

JetStream Consumer Idle Heartbeats

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Context

The JetStream ConsumerConfig option `idle_heartbeat` enables server-side heartbeats to be sent to the client. To enable the option on the consumer simply specify it with a value representing the number of nanoseconds that the server should use as notification interval.

The server will only notify after the specified interval has elapsed and no new messages have been delivered to the consumer. Delivering a message to the consumer resets the interval.

The idle heartbeats notifications are sent to the consumer's subscription as a regular NATS message. The message will have a `code` of `100` with a `description` of `Idle Heartbeat`. The message will contain additional headers that the client can use to re-affirm that it has not lost any messages:

- `Nats-Last-Consumer` indicates the last consumer sequence delivered to the client. If `0`, no messages have been delivered.
- `Nats-Last-Stream` indicates the sequence number of the newest message in the stream.

Here's an example of a client creating a consumer with an `idle_heartbeat` of 10 seconds, followed by a server notification.

```
$JS.API.CONSUMER.CREATE.FRHZZ447RL7NR8TAICHCZ6
_INBOX.FRHZZ447RL7NR8TAICHCQ8.FRHZZ447RL7NR8TAICHDQ0 136
{"config":
{"ack_policy":"explicit","deliver_subject":"my.messages","idle_heartbeat":10000000
000},
"stream_name":"FRHZZ447RL7NR8TAICHCZ6"}
...

> HMSG my.messages 2 75 75 NATS/1.0 100 Idle Heartbeat
Nats-Last-Consumer:
Nats-Last-Stream: 0
alive - last stream seq: 0 - last consumer seq: 0
```

This feature is intended as an aid to clients to detect when they have been disconnected. Without it the consumer's subscription may sit idly waiting for messages, without knowing that the server might have simply gone away and recovered elsewhere.

Consequences

Clients can use this information to set client-side timers that track how many heartbeats have been missed and perhaps take some action such as re-create a subscription to resume messages.