.6.0.                                                  |
| KIP-851: Add requireStable flag into ListConsumerGroupOffsetsOptions                        | 3.3.0                                                                       |
| KIP-848: The Next Generation of the Consumer Rebalance Protocol                             | TBD                                                                         |
| KIP-847: Add ProducerIdCount metrics                                                        | 3.5.0                                                                       |
| KIP-846: Source/sink node metrics for Consumed/Produced throughput in Streams               | 3.3.0                                                                       |
| KIP-844: Transactional State Stores                                                         | TBD                                                                         |
| KIP-843: Adding addMetricIfAbsent method to Metrics                                         | 3.3.0                                                                       |
| KIP-841: Fenced replicas should not be allowed to join the ISR in KRaft                     | 3.3.0                                                                       |

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| KIP-840: Config file option for MessageReader/MessageFormatter in ConsoleProducer/ConsoleConsumer                    | 3.4.0 |
| KIP-837: Allow MultiCasting a Result Record.                                                                         | 3.4.0 |
| KIP-836: Expose replication information of the cluster metadata                                                      | 3.3.0 |
| KIP-835: Monitor KRaft Controller Quorum Health                                                                      | 3.3.0 |
| KIP-834: Pause / Resume KafkaStreams Topologies                                                                      | 3.3.0 |
| KIP-833: Mark KRaft as Production Ready                                                                              | 3.3.0 |
| KIP-831: Add metric for log recovery progress                                                                        | 3.3.0 |
| KIP-830: Allow disabling JMX Reporter                                                                                | 3.4.0 |
| KIP-827: Expose logdirs total and usable space via Kafka API                                                         | 3.3.0 |
| KIP-825: introduce a new API to control when aggregated results are produced                                         | 3.3.0 |
| KIP-824: Allowing dumping segmentlogs limiting the batches in the output                                             | 3.3.0 |
| KIP-821: Connect Transforms support for nested structures                                                            | TBD   |
| KIP-820: Extend KStream process with new Processor API                                                               | 3.3.0 |
| KIP-815: Support max-timestamp in GetOffsetShell                                                                     | 3.2.0 |
| KIP-814: Static membership protocol should let the leader skip assignment                                            | 3.2.0 |
| KIP-813: Shareable State Stores                                                                                      | TBD   |
| KIP-812: Introduce another form of the `KafkaStreams.close()` API that forces the member to leave the consumer group | 3.3.0 |
| KIP-811: Add config repartition.purge.interval.ms to Kafka Streams                                                   | 3.2.0 |
| KIP-810: Allow producing records with null values in Kafka Console Producer                                          | 3.2.0 |
| KIP-808: Add support for different unix precisions in TimestampConverter SMT                                         | 3.2.0 |
| KIP-806: Add session and window query over kv-store in IQv2                                                          | 3.2.0 |
| KIP-805: Add range and scan query over kv-store in IQv2                                                              | 3.2.0 |
| KIP-801: Implement an Authorizer that stores metadata in __cluster__metadata                                         | 3.2.0 |
| KIP-800: Add reason to JoinGroupRequest and LeaveGroupRequest                                                        | 3.2.0 |
| KIP-798: Add possibility to write kafka headers in Kafka Console Producer                                            | 3.2.0 |
| KIP-797: Accept duplicate listener on port for IPv4/IPv6                                                             | 3.6.0 |
| KIP-796: Interactive Query v2                                                                                        | TBD   |
| KIP-794: Strictly Uniform Sticky Partitioner                                                                         | 3.3.0 |
| KIP-793: Allow sink connectors to be used with topic-mutating SMTs                                                   | 3.6.0 |
| KIP-792: Add "generation" field into consumer protocol                                                               | 3.4.0 |
| KIP-791: Add Record Metadata to StateStoreContext                                                                    | 3.2.0 |
| KIP-788: Allow configuring num.network.threads per listener                                                          | 3.2.0 |
| KIP-787: MM2 manage Kafka resources with custom Admin implementation.                                                | 3.4.0 |
| KIP-784: Add top-level error code field to DescribeLogDirsResponse                                                   | 3.2.0 |
| KIP-783: Add TaskId field to StreamsException                                                                        | 3.1.0 |
| KIP-779: Allow Source Tasks to Handle Producer Exceptions                                                            | 3.2.0 |
| KIP-778: KRaft to KRaft Upgrades                                                                                     | 3.3.0 |
| KIP-775: Custom partitioners in foreign key joins                                                                    | 3.1.0 |
| KIP-773: Differentiate consistently metric latency measured in millis and nanos                                      | 3.1.0 |

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| KIP-771: KRaft brokers without the "controller" role should not expose controller metrics                         | 3.0.0                                                  |
| KIP-770: Replace "buffered.records.per.partition" with "input.buffer.max.bytes"                                   | 3.4.0 (WIP)                                            |
| KIP-769: Connect APIs to list all connector plugins and retrieve their configuration definitions                  | 3.2.0                                                  |
| KIP-768: Extend SASL/OAUTHBEARER with Support for OIDC                                                            | 3.1.0                                                  |
| KIP-766: fetch/findSessions queries with open endpoints for SessionStore /WindowStore                             | 3.1.0                                                  |
| KIP-764: Configurable backlog size for creating Acceptor                                                          | 3.2.0                                                  |
| KIP-763: Range Queries with Open Endpoints                                                                        | 3.1.0                                                  |
| KIP-761: Add Total Blocked Time Metric to Streams                                                                 | 3.1.0                                                  |
| KIP-751: Drop support for Scala 2.12 in Kafka 4.0 (deprecate in 3.0)                                              | 3.0.0 (deprecation notice), 4.0.0 (support withdrawal) |
| KIP-750: Drop support for Java 8 in Kafka 4.0 (deprecate in 3.0)                                                  | 3.0.0 (deprecation notice), 4.0.0 (support withdrawal) |
| KIP-748: Add Broker Count Metrics                                                                                 | 3.1.0                                                  |
| KIP-746: Revise KRaft Metadata Records                                                                            | 3.0.0                                                  |
| KIP-745: Connect API to restart connector and tasks                                                               | 3.0.0                                                  |
| KIP-744: Migrate TaskMetadata and ThreadMetadata to an interface with internal implementation                     | 3.0.0                                                  |
| KIP-743: Remove config value 0.10.0-2.4 of Streams built-in metrics version config                                | 3.0.0                                                  |
| KIP-741: Change default serde to be null                                                                          | 3.0.0                                                  |
| KIP-740: Clean up public API in TaskId                                                                            | 3.0.0                                                  |
| KIP-738: Removal of Connect's internal converter properties                                                       | 3.0.0                                                  |
| KIP-735: Increase default consumer session timeout                                                                | 3.0.0                                                  |
| KIP-734: Improve AdminClient.listOffsets to return timestamp and offset for the record with the largest timestamp | 3.0.0                                                  |
| KIP-733: change Kafka Streams default replication factor config                                                   | 3.0.0                                                  |
| KIP-732: Deprecate eos-alpha and replace eos-beta with eos-v2                                                     | 3.0.0                                                  |
| KIP-730: Producer ID generation in KRaft mode                                                                     | 3.0.0                                                  |
| KIP-726: Make the "cooperative-sticky, range" as the default assignor                                             | WIP                                                    |
| KIP-725: Streamlining configurations for WindowedSerializer and WindowedDeserializer.                             | 3.0.0                                                  |
| KIP-724: Drop support for message formats v0 and v1                                                               | 3.0.0 (deprecation)<br>4.0.0 (removal)                 |
| KIP-722: Enable connector client overrides by default                                                             | 3.0.0                                                  |
| KIP-721: Enable connector log contexts in Connect Log4j configuration                                             | 3.0.0                                                  |
| KIP-720: Deprecate MirrorMaker v1                                                                                 | 3.0.0                                                  |
| KIP-719: Deprecate Log4J Appender                                                                                 | WIP                                                    |
| KIP-716: Allow configuring the location of the offset-syncs topic with MirrorMaker2                               | 3.0.0                                                  |
| KIP-715: Expose Committed offset in streams                                                                       | 3.0.0                                                  |
| KIP-714: Client metrics and observability                                                                         | 3.7.0                                                  |
| KIP-710: Full support for distributed mode in dedicated MirrorMaker 2.0 clusters                                  | 3.5.0                                                  |
| KIP-709: Extend OffsetFetch requests to accept multiple group ids.                                                | 3.3.0                                                  |
| KIP-708: Rack aware StandbyTask assignment for Kafka Streams                                                      | 3.2.0                                                  |

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|--------------------------------------------------------------------------------------------------|----------------|
| KIP-707: The future of KafkaFuture                                                               | 3.0.0          |
| KIP-704: Send a hint to the partition leader to recover the partition                            | 3.2.0          |
| KIP-700: Add Describe Cluster API                                                                | 2.8.0          |
| KIP-699: Update FindCoordinator to resolve multiple Coordinators at a time                       | 3.0.0          |
| KIP-698: Add Explicit User Initialization of Broker-side State to Kafka Streams                  | WIP / inactive |
| KIP-696: Update Streams FSM to clarify ERROR state meaning                                       | 2.8.0          |
| KIP-695: Further Improve Kafka Streams Timestamp Synchronization                                 | 3.0.0          |
| KIP-691: Enhance Transactional Producer Exception Handling                                       | WIP / inactive |
| KIP-690: Add additional configuration to control MirrorMaker 2 internal topics naming convention | 3.1.0          |
| KIP-679: Producer will enable the strongest delivery guarantee by default                        | 3.0.0          |
| KIP-689: Extend `StreamJoined` to allow more store configs                                       | 2.8.0          |
| KIP-684 - Support mutual TLS authentication on SASL_SSL listeners                                | 2.8.0          |
| KIP-680: TopologyTestDriver should not require a Properties argument                             | 2.8.0          |
| KIP-676: Respect logging hierarchy                                                               | 2.8.0          |
| KIP-673: Emit JSONs with new auto-generated schema                                               | 2.8.0          |
| KIP-671: Introduce Kafka Streams Specific Uncaught Exception Handler                             | 2.8.0          |
| KIP-666: Add Instant-based methods to ReadOnlySessionStore                                       | 3.0.0          |
| KIP-663: API to Start and Shut Down Stream Threads                                               | 2.8.0          |
| KIP-662: Throw Exception when Source Topics of a Streams App are Deleted                         | 2.7.0          |
| KIP-661: Expose task configurations in Connect REST API                                          | 2.8.0          |
| KIP-659: Improve TimeWindowedDeserializer and TimeWindowedSerde to handle window size            | 2.8.0          |
| KIP-654: Aborted transaction with non-flushed data should throw a non-fatal exception            | 2.7.0          |
| KIP-653: Upgrade log4j to log4j2                                                                 | 3.2.0 (WIP)    |
| KIP-651 - Support PEM format for SSL certificates and private key                                | 2.7.0          |
| KIP-648 Renaming getter method for Interactive Queries                                           | 2.7.0          |
| KIP-641 An new java interface to replace 'kafka.common.MessageReader'                            | 3.5.0          |
| KIP-635: GetOffsetShell: support for multiple topics and consumer configuration override         | 3.0            |
| KIP-633: Deprecate 24-hour Default Grace Period for Windowed Operations in Streams               | 3.0.0          |
| KIP-632: Add DirectoryConfigProvider                                                             | 2.7.0          |
| KIP-631: The Quorum-based Kafka Controller                                                       | 2.8.0          |
| KIP-630: Kafka Raft Snapshot                                                                     | 3.0.0          |
| KIP-629: Use racially neutral terms in our codebase                                              | 3.0.0          |
| KIP-627: Expose Trogdor-specific JMX Metrics for Tasks and Agents                                | WIP            |
| KIP-626: Rename StreamsConfig config variable name                                               | 2.7.0          |
| KIP-623: Add "internal-topics" option to streams application reset tool                          | 3.0.0          |
| KIP-622: Add currentSystemTimeMs and currentStreamTimeMs to ProcessorContext                     | 3.0.0          |
| KIP-621: Deprecate and replace DescribeLogDirsResult.all() and .values()                         | 2.7.0          |

