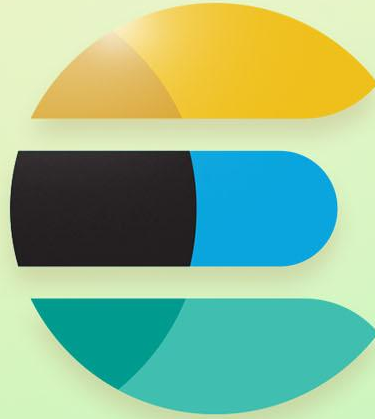


Range searches



Introduction

- The `range` query is used to perform range searches
- E.g. `in_stock >= 1 and in_stock <= 5`
- E.g. `created >= 2020/01/01 and created <= 2020/01/31`

Querying numeric ranges

Products that are almost sold out

```
GET /products/_search
{
  "query": {
    "range": {
      "in_stock": {
        "gte": 1,
        "lte": 5
      }
    }
  }
}
```

SQL equivalent

```
WHERE in_stock >= 1 AND in_stock <= 5
```

Boundaries not included

```
GET /products/_search
{
  "query": {
    "range": {
      "in_stock": {
        "gt": 1,
        "lt": 5
      }
    }
  }
}
```

SQL equivalent

```
WHERE in_stock > 1 AND in_stock < 5
```

Parameters

Parameter	Math symbol	SQL equivalent	Description
gt	$>$	$>$	Greater than
gte	\geq	\geq	Greater than or equal to
lt	$<$	$<$	Less than
lte	\leq	\leq	Less than or equal to

Querying dates

Dates without time

```
GET /products/_search
{
  "query": {
    "range": {
      "created": {
        "gte": "2020/01/01",
        "lte": "2020/01/31"
      }
    }
  }
}
```

Dates with time (timestamps)

```
GET /products/_search
{
  "query": {
    "range": {
      "created": {
        "gte": "2020/01/01 00:00:00",
        "lte": "2020/01/31 23:59:59"
      }
    }
  }
}
```

Specifying a date format

```
GET /products/_search
{
  "query": {
    "range": {
      "created": {
        "format": "dd/MM/yyyy",
        "gte": "01/01/2020",
        "lte": "31/01/2020"
      }
    }
  }
}
```

Default date format

```
yyyy/MM/dd HH:mm:ss || yyyy/MM/dd | epoch_millis
```

Specifying a UTC offset

```
GET /products/_search
{
  "query": {
    "range": {
      "created": {
        "time_zone": "+01:00",
        "gte": "2020/01/01 01:00:00",
        "lte": "2020/02/01 00:59:59"
      }
    }
  }
}
```



2020/01/01 00:00:00



2020/01/31 23:59:59

2019-12-31T23:59:59Z

2020-01-01T00:00:00Z

2020-01-01T01:00:00Z

2020-01-15T12:36:09Z

2020-01-31T23:59:59Z

2020-02-01T00:00:00Z

* Not the actual format in which dates are stored.

Lecture summary

- Use the `range` query to perform range searches
- Specify one or more of the `gt`, `gte`, `lt`, or `lte` parameters
- Supports both numbers and dates
- Dates are automatically handled for `date` fields
 - Specifying the time is optional, but recommended if possible
 - Custom formats are supported through the `format` parameter
 - Time zones are handled with the `time_zone` parameter (UTC offset)