# Fleet Indexing Reference Guide

The AWS IoT Device Management fleet indexing service allows you to **index, search,** and **aggregate** your fleet data in the cloud.

Save this document as a reference to review material from the fleet indexing module.

# **Enable Fleet Indexing**

Fleet indexing is disabled by default because usage incurs a cost. Enable fleet indexing using the console or CLI:

- <u>Console:</u> In the IoT Core console, choose <u>Settings</u>, scroll down to <u>Fleet indexing</u> <u>settings</u>.
- <u>CLI:</u> Use the <u>UpdateIndexingConfiguration</u> API.
- When enabling, you can choose to enable:
- Thing indexing
  - Device shadows
  - Thing connectivity
- Thing group indexing

## Aggregate

Search your device fleet for aggregate data of a specified field.

Aggregate data:

**Statistics:** Count, average, sum, minimum, maximum, sum of squares, variance, standard deviation

Cardinality: Count of unique values

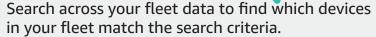
Percentile: Value for each percentile group

- <u>Console:</u> In the IoT Core console, choose
  <u>Manage</u>, choose <u>Things</u>, choose <u>Fleet Indexing</u>, choose <u>Aggregate</u>.
- <u>CLI</u>: Use the <u>GetStatistics</u>, <u>GetCardinality</u>, and GetPercentiles APIs.

#### Components of an aggregation query

- Search query: (see table on right)
- Aggregation type: Statistics/Cardinality/Percentiles
- Aggregation field: (see bottom right)

## Search



- <u>Console:</u> In the IoT Core console, choose
  Manage, choose Things, choose Fleet Indexing, choose Search.
- CLI: Use the SearchIndex API.

Search queries	
Query	Explanation
field: value	Search for fields that have a specific value.
value*	Search for a wildcard
field: [1 TO 5]	Search for an alphanumeric range
field1: [1 TO 5] OR field2: value>3	Combine search terms with boolean statements

## **Aggregation fields**

When performing aggregation queries, an aggregation field is specified for the query.

**Managed fields:** A specific set of fields defined by AWS that contain data associated with IoT things, thing groups, and device shadows (based on your indexing mode).

**Custom fields:** Fields that you can add based on the indexing mode you choose. Custom fields are added when enabling fleet indexing.