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| <a href="#">KIP-620 Deprecate ConsumerConfig#addDeserializerToConfig and ProducerConfig#addSerializerToConfig</a>              | 2.7.0                                                                        |
| <a href="#">KIP-618: Exactly-Once Support for Source Connectors</a>                                                            | 3.3.0 (almost everything)<br>3.2.0 (new admin client API)                    |
| <a href="#">KIP-617: Allow Kafka Streams State Stores to be iterated backwards</a>                                             | 2.7.0                                                                        |
| <a href="#">KIP-616: Rename implicit Serdes instances in kafka-streams-scala</a>                                               | 2.7.0                                                                        |
| <a href="#">KIP-614: Add Prefix Scan support for State Stores</a>                                                              | 2.8.0                                                                        |
| <a href="#">KIP-613: Add end-to-end latency metrics to Streams</a>                                                             | 2.6.0 (INFO node-level metrics), remainder 2.7.0 (TRACE store-level metrics) |
| <a href="#">KIP-612: Ability to Limit Connection Creation Rate on Brokers</a>                                                  | 2.7.0 / 2.8.0                                                                |
| <a href="#">KIP-610: Error Reporting in Sink Connectors</a>                                                                    | 2.6.0                                                                        |
| <a href="#">KIP-608 - Expose Kafka Metrics in Authorizer</a>                                                                   | WIP                                                                          |
| <a href="#">KIP-607: Add Metrics to Kafka Streams to Report Properties of RocksDB</a>                                          | 2.7.0                                                                        |
| <a href="#">KIP-606: Add Metadata Context to MetricsReporter</a>                                                               | 2.6.0                                                                        |
| <a href="#">KIP-605: Expand Connect Worker Internal Topic Settings</a>                                                         | 2.6.0                                                                        |
| <a href="#">KIP-604: Remove ZooKeeper Flags from the Administrative Tools</a>                                                  | one part in 2.6.0, most parts scheduled for 3.0                              |
| <a href="#">KIP-602: Change default value for client.dns.lookup</a>                                                            | 2.6.0                                                                        |
| <a href="#">KIP-601: Configurable socket connection timeout</a>                                                                | 2.7.0                                                                        |
| <a href="#">KIP-599: Throttle Create Topic, Create Partition and Delete Topic Operations</a>                                   | 2.7.0                                                                        |
| <a href="#">KIP-597: MirrorMaker2 internal topics Formatters</a>                                                               | 2.7.0                                                                        |
| <a href="#">KIP-594: Expose output topic names from TopologyTestDriver</a>                                                     | 2.6.0                                                                        |
| <a href="#">KIP-591: Add Kafka Streams config to set default state store</a>                                                   | 3.2.0 (WIP)                                                                  |
| <a href="#">KIP-590: Redirect Zookeeper Mutation Protocols to The Controller</a>                                               | 2.8.0 (WIP)                                                                  |
| <a href="#">KIP-589 Add API to update Replica state in Controller</a>                                                          | 2.8.0 (WIP)                                                                  |
| <a href="#">KIP-588: Allow producers to recover gracefully from transaction timeouts</a>                                       | 2.8.0 (WIP)                                                                  |
| <a href="#">KIP-586: Deprecate commit records without record metadata</a>                                                      | 2.6.0                                                                        |
| <a href="#">KIP-585: Filter and Conditional SMTs</a>                                                                           | 2.6.0                                                                        |
| <a href="#">KIP-584: Versioning scheme for features</a>                                                                        | 2.7.0                                                                        |
| <a href="#">KIP-581: Value of optional null field which has default value</a>                                                  | 3.5.0                                                                        |
| <a href="#">KIP-580: Exponential Backoff for Kafka Clients</a>                                                                 | 3.7.0                                                                        |
| <a href="#">KIP-577: Allow HTTP Response Headers to be Configured for Kafka Connect</a>                                        | 2.6.0                                                                        |
| <a href="#">KIP-574: CLI Dynamic Configuration with file input</a>                                                             | 2.6.0                                                                        |
| <a href="#">KIP-573: Enable TLSv1.3 by default</a>                                                                             | 2.6.0                                                                        |
| <a href="#">KIP-572: Improve timeouts and retries in Kafka Streams</a>                                                         | 2.8.0 (partially implemented in 2.7.0)                                       |
| <a href="#">KIP-571: Add option to force remove members in StreamsResetter</a>                                                 | 2.6.0                                                                        |
| <a href="#">KIP-570: Add leader epoch in StopReplicaRequest</a>                                                                | 2.6.0                                                                        |
| <a href="#">KIP-569: DescribeConfigsResponse - Update the schema to include additional metadata information of the field</a>   | 2.6.0                                                                        |
| <a href="#">KIP-568: Explicit rebalance triggering on the Consumer</a>                                                         | 2.6.0                                                                        |
| <a href="#">KIP-562: Allow fetching a key from a single partition rather than iterating over all the stores on an instance</a> | 2.5.0                                                                        |
| <a href="#">KIP-559: Make the Kafka Protocol Friendlier with L7 Proxies</a>                                                    | 2.5.0                                                                        |

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| KIP-558: Track the set of actively used topics by connectors in Kafka Connect                                | 2.5.0                                                                                              |
| KIP-557: Add emit on change support for Kafka Streams                                                        | Implemented for KTable source nodes in 2.6.0, full implementation planned for subsequent releases. |
| KIP-555: Deprecate direct Zookeeper access in Kafka administrative tools                                     | 2.5.0                                                                                              |
| KIP-554: Add Broker-side SCRAM Config API                                                                    | 2.7.0                                                                                              |
| KIP-553: Disable all SSL protocols except TLSV1.2 by default.                                                | 2.5.0                                                                                              |
| KIP-551: Expose disk read and write metrics                                                                  | 2.6.0                                                                                              |
| KIP-546: Add Client Quota APIs to the Admin Client                                                           | 2.6.0 (describe/alter), remainder pending (resolve)                                                |
| KIP-545: support automated consumer offset sync across clusters in MM 2.0                                    | 2.7.0                                                                                              |
| KIP-544: Make metrics exposed via JMX configurable                                                           | 2.5.0                                                                                              |
| KIP-543: Expand ConfigCommand's non-ZK functionality                                                         | 2.5.0                                                                                              |
| KIP-541: Create a fetch.max.bytes configuration for the broker                                               | 2.5.0                                                                                              |
| KIP-538: Add a metric tracking the number of open connections with a given SSL cipher type                   | 2.5.0                                                                                              |
| KIP-537: Increase default zookeeper session timeout                                                          | 2.5.0                                                                                              |
| KIP-535: Allow state stores to serve stale reads during rebalance                                            | 2.5.0                                                                                              |
| KIP-534: Reorganize checkpoint system in log cleaner to per partition                                        | 3.1.0                                                                                              |
| KIP-533: Add default api timeout to AdminClient                                                              | 2.5.0                                                                                              |
| KIP-532: Broker Consumer Lag metrics in size and time                                                        | WIP / inactive                                                                                     |
| KIP-531: Drop support for Scala 2.11 in Kafka 2.5                                                            | Initial version in 2.5.0, remainder in later release (WIP)                                         |
| KIP-530: Consider renaming 'UsePreviousTimeOnInvalidTimeStamp' class to 'UsePartitionTimeOnInvalidTimeStamp' | 2.5.0                                                                                              |
| KIP-528: Deprecate PartitionGrouper configuration and interface                                              | 2.4.0                                                                                              |
| KIP-527: Add VoidSerde to Serdes                                                                             | 2.5.0                                                                                              |
| KIP-526: Reduce Producer Metadata Lookups for Large Number of Topics                                         | 2.5.0                                                                                              |
| KIP-525 - Return topic metadata and configs in CreateTopics response                                         | 2.4.0                                                                                              |
| KIP-524: Allow users to choose config source when describing configs                                         | 2.5.0                                                                                              |
| KIP-523: Add KStream#toTable to the Streams DSL                                                              | 2.5.0                                                                                              |
| KIP-521: Enable redirection of Connect's log4j messages to a file by default                                 | 2.4.0                                                                                              |
| KIP-519: Make SSL context/engine configuration extensible                                                    | 2.6.0                                                                                              |
| KIP-518: Allow listing consumer groups per state                                                             | 2.6.0                                                                                              |
| KIP-517: Add consumer metrics to observe user poll behavior                                                  | 2.4.0                                                                                              |
| KIP-516: Topic Identifiers & Topic Deletion State Improvements                                               | Some in 2.8.0, remainder WIP                                                                       |
| KIP-515: Enable ZK client to use the new TLS supported authentication                                        | 2.5.0                                                                                              |
| KIP-514: Add a bounded flush() API to Kafka Producer                                                         | 2.5.0                                                                                              |
| KIP-511: Collect and Expose Client's Name and Version in the Brokers                                         | 2.4.0 (protocol) / 2.5.0 (metric)                                                                  |
| KIP-507: Securing Internal Connect REST Endpoints                                                            | 2.4.0                                                                                              |
| KIP-504 - Add new Java Authorizer Interface                                                                  | 2.4.0                                                                                              |
| KIP-503: Add metric for number of topics marked for deletion                                                 | 2.4.0                                                                                              |
| KIP-501: Avoid out-of-sync or offline partitions when follower fetch requests not processed in time          | WIP                                                                                                |
| KIP-500: Replace ZooKeeper with a Self-Managed Metadata Quorum                                               |                                                                                                    |

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| KIP-499 - Unify connection name flag for command line tool                                  | 2.5.0                                                                 |
| KIP-497: Add inter-broker API to alter ISR                                                  | 2.7.0                                                                 |
| KIP-496: Administrative API to delete consumer offsets                                      | 2.4.0                                                                 |
| KIP-495: Dynamically Adjust Log Levels in Connect                                           | 2.4.0                                                                 |
| KIP-492: Add java security providers in Kafka Security config                               | 2.4.0                                                                 |
| KIP-488: Clean up Sum,Count,Total Metrics                                                   | 2.4.0                                                                 |
| KIP-484: Expose metrics for group and transaction metadata loading duration                 | 2.4.0                                                                 |
| KIP-482: The Kafka Protocol should Support Optional Tagged Fields                           | 2.4.0                                                                 |
| KIP-481: SerDe Improvements for Connect Decimal type in JSON                                | 2.4.0                                                                 |
| KIP-480: Sticky Partitioner                                                                 | 2.4.0                                                                 |
| KIP-479: Add StreamJoined config object to Join                                             | 2.4.0                                                                 |
| KIP-478 - Strongly typed Processor API                                                      | 2.7.0                                                                 |
| KIP-476: Add Java AdminClient Interface                                                     | 2.4.0                                                                 |
| KIP-475: New Metrics to Measure Number of Tasks on a Connector                              | 2.4.0                                                                 |
| KIP-474: To deprecate WindowStore#put(key, value)                                           | 2.4.0                                                                 |
| KIP-471: Expose RocksDB Metrics in Kafka Streams                                            | 2.4.0 (metrics blocked due to RocksDB version added in 3.2.0)         |
| KIP-470: TopologyTestDriver test input and output usability improvements                    | 2.4.0                                                                 |
| KIP-467: Augment ProduceResponse error messaging for specific culprit records               | 2.4.0 (partially implemented) / 2.5.0                                 |
| KIP-466: Add support for List<T> serialization and deserialization                          | 3.0.0                                                                 |
| KIP-465: Add Consolidated Connector Endpoint to Connect REST API                            | 2.3.0                                                                 |
| KIP-464: Defaults for AdminClient#createTopic                                               | 2.4.0                                                                 |
| KIP-462: Use local thread id for KStreams                                                   | 2.3.0                                                                 |
| KIP-461: Improve Replica Fetcher behavior at handling partition failure                     | 2.3.0                                                                 |
| KIP-460: Admin Leader Election RPC                                                          | 2.4.0                                                                 |
| KIP-458: Connector Client Config Override Policy                                            | 2.3.0                                                                 |
| KIP-455: Create an Administrative API for Replica Reassignment                              | 2.4.0 (API/broker logic)<br>2.5.0 (tools changes)                     |
| KIP-454: Expansion of the ConnectClusterState interface                                     | 2.3.0                                                                 |
| KIP-453: Add close() method to RocksDBConfigSetter                                          | 2.3.0                                                                 |
| KIP-450: Sliding Window Aggregations in the DSL                                             | 2.7.0                                                                 |
| KIP-449: Add connector contexts to log messages in Connect workers                          | 2.3.0                                                                 |
| KIP-447: Producer scalability for exactly once semantics                                    | 2.5.0 (broker, consumer, producer changes implemented) / 2.6.0        |
| KIP-446: Add changelog topic configuration to KTable suppress                               | 2.6.0                                                                 |
| KIP-445: In-memory Session Store                                                            | 2.3.0                                                                 |
| KIP-444: Augment metrics for Kafka Streams                                                  | 2.4.0 (partially implemented) / 2.5.0 (partially implemented) / 2.6.0 |
| KIP-443: Return to default segment.ms and segment.index.bytes in Streams repartition topics | 2.3.0                                                                 |
| KIP-442: Return to default max poll interval in Streams                                     | 2.3.0                                                                 |
| KIP-441: Smooth Scaling Out for Kafka Streams                                               | 2.6.0                                                                 |
| KIP-440: Extend Connect Converter to support headers                                        | 2.4.0                                                                 |
| KIP-437: Custom replacement for MaskField SMT                                               | 2.6.0                                                                 |
| KIP-436: Add a metric indicating start time                                                 | 2.3.0                                                                 |

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| KIP-434: Add Replica Fetcher and Log Cleaner Count Metrics                                                   | 2.4.0                                 |
| KIP-431: Support of printing additional ConsumerRecord fields in DefaultMessageFormatter                     | 2.7.0                                 |
| KIP-430 - Return Authorized Operations in Describe Responses                                                 | 2.3.0                                 |
| KIP-429: Kafka Consumer Incremental Rebalance Protocol                                                       | 2.4.0                                 |
| KIP-428: Add in-memory window store                                                                          | 2.3.0                                 |
| KIP-427: Add AtMinIsr topic partition category (new metric & TopicCommand option)                            | 2.3.0                                 |
| KIP-425: Add some Log4J Kafka Appender Properties for Producing to Secured Brokers                           | 2.3.0                                 |
| KIP-421: Support resolving externalized secrets in AbstractConfig                                            | 2.3.0                                 |
| KIP-420: Add Single Value Fetch in Session Stores                                                            | 2.2.0                                 |
| KIP-418: A method-chaining way to branch KStream                                                             | 2.8.0                                 |
| KIP-417: Allow JmxTool to connect to a secured RMI port                                                      | 2.3.0                                 |
| KIP-415: Incremental Cooperative Rebalancing in Kafka Connect                                                | 2.3.0                                 |
| KIP-414: Expose Embedded ClientIds in Kafka Streams                                                          | 2.2.0                                 |
| KIP-412: Extend Admin API to support dynamic application log levels                                          | 2.4.0                                 |
| KIP-411: Make default Kafka Connect worker task client IDs distinct                                          | 2.3.0                                 |
| KIP-405: Kafka Tiered Storage                                                                                | Accepted                              |
| KIP-402: Improve fairness in SocketServer processors                                                         | 2.2.0 (partially implemented) / 2.3.0 |
| KIP-401: TransformerSupplier/ProcessorSupplier StateStore connecting                                         | 2.6.0                                 |
| KIP-399: Extend ProductionExceptionHandler to cover serialization exceptions                                 | 3.5.0                                 |
| KIP-396: Add Commit/List Offsets Operations to AdminClient                                                   | 2.5.0                                 |
| KIP-394: Require member.id for initial join group request                                                    | 2.2.0                                 |
| KIP-393: Time windowed serde to properly deserialize changelog input topic                                   | 2.2.0                                 |
| KIP-392: Allow consumers to fetch from closest replica                                                       | 2.4.0                                 |
| KIP-390: Support Compression Level                                                                           | WIP                                   |
| KIP-389: Introduce a configurable consumer group size limit                                                  | 2.2.0                                 |
| KIP-386: Standardize on Min/Avg/Max metrics' default value                                                   | 2.2.0                                 |
| KIP-382: MirrorMaker 2.0                                                                                     | 2.4.0                                 |
| KIP-379: Multiple Consumer Group Management                                                                  | 2.4.0                                 |
| KIP-380: Detect outdated control requests and bounced brokers using broker generation                        | 2.2.0                                 |
| KIP-377: TopicCommand to use AdminClient                                                                     | 2.2.0                                 |
| KIP-376: Implement AutoClosable on appropriate classes that want to be used in a try-with-resource statement | 2.2.0                                 |
| KIP-374: Add '--help' option to all available Kafka CLI commands                                             | 2.2.0                                 |
| KIP-373: Allow users to create delegation tokens for other users                                             | 3.3.0                                 |
| KIP-372: Naming Repartition Topics for Joins and Grouping                                                    | 2.1.0                                 |
| KIP-371: Add a configuration to build custom SSL principal name                                              | 2.2.0                                 |
| KIP-369: Alternative Partitioner to Support "Always Round-Robin" Selection                                   | 2.4.0                                 |
| KIP 368: Allow SASL Connections to Periodically Re-Authenticate                                              | 2.2.0                                 |

