

# Proposal for Connect heartbeat API

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**Context** - Heartbeat APIs are public facing data objects with high level statistics on a project or tool. Typically they provide an array of values with generic summary statistics such as counting number of participants in a cohort study, or number of data points in a forecasting tool. This is a very low load service updating a file with predictable regularity, say, once a day. Calling it an “API” is a bit of a misnomer since heartbeat APIs are typically just a public-facing JSON object. As the name indicates, the absence of a heartbeat API in a public resource aiming to be, or to contribute, to data commons is interpreted as lacking activity. For an example of how heartbeat APIs can be used to provide a view on the dynamics of a public data acquisition effort see, using AllOfUs’, <https://observablehq.com/@episphere/aou>. What is proposed here is far simpler.

**Proposal** - maintain, with daily updates, a JSON array file in a public facing (view-only) GCP bucket, with time-stamped values for summary statistics deemed appropriate. This could take the form of

```
[
  {
    Date: "Tue Jul 19 2022 08:41:25 GMT-0400 (Eastern Daylight Time)",
    nParticipants: 1234,
    ...
  },
  {
    ...
  },
  ...
]
```

The advantage of using an array of objects is the flexibility with the fields that are updated at any given time - new fields can be added and old fields can be removed without breaking interoperability. If the objects become very large (unlikely), there is also the option of appending to the JSON document instead of updating it in its entirety by removing the opening and closing square brackets.