

Elasticsearch Training

Session 5

Rajan Manickavasagam

Agenda

- Detour into REST
- Elasticsearch API's

Detour into REST

- REST – Representational State Transfer.
- It is an architectural style.
- Created by Roy Fielding in his doctoral paper.
- Key Concepts:
 - Uniform Interface
 - Stateless
 - Cacheable
 - Client-Server
 - Layered System
 - Code on Demand (optional)

Elasticsearch API's

- Create Index API
 - If nothing is specified, default settings will be taken.
 - Preferred to specify the settings, like shard, replica, analyzers.
 - Mapping can be provided later.

Elasticsearch API's

- Index API
 - Used to index documents into the index.
 - http code 201 for newly created or 200 for updated/re-indexed.
 - `_id` is optional.
 - If required, index can be automatically created (based on `action.auto_create_index: true`).
 - Document can have a TTL.
 - The operation follows a distributed execution.
 - Operation returns a document version.

Elasticsearch API's

- Get API
 - Get operation is real-time.
 - Http codes are 200 for found and 404 for not found.
 - Request for specific fields.

Elasticsearch API's

- Exists API
 - Check if a document is in the index.
 - Http codes are 200 for found and 404 for not found.

Elasticsearch API's

- Delete API
 - Deletes a document.
 - Http codes are 200 for delete and 404 for not found.
 - It will update the version of a document.
 - Operation returns a document version.

Elasticsearch API's

- Update API
 - Updates specific fields in a document.
 - Internally, performs a get and an index operation.
 - Only works if `_source` is enabled.
 - Fails if a document doesn't exist.

Elasticsearch API's

- Multi Get API
 - Get multiple documents in a single request.

Elasticsearch API's

- Bulk API
 - Index multiple document in a single request.
 - Response contains details of each action. The order of response is also maintained.

Elasticsearch API's

- Mapping API
 - Create mapping as part of creation of index.
 - Update mapping later.
 - Supported data types: string, byte, short, date, double, boolean, integer, long, float, ip address, lat/long, nested.
 - Dynamic can be strict or lenient.

Elasticsearch API's

- Search API
 - Free text search.
 - Multiple execution modes.
 - Sorting and pagination.
 - Highlighting.
 - Control search context.
 - Aggregations replaced facets from earlier versions.

Elasticsearch API's

- Warmer API
 - Automatically runs queries to load the cache.
 - Can be setup at time of index creation.
 - Can be setup later using the API.

Elasticsearch API's

- Explain API
 - Helps understand the reason for matches between a query and documents.

Elasticsearch API's

- Percolate API
 - It is the opposite of search.
 - Queries are indexed and when documents are sent to index, it matches the queries.
 - This is useful for notifications.

References

- Gist -
<https://github.com/ElasticsearchTraining/ElasticsearchScripts>
- Code -
<https://github.com/ElasticsearchTraining/ElasticsearchJavaSample>