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| KIP-367 Introduce close(Duration) to Producer and AdminClient instead of close(long, TimeUnit)       | 2.2.0                                                       |
| KIP-366: Make FunctionConversions deprecated                                                         | 2.1.0                                                       |
| KIP-365: Materialized, Serialized, Joined, Consumed and Produced with implicit Serde                 | 2.1.0                                                       |
| KIP-361: Add Consumer Configuration to Disable Auto Topic Creation                                   | 2.3.0                                                       |
| KIP-360: Improve reliability of idempotent/transactional producer                                    | 2.4.0 (partially implemented) / 2.5.0                       |
| KIP-359: Verify leader epoch in produce requests                                                     | 2.8.0 (WIP)                                                 |
| KIP-358: Migrate Streams API to Duration instead of long ms times                                    | 2.1.0                                                       |
| KIP-357: Add support to list ACLs per principal                                                      | 2.1.0                                                       |
| KIP-356: Add withCachingDisabled() to StoreBuilder                                                   | 2.1.0                                                       |
| KIP-354: Add a Maximum Log Compaction Lag                                                            | 2.3.0                                                       |
| KIP-353: Improve Kafka Streams Timestamp Synchronization                                             | 2.1.0                                                       |
| KIP-352: Distinguish URPs caused by reassignment                                                     | 2.5.0                                                       |
| KIP-351: Add --under-min-isr option to describe topics command                                       | 2.3.0                                                       |
| KIP-346: Improve LogCleaner behavior on error                                                        | 2.1.0                                                       |
| KIP-345: Introduce static membership protocol to reduce consumer rebalances                          | 2.4.0                                                       |
| KIP-342 Add support for custom SASL extensions in OAuthBearer authentication                         | 2.1.0                                                       |
| KIP-341: Update Sticky Assignor's User Data Protocol                                                 | 2.3.0                                                       |
| KIP-340: Allow kafka-reassign-partitions.sh and kafka-log-dirs.sh to take admin client property file | 2.1.0                                                       |
| KIP-339: Create a new IncrementalAlterConfigs API                                                    | 2.3.0                                                       |
| KIP-338 Support to exclude the internal topics in kafka-topics.sh command                            | 2.1.0                                                       |
| KIP-336: Consolidate ExtendedSerializer/Serializer and ExtendedDeserializer/Deserializer             | 2.1.0                                                       |
| KIP-332: Update AclCommand to use AdminClient API                                                    | 2.1.0                                                       |
| KIP-331 Add default implementation to close() and configure() for Serializer, Deserializer and Serde | 2.3.0                                                       |
| KIP-330: Add retentionPeriod in SessionBytesStoreSupplier                                            | 2.1.0                                                       |
| KIP-328: Ability to suppress updates for KTables                                                     | 2.1.0 (partially implemented; inactive)                     |
| KIP-324: Add method to get metrics() in AdminClient                                                  | 2.1.0                                                       |
| KIP-322: Return new error code for DeleteTopics API when topic deletion disabled.                    | 2.1.0                                                       |
| KIP-321: Update TopologyDescription to better represent Source and Sink Nodes                        | 2.1.0                                                       |
| KIP-320: Allow fetchers to detect and handle log truncation                                          | 2.1.0 (partially implemented). full implementation in 2.4.0 |
| KIP-319: Replace segments with segmentInterval in WindowBytesStoreSupplier                           | 2.1.0                                                       |
| KIP-313: Add KStream.flatTransform and KStream.flatTransformValues                                   | 2.2.0 (partially implemented)<br>/ 2.3.0                    |
| KIP-312 Add Overloaded StreamsBuilder Build Method to Accept java.util.Properties                    | 2.1.0                                                       |
| KIP-309: Add toUpperCase support to sasl.kerberos.principal.to.local rule                            | 2.4.0                                                       |
| KIP-308: Support dynamic update of max.connections.per.ip/max.connections.per.ip.overrides           | 2.1.0                                                       |
| KIP-307: Allow to define custom processor names with KStreams DSL                                    | 2.3.0 (partially implemented) / 2.4.0                       |
| KIP-306: Configuration for Delaying Response to Failed Authentication                                | 2.1.0                                                       |

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| KIP-305: Add Connect primitive number converters                                                  | 2.0.0                                   |
| KIP-303: Add Dynamic Routing in Streams Sink                                                      | 2.0.0                                   |
| KIP-302 - Enable Kafka clients to use all DNS resolved IP addresses                               | 2.1.0                                   |
| KIP-300: Add Windowed KTable API in StreamsBuilder                                                | not implemented; inactive               |
| KIP-298: Error Handling in Connect                                                                | 2.0.0                                   |
| KIP-297: Externalizing Secrets for Connect Configurations                                         | 2.0.0                                   |
| KIP-295 Add Streams Configuration Allowing for Optional Topology Optimization                     | 2.0.0                                   |
| KIP-294 - Enable TLS hostname verification by default                                             | 2.0.0                                   |
| KIP-291: Separating controller connections and requests from the data plane                       | 2.2.0                                   |
| KIP-292: Add transformValues() method to KTable                                                   | 2.0.0                                   |
| KIP-290: Support for Prefixed ACLs                                                                | 2.0.0                                   |
| KIP-289: Improve the default group id behavior in KafkaConsumer                                   | 2.2.0                                   |
| KIP-285: Connect Rest Extension Plugin                                                            | 2.0.0                                   |
| KIP-284: Set default retention ms for Streams repartition topics to Long.MAX_VALUE                | 2.0.0                                   |
| KIP-283: Efficient Memory Usage for Down-Conversion                                               | 2.0.0                                   |
| KIP-282: Add the listener name to the authentication context                                      | 2.0.0                                   |
| KIP-281: ConsumerPerformance: Increase Polling Loop Timeout and Make It Reachable by the End User | 2.0.0                                   |
| KIP-280: Enhanced log compaction                                                                  | WIP                                     |
| KIP-279: Fix log divergence between leader and follower after fast leader fail over               | 2.0.0                                   |
| KIP-278 - Add version option to Kafka's commands                                                  | 2.0.0                                   |
| KIP-277 - Fine Grained ACL for CreateTopics API                                                   | 2.0.0                                   |
| KIP-276 - Add StreamsConfig prefix for different consumers                                        | 2.0.0                                   |
| KIP-274: Kafka Streams Skipped Records Metrics                                                    | 2.0.0                                   |
| KIP-272: Add API version tag to broker's RequestsPerSec metric                                    | 2.0.0                                   |
| KIP-270 - A Scala Wrapper Library for Kafka Streams                                               | 2.0.0                                   |
| KIP-268: Simplify Kafka Streams Rebalance Metadata Upgrade                                        | 2.0.0                                   |
| KIP-267: Add Processor Unit Test Support to Kafka Streams Test Utils                              | 2.0.0                                   |
| KIP-266: Fix consumer indefinite blocking behavior                                                | 2.0.0                                   |
| KIP-265: Make Windowed Serde to public APIs                                                       | 2.0.0                                   |
| KIP-261: Add Single Value Fetch in Window Stores                                                  | 2.0.0                                   |
| KIP-258: Allow to Store Record Timestamps in RocksDB                                              | 2.3.0 (partially implemented; inactive) |
| KIP-257 - Configurable Quota Management                                                           | 2.0.0                                   |
| KIP-255: OAuth Authentication via SASL/OAUTHBEARER                                                | 2.0.0                                   |
| KIP-251: Allow timestamp manipulation in Processor API                                            | 2.0.0                                   |
| KIP-249: Add Delegation Token Operations to KafkaAdminClient                                      | 2.0.0                                   |
| KIP-247: Add public test utils for Kafka Streams                                                  | 1.1.0                                   |
| KIP-245: Use Properties instead of StreamsConfig in KafkaStreams constructor                      | 2.0.0                                   |
| KIP-244: Add Record Header support to Kafka Streams Processor API                                 | 2.0.0                                   |
| KIP-243: Make ProducerConfig and ConsumerConfig constructors public                               | 1.1.0                                   |
| KIP-239 Add queryableStoreName() to GlobalKTable                                                  | 1.1.0                                   |

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| KIP-238: Expose Kafka cluster ID in Connect REST API                                                                      | 1.1.0       |
| KIP-237: More Controller Health Metrics                                                                                   | 2.0.0       |
| KIP-235: Add DNS alias support for secured connection                                                                     | 2.1.0       |
| KIP-233: Simplify StreamsBuilder#addGlobalStore                                                                           | 1.1.0       |
| KIP-231: Improve the Required ACL of ListGroups API                                                                       | 2.1.0       |
| KIP-229: DeleteGroups API                                                                                                 | 1.1.0       |
| KIP-227 - Introduce Incremental FetchRequests to Increase Partition Scalability                                           | 1.1.0       |
| KIP-226 - Dynamic Broker Configuration                                                                                    | 1.1.0       |
| KIP-225 - Use tags for consumer "records.lag" metrics                                                                     | 1.1.0       |
| KIP-224: Add configuration parameter `retries` to Streams API                                                             | 1.1.0       |
| KIP-223 - Add per-topic min lead and per-partition lead metrics to KafkaConsumer                                          | 2.0.0       |
| KIP-222 - Add Consumer Group operations to Admin API                                                                      | 2.0.0       |
| KIP-221: Enhance DSL with Connecting Topic Creation and Repartition Hint                                                  | 2.6.0       |
| KIP-220: Add AdminClient into Kafka Streams' ClientSupplier                                                               | 1.1.0       |
| KIP-219: Improve quota communication                                                                                      | 2.0.0       |
| KIP-218: Make KafkaFuture.Function java 8 lambda compatible                                                               | 1.1.0       |
| KIP-216: IQ should throw different exceptions for different errors                                                        | 2.8.0 (WIP) |
| KIP-215: Add topic regex support for Connect sinks                                                                        | 1.1.0       |
| KIP-214: Add zookeeper.max.in.flight.requests config to the broker                                                        | 1.1.0       |
| KIP-213 Support non-key joining in KTable                                                                                 | 2.4.0       |
| KIP-212: Enforce set of legal characters for connector names                                                              | 1.1.0       |
| KIP-211: Revise Expiration Semantics of Consumer Group Offsets                                                            | 2.1.0       |
| KIP-210 - Provide for custom error handling when Kafka Streams fails to produce                                           | 1.1.0       |
| KIP-208: Add SSL support to Kafka Connect REST interface                                                                  | 1.1.0       |
| KIP-207: Offsets returned by ListOffsetsResponse should be monotonically increasing even during a partition leader change | 2.2.0       |
| KIP-206: Add support for UUID serialization and deserialization                                                           | 2.1.0       |
| KIP-205: Add all() and range() API to ReadOnlyWindowStore                                                                 | 1.1.0       |
| KIP-204 : Adding records deletion operation to the new Admin Client API                                                   | 1.1.0       |
| KIP-203: Add toLowerCase support to sasl.kerberos.principal.to.local rule                                                 | 1.1.0       |
| KIP-202: Move merge() from StreamsBuilder to KStream                                                                      | 1.0.0       |
| KIP-198: Remove ZK dependency from Streams Reset Tool                                                                     | 1.0.0       |
| KIP-197 Connect REST API should include the connector type when describing a connector                                    | 1.0.0       |
| KIP-196: Add metrics to Kafka Connect framework                                                                           | 1.0.0       |
| KIP-195: AdminClient.createPartitions                                                                                     | 1.0.0       |
| KIP-192 : Provide cleaner semantics when idempotence is enabled                                                           | 1.0.0       |
| KIP-191: KafkaConsumer.subscribe() overload that takes just Pattern                                                       | 1.0.0       |
| KIP-190: Handle client-ids consistently between clients and brokers                                                       | 1.0.0       |
| KIP-189: Improve principal builder interface and add support for SASL                                                     | 1.0.0       |
| KIP-188 - Add new metrics to support health checks                                                                        | 1.0.0       |
| KIP-187 - Add cumulative count metric for all Kafka rate metrics                                                          | 1.0.0       |

