

# [DISCARD] KIP-658 Deprecate all setters of Headers

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## Status

**Current state:** *Under Discussion*

**Discussion thread:** [here](#) *[Change the link from the KIP proposal email archive to your own email thread]*

**JIRA:** [here](#)

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

## Motivation

*Headers is a part of public APIs but the usage of Headers is a bit chaos to users.*

1. it has a lot of abstract setters so users have to implement all of them. However, we never call user-defined setters in production.
2. it is not thread-safe so we have to call "setReadOnly" to make data consistency.
3. "setReadOnly" is not a part of public API so users have no idea about the "thread-safe" of Headers

We can't improve Headers right now by reason of deprecation cycles. This KIP plans to deprecate and offer default implementation (*java.lang.UnsupportedOperationException*) to all setters of *Headers* so we can cleanup all setters to make it be readonly in next major and users are able to remove all useless implementation from their Headers in this patch.

## Public Interfaces

The following methods of Headers are deprecated.

```
@Deprecated
default Headers add(Header header) throws IllegalStateException {
    throw new UnsupportedOperationException("this method is deprecated");
}

@Deprecated
default Headers add(String key, byte[] value) throws IllegalStateException {
    throw new UnsupportedOperationException("this method is deprecated");
}

@Deprecated
default Headers remove(String key) throws IllegalStateException {
    throw new UnsupportedOperationException("this method is deprecated");
}
```

## Proposed Changes

*The following changes are added to Headers*

1. deprecated *Headers#add(Header)*
2. add default implementation to *Headers#add(Header)*
3. deprecated *Headers#add(String, byte[])*
4. add default implementation to *Headers#add(String, byte[])*
5. deprecated *Headers#add(String)*
6. add default implementation to *Headers#add(String)*



# Compatibility, Deprecation, and Migration Plan

C: No methods are removed so compatibility issue does not exist

D: There are three deprecated methods of Headers

MP: User-implemented Headers can remove the deprecated methods

## Rejected Alternatives

n/a