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|-----------------------------------------------------------------------------------------------------------------------|-----------------------------------------|
| KIP-186: Increase offsets retention default to 7 days                                                                 | 2.0.0                                   |
| KIP-183 - Change PreferredReplicaLeaderElectionCommand to use AdminClient                                             | 2.2.0                                   |
| KIP-182: Reduce Streams DSL overloads and allow easier use of custom storage engines                                  | 1.0.0                                   |
| KIP-180: Add a broker metric specifying the number of consumer group rebalances in progress                           | 1.1.0                                   |
| KIP-177: Consumer perf tool should count rebalance time                                                               | 1.0.0                                   |
| KIP-176: Remove deprecated new-consumer option for tools                                                              | 2.0.0                                   |
| KIP-175: Additional '--describe' views for ConsumerGroupCommand                                                       | 1.1.0                                   |
| KIP-174 - Deprecate and remove internal converter configs in WorkerConfig                                             | 2.0.0                                   |
| KIP-173: Add prefix to StreamsConfig to enable setting default internal topic configs                                 | 1.0.0                                   |
| KIP-171 - Extend Consumer Group Reset Offset for Stream Application                                                   | 1.1.0                                   |
| KIP-168: Add GlobalTopicCount and GlobalPartitionCount metric per cluster                                             | 1.0.0                                   |
| KIP-167: Add interface for the state store restoration process                                                        | 1.0.0                                   |
| KIP-164 - Add UnderMinIsrPartitionCount and per-partition UnderMinIsr metrics                                         | 1.0.0                                   |
| KIP-163: Lower the Minimum Required ACL Permission of OffsetFetch                                                     | 1.0.0                                   |
| KIP-162: Enable topic deletion by default                                                                             | 1.0.0                                   |
| KIP-161: streams deserialization exception handlers                                                                   | 1.0.0                                   |
| KIP-160: Augment KStream.print(), KStream.writeAsText() to allow users pass in extra parameters in the printed string | 1.0.0                                   |
| KIP-158: Kafka Connect should allow source connectors to set topic-specific settings for new topics                   | 2.6.0                                   |
| KIP-157 - Add consumer config options to streams reset tool                                                           | 1.0.0                                   |
| KIP-156 Add option "dry run" to Streams application reset tool                                                        | 0.11.0.0                                |
| KIP-155 - Add range scan for windowed state stores                                                                    | 0.11.0.0                                |
| KIP-154 Add Kafka Connect configuration properties for creating internal topics                                       | 0.11.0.0                                |
| KIP-153: Include only client traffic in BytesOutPerSec metric                                                         | 0.11.0.0                                |
| KIP-152 - Improve diagnostics for SASL authentication failures                                                        | 1.0.0                                   |
| KIP-151 Expose Connector type in REST API                                                                             | 0.11.0.0                                |
| KIP-150 - Kafka-Streams Cogroup                                                                                       | 2.5.0                                   |
| KIP-149: Enabling key access in ValueTransformer, ValueMapper, and ValueJoiner                                        | 1.1.0 (partially implemented; inactive) |
| KIP-146 - Classloading Isolation in Connect                                                                           | 0.11.0.0                                |
| KIP-145 - Expose Record Headers in Kafka Connect                                                                      | 1.1.0                                   |
| KIP-144: Exponential backoff for broker reconnect attempts                                                            | 0.11.0.0                                |
| KIP-143: Controller Health Metrics                                                                                    | 0.11.0.0                                |
| KIP-140: Add administrative RPCs for adding, deleting, and listing ACLs                                               | 0.11.0.0                                |
| KIP-138: Change punctuate semantics                                                                                   | 1.0.0                                   |
| KIP-137: Enhance TopicCommand --describe to show topics marked for deletion                                           | 0.11.0.0                                |
| KIP-136: Add Listener name to SelectorMetrics tags                                                                    | 0.11.0.0                                |
| KIP-134: Delay initial consumer group rebalance                                                                       | 0.11.0.0                                |
| KIP-133: Describe and Alter Configs Admin APIs                                                                        | 0.11.0.0                                |

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| KIP-131 - Add access to OffsetStorageReader from SourceConnector                                   | 2.6.0    |
| KIP-130: Expose states of active tasks to KafkaStreams public API                                  | 1.0.0    |
| KIP-129: Streams Exactly-Once Semantics                                                            | 0.11.0.0 |
| KIP-128: Add ByteArrayConverter for Kafka Connect                                                  | 0.11.0.0 |
| KIP-126 - Allow KafkaProducer to split and resend oversized batches.                               | 0.11.0.0 |
| KIP-124 - Request rate quotas                                                                      | 0.11.0.0 |
| KIP-123: Allow per stream/table timestamp extractor                                                | 0.11.0.0 |
| KIP-122: Add Reset Consumer Group Offsets tooling                                                  | 0.11.0.0 |
| KIP-121: Add KStream peek method                                                                   | 0.11.0.0 |
| KIP-120: Cleanup Kafka Streams builder API                                                         | 1.0.0    |
| KIP-119: Drop Support for Scala 2.10 in Kafka 0.11                                                 | 0.11.0.0 |
| KIP-118: Drop Support for Java 7                                                                   | 2.0.0    |
| KIP-117: Add a public AdminClient API for Kafka admin operations                                   | 0.11.0.0 |
| KIP-115: Enforce offsets.topic.replication.factor upon __consumer__offsets auto topic creation     | 0.11.0.0 |
| KIP-114: KTable state stores and improved semantics                                                | 0.11.0.0 |
| KIP-113: Support replicas movement between log directories                                         | 1.1.0    |
| KIP-112: Handle disk failure for JBOD                                                              | 1.0.0    |
| KIP-110: Add Codec for ZStandard Compression                                                       | 2.1.0    |
| KIP-109: Old Consumer Deprecation                                                                  | 0.11.0.0 |
| KIP-108: Create Topic Policy                                                                       | 0.10.2.0 |
| KIP-107: Add deleteRecordsBefore() API in AdminClient                                              | 0.11.0.0 |
| KIP-106 - Change Default unclean.leader.election.enabled from True to False                        | 0.11.0.0 |
| KIP-105: Addition of Record Level for Sensors                                                      | 0.10.2.0 |
| KIP-104: Granular Sensors for Streams                                                              | 0.10.2.0 |
| KIP-103: Separation of Internal and External traffic                                               | 0.10.2.0 |
| KIP-102 - Add close with timeout for consumers                                                     | 0.10.2.0 |
| KIP-101 - Alter Replication Protocol to use Leader Epoch rather than High Watermark for Truncation | 0.11.0.0 |
| KIP-100 - Relax Type constraints in Kafka Streams API                                              | 0.10.2.0 |
| KIP-99: Add Global Tables to Kafka Streams                                                         | 0.10.2.0 |
| KIP-98 - Exactly Once Delivery and Transactional Messaging                                         | 0.11.0.0 |
| KIP-97: Improved Kafka Client RPC Compatibility Policy                                             | 0.10.2.0 |
| KIP-96 - Add per partition metrics for in-sync and assigned replica count                          | 0.10.2.0 |
| KIP-94 Session Windows                                                                             | 0.10.2.0 |
| KIP-93: Improve invalid timestamp handling in Kafka Streams                                        | 0.10.2.0 |
| KIP-92 - Add per partition lag metrics to KafkaConsumer                                            | 0.10.2.0 |
| KIP-91 Provide Intuitive User Timeouts in The Producer                                             | 2.1.0    |
| KIP-90 - Remove zkClient dependency from Streams                                                   | 0.10.2.0 |
| KIP-89: Allow sink connectors to decouple flush and offset commit                                  | 0.10.2.0 |
| KIP-88: OffsetFetch Protocol Update                                                                | 0.10.2.0 |
| KIP-86: Configurable SASL callback handlers                                                        | 2.0.0    |

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| KIP-85: Dynamic JAAS configuration for Kafka clients                                                  | 0.10.2.0            |
| KIP-84: Support SASL SCRAM mechanisms                                                                 | 0.10.2.0            |
| KIP-82 - Add Record Headers                                                                           | 0.11.0.0            |
| KIP-81: Bound Fetch memory usage in the consumer                                                      | 2.8.0 (WIP)         |
| KIP-79 - ListOffsetRequest/ListOffsetResponse v1 and add timestamp search methods to the new consumer | 0.10.1.0            |
| KIP-78: Cluster Id                                                                                    | 0.10.1.0            |
| KIP-77: Improve Kafka Streams Join Semantics                                                          | 0.10.2.0            |
| KIP-75 - Add per-connector Converters                                                                 | 0.10.1.0            |
| KIP-74: Add Fetch Response Size Limit in Bytes                                                        | 0.10.1.0            |
| KIP-73: Replication Quotas                                                                            | 0.10.1.0            |
| KIP-72: Allow putting a bound on memory consumed by Incoming request                                  | 1.0.0               |
| KIP-71: Enable log compaction and deletion to co-exist                                                | 0.10.1.0            |
| KIP-70: Revise Partition Assignment Semantics on New Consumer's Subscription Change                   | 0.10.1.0            |
| KIP-67: Queryable state for Kafka Streams                                                             | 0.10.1.0            |
| KIP-66: Single Message Transforms for Kafka Connect                                                   | 0.10.2.0 / 0.11.0.0 |
| KIP-65: Expose timestamps to Connect                                                                  | 0.10.1.0            |
| KIP-63: Unify store and downstream caching in streams                                                 | 0.10.1.0            |
| KIP-62: Allow consumer to send heartbeats from a background thread                                    | 0.10.1.0            |
| KIP-60 - Make Java client classloading more flexible                                                  | 0.10.1.0            |
| KIP-58 - Make Log Compaction Point Configurable                                                       | 0.10.1.0            |
| KIP-57 - Interoperable LZ4 Framing                                                                    | 0.10.0.0            |
| KIP-56: Allow cross origin HTTP requests on all HTTP methods                                          | 0.10.0.0            |
| KIP-55: Secure Quotas for Authenticated Users                                                         | 0.10.1.0            |
| KIP-54: Sticky Partition Assignment Strategy                                                          | 0.11.0.0            |
| KIP-52: Connector Control APIs                                                                        | 0.10.0.0            |
| KIP-51 - List Connectors REST API                                                                     | 0.10.0.0            |
| KIP-48 Delegation token support for Kafka                                                             | 1.1.0               |
| KIP-45 - Standardize all client sequence interaction on j.u.Collection.                               | 0.10.0.0            |
| KIP-43: Kafka SASL enhancements                                                                       | 0.10.0.0            |
| KIP-42: Add Producer and Consumer Interceptors                                                        | 0.10.0.0            |
| KIP-41: Consumer Max Records                                                                          | 0.10.0.0            |
| KIP-40: ListGroups and DescribeGroup                                                                  | 0.9.0.0             |
| KIP-38: ZooKeeper Authentication                                                                      | 0.9.0.0             |
| KIP-36 - Rack aware replica assignment                                                                | 0.10.0.0            |
| KIP-35 - Retrieving protocol version                                                                  | 0.10.0.0            |
| KIP-33 - Add a time based log index                                                                   | 0.10.1.0            |
| KIP-32 - Add timestamps to Kafka message                                                              | 0.10.0.0            |
| KIP-31 - Move to relative offsets in compressed message sets                                          | 0.10.0.0            |
| KIP-28 - Add a processor client                                                                       | 0.10.0.0            |
| KIP-26 - Add Kafka Connect framework for data import/export                                           | 0.9.0.0             |

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| <a href="#">KIP-25 - System test improvements</a>                                                                         | 0.9.0.0                     |
| <a href="#">KIP-22 - Expose a Partitioner interface in the new producer</a>                                               | 0.9.0.0                     |
| <a href="#">KIP-21 - Dynamic Configuration</a>                                                                            | 0.9.0.0 (WIP)               |
| <a href="#">KIP-20 Enable log preallocate to improve consume performance under windows and some old Linux file system</a> | 0.9.0.0                     |
| <a href="#">KIP-19 - Add a request timeout to NetworkClient</a>                                                           | 0.9.0.0                     |
| <a href="#">KIP-16 - Automated Replica Lag Tuning</a>                                                                     | 0.9.0.0                     |
| <a href="#">KIP-15 - Add a close method with a timeout in the producer</a>                                                | 0.9.0.0                     |
| <a href="#">KIP-13 - Quota Design</a>                                                                                     | 0.9.0.0                     |
| <a href="#">KIP-12 - Kafka Sasl/Kerberos and SSL implementation</a>                                                       | 0.9.0.0                     |
| <a href="#">KIP-11 - Kafka Authorizer design</a>                                                                          | 0.9.0.0                     |
| <a href="#">KIP-8 - Add a flush method to the producer API</a>                                                            | 0.9.0.0                     |
| <a href="#">KIP-4 - Metadata Protocol Changes</a>                                                                         | 0.10.0.0                    |
| <a href="#">KIP-4 - Command line and centralized administrative operations</a>                                            | 0.9.0.0, 0.10.0.0, 0.10.1.0 |
| <a href="#">KIP-3 - Mirror Maker Enhancement</a>                                                                          | 0.9.0.0                     |
| <a href="#">KIP-2 - Refactor brokers to allow listening on multiple ports and IPs</a>                                     | 0.9.0.0                     |
| <a href="#">KIP-1 - Remove support of request.required.acks</a>                                                           | 0.9.0.0                     |

## KIPs under discussion

Please insert new rows in **sorted order** (ascending by KIP number). Please move the adopted/accepted KIPs to the "Adopted KIPs" table above.

| KIP                                                                                                           | Comment                                                                              |
|---------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| <a href="#">KIP-59: Proposal for a kafka broker command</a>                                                   | Sent emails to Dev discussion group. Work tracked under <a href="#">KAFKA-3663</a> . |
| <a href="#">KIP-125: ZookeeperConsumerConnector to KafkaConsumer Migration and Rollback</a>                   |                                                                                      |
| <a href="#">KIP-135 : Send of null key to a compacted topic should throw non-retriable error back to user</a> |                                                                                      |
| <a href="#">KIP 141 - ProducerRecord &amp; SourceRecord: Add timestamp constructors</a>                       |                                                                                      |
| <a href="#">KIP-142: Add ListTopicsRequest to efficiently list all the topics in a cluster</a>                |                                                                                      |
| <a href="#">KIP-148: Add a connect timeout for client</a>                                                     |                                                                                      |
| <a href="#">KIP-166 - Add a tool to make amounts of replicas and leaders on brokers balanced</a>              |                                                                                      |
| <a href="#">KIP-169 - Lag-Aware Partition Assignment Strategy</a>                                             |                                                                                      |
| <a href="#">KIP-178: Size-based log directory selection strategy</a>                                          |                                                                                      |
| <a href="#">KIP-185: Make exactly once in order delivery the default producer setting</a>                     |                                                                                      |
| <a href="#">KIP-193: Add SchemaBuilder.from(Schema)</a>                                                       |                                                                                      |
| <a href="#">KIP-201: Rationalising Policy interfaces</a>                                                      |                                                                                      |
| <a href="#">KIP-209 - Connection String Support</a>                                                           |                                                                                      |
| <a href="#">KIP-217: Expose a timeout to allow an expired ZK session to be re-created</a>                     |                                                                                      |
| <a href="#">KIP-228 Negative record timestamp support</a>                                                     | Voting in progress                                                                   |
| <a href="#">KIP-234: add support for getting topic defaults from AdminClient</a>                              |                                                                                      |
| <a href="#">KIP-236: Interruptible Partition Reassignment</a>                                                 | Discussion                                                                           |
| <a href="#">KIP-240: AdminClient.listReassignments() AdminClient.describeReassignments()</a>                  |                                                                                      |

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| KIP-242: Mask password in Kafka Connect Rest API response                                                                 |                                                                                    |
| KIP-250 Add Support for Quorum-based Producer Acknowledgment                                                              |                                                                                    |
| KIP-252 - Extend ACLs to allow filtering based on ip ranges and subnets                                                   |                                                                                    |
| KIP-253: Support in-order message delivery with partition expansion                                                       | Discussion                                                                         |
| KIP-254: JsonConverter Exception Handling                                                                                 |                                                                                    |
| KIP-264: Add a consumer metric to record raw fetch size                                                                   | Voting in progress                                                                 |
| KIP-271: Add NetworkClient redirector                                                                                     | Discussion                                                                         |
| KIP-273: Kafka to support using ETCD beside Zookeeper                                                                     | Discussion                                                                         |
| KIP-293 Add new metrics for consumer/replication fetch requests                                                           | Voting in progress                                                                 |
| KIP-296: Add connector level configurability for producer/consumer client configs                                         | Discussion                                                                         |
| KIP-301: Schema Inferencing for JsonConverter                                                                             | Discussion                                                                         |
| KIP-304: Connect runtime mode improvements for container platforms                                                        | Discussion                                                                         |
| KIP-315: Stream Join Sticky Assignor                                                                                      | Discussion                                                                         |
| KIP-316: Command-line overrides for ConnectDistributed worker properties                                                  | Discussion                                                                         |
| KIP-317: Add end-to-end data encryption functionality to Apache Kafka                                                     | Discussion                                                                         |
| KIP-325: Extend Consumer Group Command to Show Beginning Offsets                                                          | Voting in Progress345                                                              |
| KIP-333: Add faster mode of rebalancing                                                                                   | Discussion                                                                         |
| KIP-334 - Include partitions in exceptions raised during consumer record deserialization/validation                       |                                                                                    |
| KIP-348 Eliminate null from SourceTask#poll()                                                                             |                                                                                    |
| KIP-350: Allow kafka-topics.sh to take brokerid as parameter to show partitions associated with it                        |                                                                                    |
| KIP-356: Add KafkaConsumer fetch-error-rate and fetch-error-total metrics                                                 | Discussion                                                                         |
| KIP-363: Allow performance tools to print final results to output file                                                    | Discussion                                                                         |
| KIP-370: Remove Orphan Partitions                                                                                         | Discussion                                                                         |
| KIP-375: Kafka Clients - make Metadata#TOPIC_EXPIRY_MS configurable                                                       | Discussion                                                                         |
| KIP-381: Connect: Tell about records that had their offsets flushed in callback                                           | Voting in progress (restarted 18th January 2019, due to no votes in first attempt) |
| KIP-384: Add config for incompatible changes to persistent metadata                                                       | Discussion                                                                         |
| KIP-385: Avoid throwing away prefetched data                                                                              | Discussion                                                                         |
| KIP-387: Fair Message Consumption Across Partitions in KafkaConsumer                                                      | Discussion                                                                         |
| KIP-388: Add observer interface to record request and response                                                            | Discussion                                                                         |
| KIP-395: Encrypt-then-MAC Delegation token metadata                                                                       |                                                                                    |
| KIP-400: Improve exit status in case of errors in ConsoleProducer                                                         | Discussion                                                                         |
| KIP-403: Increase ProducerPerformance precision by using nanoTime                                                         | Draft                                                                              |
| KIP-406: GlobalStreamThread should honor custom offset policy.                                                            | Blocked                                                                            |
| KIP-407: Kafka Connect support override worker kafka api configuration with connector configuration that post by rest api |                                                                                    |
| KIP-409: Allow creating under-replicated topics and partitions                                                            |                                                                                    |
| KIP-410: Add metric for request handler thread pool utilization by request type                                           | Discussion                                                                         |
| KIP-416: Notify SourceTask of ACK'd offsets, metadata                                                                     | Discussion                                                                         |
| KIP-419: Safely notify Kafka Connect SourceTask is stopped                                                                | Voting in progress, JIRA exists with pull request                                  |
| KIP-423: Add JoinReason to Consumer Join Group Protocol                                                                   | Discussion                                                                         |
| KIP-424: Allow suppression of intermediate events based on wall clock time                                                | Discussion                                                                         |

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| KIP-426: Persist Broker Id to Zookeeper                                                                   | Discussion                                                                           |
| KIP-435: Internal Partition Reassignment Batching                                                         | Discussion                                                                           |
| KIP-438: Expose task, connector IDs in Connect API                                                        | Discussion                                                                           |
| KIP-439: Cleanup built-in Store interfaces                                                                | Discussion                                                                           |
| KIP-448: Add State Stores Unit Test Support to Kafka Streams Test Utils                                   | Discussion                                                                           |
| KIP-452: Tool to view cluster status                                                                      | Discussion, JIRA exists                                                              |
| KIP-468: Avoid decompression of record when validate record at server in the scene of inPlaceAssignment . | Under discussion                                                                     |
| KIP-473: Enable KafkaLog4JAppender to use SASL Authentication Callback Handlers                           | Under Discussion                                                                     |
| KIP-477: Add PATCH method for connector config in Connect REST API                                        | Under Discussion                                                                     |
| KIP-487: Automatic Topic Creation on Producer                                                             | Under Discussion                                                                     |
| KIP-489: Kafka Consumer Record Latency Metric                                                             | Under Discussion                                                                     |
| KIP-490: New metric to count offsets expired without being consumed by a consumer group                   | Under discussion                                                                     |
| KIP-491: Preferred Leader Deprioritized List (Temporary Blacklist)                                        | Under discussion                                                                     |
| KIP-494: Connect REST Endpoint to get Transformations (SMTs)                                              |                                                                                      |
| KIP-498: Add client-side configuration for maximum response size to protect against OOM                   | Sent emails to Dev discussion group. Work tracked under <a href="#">KAFKA-4090</a> . |
| KIP-502: Connect SinkTask.put(...) to specify ArrayList<SinkRecord> in Signature                          |                                                                                      |
| KIP-505: Add new public method to only update assignment metadata in consumer                             | Under discussion                                                                     |
| KIP-506: Allow setting SCRAM password via Admin interface                                                 | Under discussion                                                                     |
| KIP-508: Make Suppression State Queriable                                                                 | Under discussion                                                                     |
| KIP-509: Rebalance and restart Producers                                                                  | Under discussion                                                                     |
| KIP-510: Metrics library upgrade                                                                          | Under discussion                                                                     |
| KIP-512: Adding headers to RecordMetaData                                                                 | Sent <a href="#">mail</a> to dev discussion group                                    |
| KIP-513: Distinguish between Key and Value serdes in scala wrapper library for kafka streams              | Sent <a href="#">mail</a> to dev discussion group                                    |
| KIP-536: Propagate broker start time to Admin API                                                         | Under discussion                                                                     |
| KIP-539: Add mechanism to flush records out in low volume suppression buffers                             | Under discussion.                                                                    |
| KIP-540: Implement per key stream time tracking                                                           | Draft (In Progress)                                                                  |
| KIP-542: Partition Reassignment Throttling                                                                | Draft                                                                                |
| KIP-547: Extend ConsumerInterceptor to allow modification of Consumer Commits                             | Under Discussion                                                                     |
| KIP-548 Add Option to enforce rack-aware custom partition reassignment execution                          | Under Discussion                                                                     |
| KIP-549: Surface Consumer's Metadata in KafkaAdminClient#describeConsumerGroups                           | Under Discussion                                                                     |
| KIP-550: Mechanism to Delete Stray Partitions on Broker                                                   | Draft                                                                                |
| KIP-552: Suppress "unused config" warning                                                                 | Under Discussion                                                                     |
| KIP-560: Auto infer external topic partitions in stream reset tool                                        | Under Discussion                                                                     |
| KIP-561: Regex Support for ConsumerGroupCommand                                                           | Under Discussion                                                                     |
| KIP-563: Add 'tail -n' feature for ConsoleConsumer                                                        | Under Discussion                                                                     |
| KIP-564: Add new cached authorizer:change the dim of cache                                                | Under Discussion                                                                     |
| KIP-565: Using AclCommand,avoid call the global method loadcache in SimpleAclAuthorizer                   | Under Discussion                                                                     |
| KIP-566: Add rebalance callbacks to ConsumerInterceptor                                                   | Under Discussion                                                                     |
| KIP-567: Kafka Cluster Audit                                                                              | Under Discussion                                                                     |
| KIP-575: build a Kafka-Exporter by Java                                                                   | Under Discussion                                                                     |

|                                                                                                                                                     |                                                                                                      |
|-----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|
| KIP-576: Support dynamic update of more broker configs related to replication                                                                       | Under Discussion                                                                                     |
| KIP-578: Add configuration to limit number of partitions                                                                                            | Voting                                                                                               |
| KIP-579: new exception on min.insync.replicas > replication.factor                                                                                  | Voting in progress                                                                                   |
| KIP-582: Add a "continue" option for Kafka Connect error handling                                                                                   | Under Discussion                                                                                     |
| KIP-583: add tag "partition" to BrokerTopicMetrics so as to observe the partition metrics on the same broker                                        | Under Discussion                                                                                     |
| KIP-587: Suppress detailed responses for handled exceptions in security-sensitive environments                                                      | Under Discussion                                                                                     |
| KIP-592: Replicate mirrmaker topics from earliest                                                                                                   | Under Discussion                                                                                     |
| KIP-595: A Raft Protocol for the Metadata Quorum                                                                                                    | Under Discussion                                                                                     |
| KIP-596: Safely abort Producer transactions during application shutdown                                                                             | Under Discussion                                                                                     |
| KIP-598: Augment TopologyDescription with store and source / sink serde information                                                                 | Under Discussion                                                                                     |
| KIP-619: Add internal topic creation support                                                                                                        | Under Discussion                                                                                     |
| KIP-625: Richer encodings for integral-typed protocol fields                                                                                        | Under Discussion                                                                                     |
| KIP-628: ConsumerPerformance's multi-thread implementation                                                                                          | Sent <a href="#">email</a> to Dev discussion group. Work tracked under <a href="#">KAFKA-10136</a> . |
| KIP-636: Make RPC error codes and messages tagged fields                                                                                            | Under Discussion                                                                                     |
| KIP-637: Include min.insync.replicas in MetadataResponse to make Producer smarter in partitioning events                                            | Draft                                                                                                |
| KIP-639: Move nodeLevelSensor and storeLevelSensor methods from StreamsMetricsImpl to StreamsMetrics                                                | Under Discussion                                                                                     |
| KIP-640: Add log compression analysis tool                                                                                                          | Under Discussion                                                                                     |
| KIP-649: Dynamic client configuration                                                                                                               | Under Discussion                                                                                     |
| KIP-655: Windowed Distinct Operation for Kafka Streams API                                                                                          | Voting in progress                                                                                   |
| KIP-656: MirrorMaker2 Exactly-once Semantics                                                                                                        | Draft                                                                                                |
| KIP-665: Kafka Connect Hash SMT                                                                                                                     | Voting in progress                                                                                   |
| KIP-668: Expose REST endpoint to list converter plugins                                                                                             | Under Discussion                                                                                     |
| KIP-669 Preserve Source Partition in Kafka Streams from context                                                                                     | Draft                                                                                                |
| KIP-674: API to Aggregate Metrics in Kafka Streams                                                                                                  | Under Discussion                                                                                     |
| KIP-675: Convert a KTable to a KStream using the previous value                                                                                     | Under Discussion                                                                                     |
| KIP-678: New Kafka Connect SMT for plainText => struct with Regex                                                                                   | Voting                                                                                               |
| KIP-681: Rename master key in delegation token feature                                                                                              | Draft                                                                                                |
| KIP-682: Connect TimestampConverter support for multiple fields and multiple input formats                                                          | Under Discussion                                                                                     |
| KIP-683: Add recursive support to Connect Cast and ReplaceField transforms, and support for casting complex types to either a native or JSON string | Under Discussion                                                                                     |
| KIP-685: Loosen permission for listing reassignments                                                                                                | Under Discussion                                                                                     |
| KIP-686: API to ensure Records policy on the broker                                                                                                 | Under Discussion                                                                                     |
| KIP-687: Automatic Reloading of Security Store                                                                                                      | Under Discussion                                                                                     |
| KIP-688: Support dynamic update of delete.topic.enable config                                                                                       | Under Discussion                                                                                     |
| KIP-692: Make AdminClient value object constructors public                                                                                          | Under discussion                                                                                     |
| KIP-693: Client-side Circuit Breaker for Partition Write Errors                                                                                     | Voting in progress                                                                                   |
| KIP-694: Support Reducing Partitions for Topics                                                                                                     | Under Discussion                                                                                     |
| KIP-697: Stricter parsing of addresses in configs                                                                                                   | Under Discussion                                                                                     |
| KIP-701: Add --override option to bin/connect-distributed.sh                                                                                        | Under Discussion                                                                                     |

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| KIP-702: The control plane needs to force the validation of requests from the controller | Under Discussion        |
| KIP-703: Add a metric for reporting idle connections closed                              | Under Discussion        |
| KIP-705: Selectively Disable Topology Optimizations                                      | Draft                   |
| KIP-706: Add method "Producer#produce" to return CompletionStage instead of Future       | Under Discussion        |
| KIP-711: Deprecate org.apache.kafka.streams.errors.BrokerNotFoundException               | Under Discussion        |
| KIP-712: Shallow Mirroring                                                               | Under Discussion        |
| KIP-713: Validation of Enums in configuration                                            | Under Discussion        |
| KIP-718: Make KTable Join on Foreign key unopinionated                                   | Under Discussion        |
| KIP-723: Add socket.tcp.no.delay property to Kafka Config                                | Under Discussion        |
| KIP-727: Add --under-preferred-replica-partitions option to describe topics command      | Under Discussion        |
| KIP-729: Custom validation of records on the broker prior to log append                  | Under Discussion        |
| KIP-731: Record Rate Limiting for Kafka Connect                                          | Under Discussion        |
| KIP-736: Report the true end to end fetch latency                                        | Under Discussion        |
| KIP-737: Add canTrackSource to ReplicationPolicy                                         | Under Discussion        |
| KIP-739: Block Less on KafkaProducer#send                                                | Under Discussion        |
| KIP-749: Add --files and --file-separator options to the ConsoleProducer                 | Under Discussion        |
| KIP-752: Support --bootstrap-server in ReplicaVerificationTool                           | Under Discussion        |
| KIP-754: Make Scala case class's final                                                   | Under Discussion        |
| KIP-755: Add new AUTO_CREATE ACL for auto topic creation                                 | Under Discussion        |
| KIP-759: Unneeded repartition canceling                                                  | Accepted, targeting 3.7 |
| KIP-760: Minimum value for segment.ms and segment.bytes                                  | Under Discussion        |
| KIP-762: Delete Committed Connect Records                                                | Under Discussion        |
| KIP-767: Connect Latency Metrics                                                         | Under Discussion        |
| KIP-774: Deprecate public access to Admin client's *Result constructors                  | Under Discussion        |
| KIP-777: Improved testability for Admin client                                           | Draft                   |
| KIP-780: Support fine-grained compression options                                        | Under Discussion        |
| KIP-781: Improve MirrorMaker2's client configuration                                     | Under Discussion        |
| KIP-782: Expandable batch size in producer                                               | Voting                  |
| KIP-785: Automatic storage formatting                                                    | Under Discussion        |
| KIP-786: Emit Metric Client Quota Values                                                 | Under Discussion        |
| KIP-789: Use localhost:9092 as default bootstrap-server/broker-list in client tools      | KIP page WIP            |
| KIP-799: Align behaviour for producer callbacks with documented behaviour                | Under Discussion        |
| KIP-802: Validation Support for Kafka Connect SMT Options                                | Under Discussion        |
| KIP-803: Add Task ID and Connector Name to Connect Task Context                          | Under Discussion        |
| KIP-804: OfflinePartitionsCount Tagged by Topic                                          | Under Discussion        |
| KIP-807: Refactor KafkaStreams exposed metadata hierarchy                                | Under Discussion        |
| KIP-809: Support live upgrades with dynamic addition/removal of modular topologies       | KIP page WIP            |
| KIP-816: Topology changes without local state reset                                      | Under Discussion        |
| KIP-817: Fix inconsistency in dynamic application log levels                             | Under Discussion        |
| KIP-819: Merge multiple KStreams in one operation                                        | Under Discussion        |

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| KIP-822: Optimize the semantics of <code>KafkaConsumer#pause</code> to be consistent between the two <code>RebalanceProtocols</code>               | Under Discussion |
| KIP-823: Update <code>Admin::describeConfigs</code> to allow fetching specific configurations                                                      | KIP page WIP     |
| KIP-826: Define platforms supported                                                                                                                | Under Discussion |
| KIP-828: Add the corresponding validator to the configuration where the validator is missing                                                       | Under Discussion |
| KIP-829: (console-consumer) add <code>print.topic</code> property                                                                                  | Under Discussion |
| KIP-838 Simulate batching and compression                                                                                                          | Under Discussion |
| KIP-839: Provide builders for <code>KafkaProducer/KafkaConsumer</code> and <code>KafkaStreams</code>                                               | Under Discussion |
| KIP-842: Add richer group offset reset mechanisms                                                                                                  | Under Discussion |
| KIP-849: Expose <code>logdirs</code> total and usable space via <code>kafka-log-dirs.sh</code>                                                     | Under Discussion |
| KIP-853: KRaft Voter Changes                                                                                                                       | Under Discussion |
| KIP-855: Add <code>schema.namespace</code> parameter to <code>SetSchemaMetadata</code> SMT in Kafka Connect                                        | Under Discussion |
| KIP-856: KRaft Disk Failure Recovery                                                                                                               | Draft            |
| KIP-857: Streaming recursion in Kafka Streams                                                                                                      | Under Discussion |
| KIP-860: Add client-provided option to guard against replication factor change during partition reassignments                                      | Under Discussion |
| KIP-864: Add End-To-End Latency Metrics to Connectors                                                                                              | Under Discussion |
| KIP-870: Retention policy based on record event time                                                                                               | Under Discussion |
| KIP-873: <code>ExceptionHandlingDeserializer</code> , <code>RetryDeserializer</code> , <code>PipeSerializer</code> , <code>PipeDeserializer</code> | Under Discussion |
| KIP-877: Mechanism for plugins and connectors to register metrics                                                                                  | Under Discussion |
| KIP-879: Multi-level Rack Awareness                                                                                                                | Under Discussion |
| KIP-880: X509 SAN based SPIFFE URI ACL within mTLS Client Certificates                                                                             | Under Discussion |
| KIP-882: Kafka Connect REST API configuration validation timeout improvements                                                                      | Under Discussion |
| KIP-883: Add <code>isDeleted</code> flag when stopping a connector                                                                                 | Under Discussion |
| KIP-885: Expose Broker's Name and Version to Clients                                                                                               | Under Discussion |
| KIP-886: Add Client Producer and Consumer Builders                                                                                                 | Under Discussion |
| KIP-888: Batch describe ACLs and describe client quotas                                                                                            | Under Discussion |
| KIP-891: Running multiple versions of a connector                                                                                                  | Under Discussion |
| KIP-895: Dynamically refresh partition count of <code>__consumer__offsets</code>                                                                   | Under Discussion |
| KIP-899: Allow clients to bootstrap                                                                                                                | Under Discussion |
| KIP-901: Add <code>connectorDeleted</code> flag when stopping tasks                                                                                | Under Discussion |
| KIP-905: Broker interceptors                                                                                                                       | Under Discussion |
| KIP-910: Update Source offsets for Source Connectors without producing records                                                                     | Under Discussion |
| KIP-912: Support decreasing send's block time without worrying about metadata's fetch                                                              | Under Discussion |
| KIP-913: add new method to provide possibility for accelerate first record's sending                                                               | Under Discussion |
| KIP-916: MM2 distributed mode flow log context                                                                                                     | Under Discussion |
| KIP-917: Additional custom metadata for remote log segment                                                                                         | Under Discussion |
| KIP-918: MM2 Topic And Group Listener                                                                                                              | Under Discussion |
| KIP-921: OpenJDK CRaC support                                                                                                                      | Under Discussion |
| KIP-922: Add the traffic metric of the partition dimension                                                                                         | Under Discussion |
| KIP-924: Introduce public config for Streams task assignor                                                                                         | Under Discussion |
| KIP-926: introducing <code>acks=min.insync.replicas</code> config                                                                                  | Under Discussion |

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|--------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|
| KIP-928: Making Kafka resilient to log directories becoming full                                                   | Under Discussion                                       |
| KIP-930: Rename ambiguous Tiered Storage Metrics                                                                   | Under Discussion                                       |
| KIP-931: Flag to ignore unused message attribute field                                                             | Under Discussion                                       |
| KIP-932: Queues for Kafka                                                                                          | Under Discussion                                       |
| KIP-933: Publish metrics when source connector fails to poll data                                                  | Under Discussion                                       |
| KIP-934: Add DeleteTopicPolicy                                                                                     | Under Discussion                                       |
| KIP-935: Extend AlterConfigPolicy with existing configurations                                                     | Under Discussion                                       |
| KIP-936: Throttle number of active PIDs                                                                            | Under Discussion                                       |
| KIP-939: Support Participation in 2PC                                                                              | Under Discussion                                       |
| KIP-940: Broker extension point for validating record contents at produce time                                     | Under Discussion                                       |
| KIP-943: Add independent "offset.storage.segment.bytes" for connect-distributed.properties                         | Under Discussion                                       |
| KIP-945: Update threading model for Consumer                                                                       | WIP                                                    |
| KIP-946: Modify exceptions thrown by Consumer APIs                                                                 | WIP                                                    |
| KIP-948: Allow custom prefix for internal topic names in Kafka Streams                                             | Under Discussion                                       |
| KIP-950: Tiered Storage Disablement                                                                                | Under Discussion                                       |
| KIP-952: Regenerate segment-aligned producer snapshots when upgrading to a Kafka version supporting Tiered Storage | Under Discussion                                       |
| KIP-953: partition method to be overloaded to accept headers as well.                                              | Draft                                                  |
| KIP-955: Add stream-table join on foreign key                                                                      | Under Discussion                                       |
| KIP-956 Tiered Storage Quotas                                                                                      | Draft                                                  |
| KIP-964 Have visibility when produce requests become "async"                                                       | Under discussion                                       |
| KIP-965: Support disaster recovery between clusters by MirrorMaker                                                 | Under Discussion                                       |
| KIP-969: Support range Interactive Queries (IQv2) for Versioned State Stores                                       |                                                        |
| KIP-971: Expose replication-record-lag MirrorMaker2 metric                                                         | Voting in progress                                     |
| KIP-972: Add the metric of the current running version of kafka                                                    | Under Discussion                                       |
| KIP-973: Expose per topic replication rate metrics                                                                 | Under Discussion                                       |
| KIP-974: Docker Image for GraalVM based Native Kafka Broker                                                        | Under Discussion                                       |
| KIP-981: Manage Connect topics with custom implementation of Admin                                                 | Under Discussion                                       |
| KIP-982: Access SslPrincipalMapper and kerberosShortNamer in Custom KafkaPrincipalBuilder                          | Voting in progress<br>(PR is reviewed by Contributors) |
| KIP-983: Full speed async processing during rebalance                                                              | Draft                                                  |
| KIP-984: Add pluggable compression interface to Kafka                                                              | Under Discussion                                       |
| KIP-986: Cross-Cluster Replication                                                                                 | Draft                                                  |
| KIP-987: Connect Static Assignments                                                                                | Under Discussion                                       |
| KIP-989: RocksDB Iterator Metrics                                                                                  | Under Discussion                                       |
| KIP-990: Capability to PAUSE Tasks on DeserializationException                                                     | Under Discussion                                       |
| KIP-991: Allow DropHeaders SMT to drop headers by wildcard/regexp                                                  | Under Discussion                                       |
| KIP-995: Allow users to specify initial offsets while creating connectors                                          | Under Discussion                                       |
| KIP-997: update WindowRangeQuery and unify WindowKeyQuery and WindowRangeQuery                                     | Under Discussion<br>Vote                               |
| KIP-999: Server-side Consumer Lag Metrics                                                                          | Draft                                                  |
| KIP-1002: Fetch remote segment indexes at once                                                                     | Under Discussion                                       |

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|--------------------------------------------------------------------------------------------------------|------------------|
| <a href="#">KIP-1003: Signal next segment when remote fetching</a>                                     | Under Discussion |
| <a href="#">KIP-1006: Remove SecurityManager Support</a>                                               | Draft            |
| <a href="#">KIP-1008: ParKa - the Marriage of Parquet and Kafka</a>                                    | Under Discussion |
| <a href="#">KIP-1009: Add Broker-level Throttle Configurations</a>                                     | Under Discussion |
| <a href="#">KIP-1010: Topic Partition Quota</a>                                                        | Under Discussion |
| <a href="#">KIP-1011: Use incrementalAlterConfigs when updating broker configs by kafka-configs.sh</a> | Under Discussion |
| <a href="#">KIP-1015: Limit number of ssl connections in brokers</a>                                   | Under Discussion |
| <a href="#">KIP-1016 Make MM2 heartbeats topic name configurable</a>                                   | Under Discussion |
| <a href="#">KIP-1017: Health check endpoint for Kafka Connect</a>                                      | Under Discussion |
| <a href="#">KIP-1018: Introduce max remote fetch timeout config for DelayedRemoteFetch requests</a>    | Under Discussion |
| <a href="#">KIP-1019: Expose method to determine Metric Measurability</a>                              | Under Discussion |

[Go to link](#)

## Dormant/inactive KIPs

Please insert new rows in **sorted order** (ascending by KIP number).

| KIP                                                                                                                 | Comment                      |
|---------------------------------------------------------------------------------------------------------------------|------------------------------|
| <a href="#">KIP-6 - New reassignment partition logic for rebalancing</a>                                            | Needs more detail            |
| <a href="#">KIP-10 - Running Producer, Consumers and Brokers on Mesos</a>                                           |                              |
| <a href="#">KIP-14 - Tools standardization</a>                                                                      |                              |
| <a href="#">KIP-17 - Add HighwaterMarkOffset to OffsetFetchResponse</a>                                             |                              |
| <a href="#">KIP-23 - Add JSON/CSV output and looping options to ConsumerGroupCommand</a>                            |                              |
| <a href="#">KIP-27 - Conditional Publish</a>                                                                        |                              |
| <a href="#">KIP-30 - Allow for brokers to have plug-able consensus and meta data storage sub systems</a>            |                              |
| <a href="#">KIP-37 - Add Namespaces to Kafka</a>                                                                    |                              |
| <a href="#">KIP-39: Pinning controller to broker</a>                                                                |                              |
| <a href="#">KIP-44 - Allow Kafka to have a customized security protocol</a>                                         |                              |
| <a href="#">KIP-46 - Self Healing</a>                                                                               |                              |
| <a href="#">KIP-47 - Add timestamp-based log deletion policy</a>                                                    |                              |
| <a href="#">KIP-49 - Fair Partition Assignment Strategy</a>                                                         |                              |
| <a href="#">KIP-53 - Add custom policies for reconnect attempts to NetworkdClient</a>                               |                              |
| <a href="#">KIP-59: Proposal for a kafka broker command</a>                                                         |                              |
| <a href="#">KIP-64 -Allow underlying distributed filesystem to take over replication depending on configuration</a> |                              |
| <a href="#">KIP-68 Add a consumed log retention before log retention</a>                                            |                              |
| <a href="#">KIP-69 - Kafka Schema Registry</a>                                                                      | Draft                        |
| <a href="#">KIP-76 Enable getting password from executable rather than passing as plaintext in config files</a>     |                              |
| <a href="#">KIP-87 - Add Compaction Tombstone Flag</a>                                                              | Possibly displaced by KIP-82 |
| <a href="#">KIP-95: Incremental Batch Processing for Kafka Streams</a>                                              |                              |
| <a href="#">KIP-159: Introducing Rich functions to Streams</a>                                                      |                              |

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|-----------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------|
| <a href="#">KIP-260: add primary join operation for Stream-Stream join (WIP)</a>                    | Draft                                                                         |
| <a href="#">KIP-269: Substitution Within Configuration Values</a>                                   |                                                                               |
| <a href="#">KIP-311: Async processing with dynamic scheduling in Kafka Streams</a>                  |                                                                               |
| <a href="#">KIP-314: KTable to GlobalKTable Bi-directional Join</a>                                 |                                                                               |
| <a href="#">KIP-326: Schedulable KTable as Graph source</a>                                         |                                                                               |
| <a href="#">KIP-349: Priorities for Source Topics</a>                                               | Functionality can be realized with existing API although at a lower level.    |
| <a href="#">KIP-335: Consider configurations for KafkaStreams</a>                                   |                                                                               |
| <a href="#">KIP-362: Support Dynamic Session Window</a>                                             |                                                                               |
| <a href="#">KIP-378: Enable Dependency Injection for Kafka Streams handlers</a>                     |                                                                               |
| <a href="#">KIP-408: Add asynchronous processing to Kafka Streams</a>                               |                                                                               |
| <a href="#">KIP-422: Add support for client quota configuration in the Kafka Admin Client</a>       | KIP-546 added the necessary APIs instead                                      |
| <a href="#">KIP-457: Add DISCONNECTED status to Kafka Streams</a>                                   |                                                                               |
| <a href="#">KIP-459: Improve KafkaStreams#close</a>                                                 |                                                                               |
| <a href="#">KIP-463: Auto-configure non-default Serdes passed alongside the TopologyBuilder</a>     |                                                                               |
| <a href="#">KIP-611: Improved Handling of Abandoned Connectors and Tasks</a>                        |                                                                               |
| <a href="#">KIP-645: Replace Windows with a proper interface</a>                                    | Still nice to have, just not as important as I thought.                       |
| <a href="#">KIP-634: Complementary support for headers and record metadata in Kafka Streams DSL</a> | KIP-820 offers a workaround, and potential DSL v2 could replace the proposal. |

## Discarded KIPs

Please insert new rows in **sorted order** (ascending by KIP number).

| KIP                                                                                                                                                                    | Comment                                                                                 |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| <a href="#">KIP-5 - Broker Configuration Management</a>                                                                                                                | Superseded by KIP-21                                                                    |
| <a href="#">KIP-7 - Security - IP Filtering</a>                                                                                                                        |                                                                                         |
| <a href="#">KIP-9 - SSL Support</a>                                                                                                                                    | Adopted via KAFKA-1690 but not via this KIP process                                     |
| <a href="#">KIP-18 - JBOD Support</a>                                                                                                                                  | Superseded by KIP-112 and KIP-113                                                       |
| <a href="#">KIP-24 - Remove ISR information from TopicMetadataRequest and add broker level metadata request</a>                                                        |                                                                                         |
| <a href="#">KIP-29 - Add an IsrPropagateIntervalMs configuration to KafkaConfig</a>                                                                                    | No longer need after KAFKA-2722                                                         |
| <a href="#">KIP-34 Add Partitioner Change Listener to Partitioner Interface for Multiple Use Case</a>                                                                  | Per feedback it is better do this partition() method and avoid Thread Coordination etc. |
| <a href="#">KIP-50 - Move Authorizer to o.a.k.common package</a>                                                                                                       | Superseded by KIP-504                                                                   |
| <a href="#">KIP-80: Kafka Rest Server</a>                                                                                                                              |                                                                                         |
| <a href="#">KIP-83 - Allow multiple SASL authenticated Java clients in a single JVM process</a>                                                                        | After KIP-85, no interface changes, reduced to <a href="#">KAFKA-4180</a>               |
| <a href="#">KIP-111: Kafka should preserve the Principal generated by the PrincipalBuilder while processing the request received on socket channel, on the broker.</a> | Covered by KIP-189                                                                      |
| <a href="#">KIP-116: Add State Store Checkpoint Interval Configuration</a>                                                                                             | Currently not needed as checkpointing can be done on commit interval.                   |
| <a href="#">KIP-127: Pluggable JAAS LoginModule configuration for SSL</a>                                                                                              | Similar functionality can be implemented using a custom PrincipalBuilder.               |
| <a href="#">KIP-132: Augment KStream.print to allow extra parameters in the printed string</a>                                                                         | Duplicated by <a href="#">KIP-160</a>                                                   |
| <a href="#">KIP-147: Add missing type parameters to StateStoreSupplier factories and KGroupedStream/Table methods</a>                                                  | Covered by <a href="#">KIP-182</a>                                                      |

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| KIP-165: Extend Interactive Queries for return latest update timestamp per key                  | Covered by KIP-258                                                                                                                                                                                                        |
| KIP-170: Enhanced TopicCreatePolicy and introduction of TopicDeletePolicy                       | Superseded by KIP-201: Rationalising Policy interfaces                                                                                                                                                                    |
| KIP 172: Add regular-expression topic support for sink connector                                | Superseded by KIP-215: Add topic regex support for Connect sinks                                                                                                                                                          |
| KIP-179: Change ReassignPartitionsCommand to use AdminClient                                    |                                                                                                                                                                                                                           |
| KIP-184: Rename LogCleaner and related classes to LogCompactor                                  | A lot of configuration change will cause more trouble and doesn't seems to be worth it                                                                                                                                    |
| KIP-199: Add Kafka Connect offset tool                                                          | Superseded by KIP-875: First-class offsets support in Kafka Connect                                                                                                                                                       |
| KIP 230: Name Windowing Joins                                                                   | Covered by KIP-372: Naming Repartition Topics for Joins and Grouping                                                                                                                                                      |
| KIP-232: Detect outdated metadata using per-partition leaderEpoch field                         | Merged into KIP-320: Allow fetchers to detect and handle log truncation                                                                                                                                                   |
| KIP-246: Connect producers and consumers should inherit worker configs                          | Withdrawn because proposal could not be made backward compatible with existing behavior                                                                                                                                   |
| KIP-248 - Create New ConfigCommand That Uses The New AdminClient                                | Discarded by author as it's partly covered in KIP-339 and KIP-422                                                                                                                                                         |
| KIP-259: Improve Streams DSL Timestamp Propagation Semantics                                    | Change did not require a KIP.                                                                                                                                                                                             |
| KIP-262: Metadata should include number of state stores for task                                | Rejected since metadata is no longer required.                                                                                                                                                                            |
| KIP-263: Allow broker to skip sanity check of inactive segments on broker startup               | Withdrawn because the solution we agreed on does not require interface change                                                                                                                                             |
| KIP-275 - Indicate "isClosing" in the SinkTaskContext                                           |                                                                                                                                                                                                                           |
| KIP-286: producer.send() should not block on metadata update                                    | Withdrawn because the benefit of not having to wait for metadata is probably not worth the complexity added in producer.                                                                                                  |
| KIP-288: [DISCARDED] Consumer.poll() timeout semantic change and new waitForAssignment method   | Discarded in deference to KIP-266                                                                                                                                                                                         |
| KIP-310: Add a Kafka Source Connector to Kafka Connect                                          | Withdrawn in favor of KIP-382.                                                                                                                                                                                            |
| KIP-327: Add describe all topics API to AdminClient                                             | Withdrawn in-favor of filter support in Metadata API and KIP-142                                                                                                                                                          |
| KIP-344: The auto-generated client id should be passed to MetricsReporter                       | Bug fix so KIP not needed                                                                                                                                                                                                 |
| KIP-347: Enable batching in FindCoordinatorRequest                                              | Replaced by KIP-699                                                                                                                                                                                                       |
| KIP-364: Remove implicit Materialized, Consumed and Produced                                    | Subsumed by KIP-365                                                                                                                                                                                                       |
| KIP-383: Pluggable interface for SSL Factory                                                    | Replaced by KIP-519                                                                                                                                                                                                       |
| KIP-391: Allow Producing with Offsets for Cluster Replication                                   | Not enough interest in favour.                                                                                                                                                                                            |
| KIP-398: Support reading trust store from classpath                                             | Not enough interest in favour. Can be implemented with mechanism in <div>  Unable to render Jira issues macro, execution error. </div> |
| KIP-404: Add Kafka Connect configuration parameter for disabling WADL output on OPTIONS request | Discarded, reported as a bug by <div>  Unable to render Jira issues macro, execution error. </div>                                     |
| KIP-432: Additional Broker-Side Opt-In for Default, Unsecure SASL /OAUTHBEARER Implementation   | A "security sanity check tool" is a more generic and appropriate solution.                                                                                                                                                |
| KIP-451: Make TopologyTestDriver output iterable                                                | Discarded in favor of KIP-456                                                                                                                                                                                             |
| KIP-456: Helper classes to make it simpler to write test logic with TopologyTestDriver          | Discarded in favor of KIP-470                                                                                                                                                                                             |

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| KIP-472: Add header to RecordContext/ProducerRecord                                | Discarded due to change being far more complex than necessary for a simple bug                                                      |
| KIP-485: Make topic optional when using through() operations in DSL                | Moved to <a href="#">KIP-221</a>                                                                                                    |
| KIP-486: Support custom way to load KeyStore and TrustStore                        | Discarded in favor of <a href="#">KIP-519</a>                                                                                       |
| KIP-522: Update BrokerApiVersionsCommand to use AdminClient                        | Discarded as this KIP is likely to be misused                                                                                       |
| KIP-593: Enable --if-exists and --if-not-exists for AdminClient in TopicCommand    | Superseded by KIP-604                                                                                                               |
| KIP-615: add ConstrainedCooperativeStickyAssignor                                  | Discarded in favor of modifying existing assignor                                                                                   |
| KIP-638: Deprecate DescribeLogDirsResponse.[LogDirInfo, ReplicaInfo]               | Duplication of <a href="#">KIP-621</a>                                                                                              |
| KIP-660: Pluggable ReplicaPlacer                                                   |                                                                                                                                     |
| KIP-667: Remove deprecated methods from ReadOnlyWindowStore                        | No KIP needed                                                                                                                       |
| KIP-672: Introduce Kafka Streams Specific Uncaught Exception Handler               | Combined with <a href="#">KIP-671</a>                                                                                               |
| [DISCARD] KIP-658 Deprecate all setters of Headers                                 |                                                                                                                                     |
| KIP-818: Introduce cache-size-bytes-total Task Level Metric                        | Decided to add the new metric in KIP-770.                                                                                           |
| KIP-717: Deprecate batch-size config from console producer                         | Change did not require a KIP                                                                                                        |
| KIP-756: Move StreamsResetter tool outside of core                                 | Subsumed by <a href="#">KIP-906</a>                                                                                                 |
| KIP-795: Add public APIs for AbstractCoordinator                                   | Discarded in favor of <a href="#">KIP-848</a>                                                                                       |
| KIP-832: Allow creating a producer/consumer using a producer/consumer config       | Superseded by KIP-839                                                                                                               |
| KIP-845: 'HasField' predicate for kafka connect                                    | Discarded in favor of improving existing SMTs                                                                                       |
| KIP 850: REST API for filtering Connector plugins by type                          | Discarded as JIRA was obsolete                                                                                                      |
| KIP-871: Fix ByteBufferSerializer#serialize(String, ByteBuffer) compatible problem | Discard as it doesn't change any public API.                                                                                        |
| KIP-874: TopicRoundRobinAssignor                                                   | Discard as it is too specific.                                                                                                      |
| KIP-897: Publish a single kafka (aka core) Maven artifact in Apache Kafka 4.0      | Taking a different approach.                                                                                                        |
| KIP-908: Add description field to connector configuration                          | Discarded as the benefits are too limited                                                                                           |
| KIP-947: Add support for consumer group protocol in Consumer                       | Change did not require a KIP                                                                                                        |
| KIP-944: Support async runtimes in consumer and KIP-957: Support Async runtimes    | Withdrawn because the committers do not seem to be convinced that you cannot control on what thread code runs with an async runtime |

## KIP Discussion Recordings

| Date (link to recording)   | Summary                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
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| <a href="#">2018-04-09</a> | <ul style="list-style-type: none"> <li>KIP-253 - partition expansion: We discussed a few things. (1) Is it useful to backfill a compacted topic? The main use case is to rebuild the application states. If the new partition has the existing data, rebuilding the state can be done easily by reading from a single partition. Otherwise, an application has to read both the child and the parent partition to rebuild the state. This is possible, but can be complicated. Jan will do an exercise to see how complicated this is. (2) What's the best way to add the backfilling support if we want to do it? We can do this on the server side or on the client side. The former potentially makes the coordination easier. The latter potentially reduces the memory footprint on the server for reshuffling. We need to think through how to support EOS message format and how to throttle the process to avoid overwhelming the cluster. (3) Linear hashing vs doubling partitions. It seems that Linear hashing is more general. (4) Partition splitting in Kinesis. This is done differently since it doesn't allow customized partitioning. It doesn't support compacted topic either. (5) Sticky partition assignment. It could be useful to support a partition assignment strategy where the child partition is assigned together with the parent partition to a consumer instance so that the local state doesn't have to be moved immediately. (6) Consumer callback on partition splitting. This could still be useful if the states are maintained globally.</li> </ul> |

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| 2017-01-07 | <ul style="list-style-type: none"> <li>KIP-112 - Handle disk failure for JBOD: We discussed whether we need to support JBOD directly in Kafka or just rely on the 1 disk per broker model. The general consensus is that direct JBOD support in Kafka is needed. There is some concern on the complexity added to Kafka. So, we have to be careful with the implementation details. We discussed how directory failure should be detected, where the failure state is kept, and whether the state should be reset on broker restart. There is a bit confusing on what's written in the wiki. Dong is going to clarify the proposal based on the feedback and we will follow up on the details in the mailing list.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 2016-10-19 | <ul style="list-style-type: none"> <li>KIP-82 - add record header: We agreed that there are use cases for third-party vendors building tools around Kafka. We haven't reached the conclusion whether the added complexity justifies the use cases. We will follow up on the mailing list with use cases, container format people have been using, and details on the proposal.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 2016-09-13 | <ul style="list-style-type: none"> <li>KIP-54 (Sticky Partition Assignment): aims to minimise partition movement so that resource reinitialisation (e.g. caches) is minimised. It is partially sticky and partially fair. Some concerns around the fact that user code for partitionsRevoked and partitionsAssigned would have to be changed to work correctly with this assignment strategy. Good: more complex usage of an assigner that takes advantage of the user data field. Vahid will start the vote.</li> <li>KIP-72 (Allow Sizing Incoming Request Queue in Bytes): large requests can kill the broker, no control over how much memory is allocated. Client quotas don't help as damage may already have been done by the time they kick in. There was a discussion on whether it was worth it to avoid the immediate return from select when there was no memory available in the pool. Radai will update the KIP to describe this aspect in more detail as well as the config validation that is performed.</li> <li>KIP-79 (ListOffsetRequest/ListOffsetResponse v1 and add timestamp search methods to the new consumer): we discussed the option of passing multiple timestamps for the same partition in the same request. Becket thinks it's a rare use case and not worth supporting. Gwen said that it would be nice to have, but not essential. We talked about validation of duplicate topics. Becket will check the approach taken by the create topics request and evaluate if it can be adopted here too. PR will be available today and Jason will evaluate if it's feasible to include it in the next release once it's available.</li> </ul> |
| 2016-08-30 | <ul style="list-style-type: none"> <li>KIP48 (delegation tokens): Harsha will update the wiki with more details on how to use delegation tokens and how to configure it.</li> <li>KIP-78 (cluster id): There was discussion on adding human readable tags later. No major concerns.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 2016-08-23 | <ul style="list-style-type: none"> <li>time-based release: No one seems to have objections. Ismael will follow up with a release wiki.</li> <li>KIP-4: We discussed having separate ACL requests of add and delete. No one seems to object to it. We discussed the admin client. Grant will send a PR. We discussed how KStream can use the ACL api. It seems that we will need some kind of regex or namespace support in ACL to make the authorization convenient in KStream.</li> <li>KIP-50: There is some discussion for further changes in the PR. Ashish will reply to the KIP email thread with the recommended changes. Ashish/Grant plan to look into whether it's possible to make the authorizer api change backward compatible. However, it seems that people are in general ok with a non-compatible api change.</li> <li>KIP-74: No objections on the current proposal.</li> <li>Java 7 support timeline: The consensus is to defer dropping the Java 7 support until the next major release (which will be next year). Ismael will follow up on the email thread.</li> <li>KIP-48 delegation token : Ashish will ping Harsh to see if this is still active.</li> <li>Some of the KIPs have been idle. Grant will send a proposal on tagging them properly (e.g., blocked, inactive, no resource, etc).</li> </ul>                                                                                                                                                                                                                                                                                                                                        |
| 2016-05-24 | <ul style="list-style-type: none"> <li>KIP-58 - Make Log Compaction Point Configurable: We want to start with just a time-based configuration since there is no good usage for byte-based or message-based configuration. Eric will change the KIP and start the vote.</li> <li>KIP-4 - Admin api: Grant will pick up the work. Initially, he plans to route the write requests from the admin clients to the controller directly to avoid having the broker forward the requests to the controller.</li> <li>KIP-48 - Delegation tokens: Two of the remaining issues are (1) how to store the delegation tokens and (2) how token expiration works. Since Parth wasn't able to attend the meeting. We will follow up in the mailing list.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| 2016-04-05 | <ul style="list-style-type: none"> <li>KIP-4: There is a slight debate on the metadata request schema, as well as the internal ZK based implementation, which we will wait for Jun to comment on the mailing list thread.</li> <li>KIP-52: We decided to start a voting process for this.</li> <li>KIP-35: Decided on renaming ApiVersionQuery api to ApiVersion. Consensus on using the api in java client to only check for availability of current versions. ApiVersion api's versions will not be deprecated. Update KIP-35 wiki will be updated with latest info and vote thread will be initiated.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

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| 2016-03-15 | <ul style="list-style-type: none"> <li>KIP-33 - Add a time based log index to Kafka: We decided NOT to include this in 0.10.0 since the changes may have performance risks.</li> <li>KIP-45 - Standardize all client sequence interaction on j.u.Collection: There is no consensus in the discussion. We will just put it to vote.</li> <li>KIP-35 - Retrieving protocol version: This gets the longest discussion. There is still no consensus. Magnus thinks the current proposal of maintaining a global protocol version won't work and will try to submit a new proposal.</li> <li>KIP-43 - Kafka SASL enhancements: Rajini will modify the KIP to only support native SASL mechanisms and leave the changes to Login and CallbackHandler to KIP-44 instead.</li> </ul>                                                                                                                                                                                                   |
| 2016-02-23 | <ul style="list-style-type: none"> <li>KIP-33 and KIP-47: No issues. Will start the voting thread.</li> <li>KIP-43: We discussed whether there is a need to support multiple SASL mechanisms at the same time and what's the best way to implement this. Will discuss this in more details in the email thread.</li> <li>KIP-4: Grant gave a comprehensive summary of the current state. We have gaps on how to make the admin request block on the broker, how to integrate admin requests with ACL (especially with respect to client config changes for throttling and ACL changes), how to do the alter topic request properly. Grant will update the KIP with an interim plan and a long term plan.</li> <li>KIP-43: We briefly discussed on to support multiple sasl mechanisms on the broker. Harsha will follow up with more details on the email thread.</li> <li>Everyone seems to be in favor of making the next major release 0.10.0, instead of 0.9.1.</li> </ul> |
| 2016-01-26 | <ul style="list-style-type: none"> <li>KIP-42: We agreed to leave the broker side interceptor for another KIP. On the client side, people favor the 2nd option in Anna's proposal. Anna will update the wiki accordingly.</li> <li>KIP-43: We discussed whether there is a need to support multiple SASL mechanisms at the same time and what's the best way to implement this. Will discuss this in more details in the email thread.</li> <li>Jiangjie brought up an issue related to KIP-32 (adding timestamp field in the message). The issue is that currently there is no convenient way for the consumer to tell whether the timestamp in a message is the create time or the server time. He and Guozhang propose to use a bit in the message attribute to do that. Jiangjie will describe the proposal in the email thread.</li> </ul>                                                                                                                                |
| 2016-01-12 | <ul style="list-style-type: none"> <li>KIP-41: Discussed whether the issue of long processing time between poll calls is a common issue and whether we should revisit the poll api. Also discussed whether the number of records returned in poll calls can be made more dynamic. In the end, we feel that just adding a config that controls the number records returned in poll() is the simplest approach at this moment.</li> <li>KIP-36: Need to look into how to change the broker JSON representation in ZK w/o breaking rolling upgrades. Otherwise, ready for voting.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                      |
| 2015-10-20 | <ul style="list-style-type: none"> <li>KIP-38: No concerns with this KIP. Flavio will initiate the voting on this.</li> <li>KIP-37: There are questions on how ACL, configurations, etc will work, and whether we should support "move" or not. We will discuss the details more in the mailing list.</li> <li>KIP-32/KIP-33: Jiangjie raised some concerns on the approach that Jay proposed. Guozhang and Jay will follow up on the mailing list.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 2015-10-13 | <ul style="list-style-type: none"> <li>0.9.0 release: We discussed if KAFKA-2397 should be a blocker in 0.9.0. Jason and Guozhang will follow up on the jira.</li> <li>KIP-32 and KIP-33: We discussed Jay's alternative proposal of just keeping CreateTime in the message and having a config to control how far off the CreateTime can be from the broker time. We will think a bit more on this and Jiangjie will update the KIP wiki.</li> <li>KIP-36: We discussed an alternative approach of introducing a new broker property to designate the rack. It's simpler and potentially can work in the case when the broker to rack mapping is maintaining externally. We need to make sure that we have an upgrade plan for this change. Allen will update the KIP wiki</li> </ul>                                                                                                                                                                                         |
| 2015-10-06 | <ul style="list-style-type: none"> <li>We only had the time to go through KIP-35. The consensus is that we will add a BrokerProtocolRequest that returns the supported versions for every type of requests. It's up to the client to decide how to use this. Magnus will update the KIP wiki with more details.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| 2015-09-22 | <ul style="list-style-type: none"> <li>KIP-31: Need to figure out how to evolve inter.broker.protocol.version with multiple protocol changes within the same release, mostly for people who are deploying from trunk. Becket will update the wiki.</li> <li>KIP-32/KIP-33: Having both CreateTime and LogAppendTime per message adds significant overtime. There are a couple of possibilities to improve this. Becket will follow up on this.</li> <li>LinkedIn has been testing SSL in MirrorMaker (SSL is only enabled in the producer). So far, MirrorMaker can keep up with the load. LinkedIn folks will share some of the performance results.</li> </ul>                                                                                                                                                                                                                                                                                                               |
| 2015-09-14 | <ul style="list-style-type: none"> <li>KIP-28: Discussed the improved proposal including 2 layers of API (the higher layer is for streaming DSL), and stream time vs processor time. Ready for review.</li> <li>KIP-31, KIP-32: (1) Discussed whether the timestamp should be from the client or the broker. (2) Discussed the migration path and whether this requires all consumers to upgrade before the new message format can be used. (3) Since this is too big a change, it will NOT be included in 0.9.0 release. Becket will update the wiki.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                              |

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| 2015-08-18 | <ul style="list-style-type: none"> <li>• client-side assignment strategy: We discussed concerns about rebalancing time due to metadata inconsistency, especially when lots of topics are subscribed. Will discuss a bit more on the mailing list.</li> <li>• CopyCat data api: The discussions are in KAFKA-2367 for people who are interested.</li> <li>• 0.8.2.2: We want to make this a low risk bug fix release since 0.8.3 is coming. So, will only include a small number of critical and small fixes.</li> <li>• 0.8.3: The main features will be security and the new consumer. We will be cutting a release branch when the major pieces for these new features have been committed.</li> </ul> |
| 2015-08-11 | <ul style="list-style-type: none"> <li>• KIP-29: we will do a quick fix for unblocking production issues with hard-coded interval values, still needs further discussion on KIP itself.</li> <li>• KIP-26: RP-99 (<a href="https://github.com/apache/kafka/pull/99">https://github.com/apache/kafka/pull/99</a>) pending for reviews.</li> <li>• KIP-28: RP-130 (<a href="https://github.com/apache/kafka/pull/130">https://github.com/apache/kafka/pull/130</a>) needs further discussion.</li> <li>• KIP-4: KAFKA-1695 / 2210 pending for reviews.</li> </ul>                                                                                                                                          |