

OpenSearch Cheatsheet

Connection & Authentication

```
curl -X GET 'https://opensearch-host:9200' -u 'username:password'
```

Test connection to OpenSearch server

```
curl -X GET 'https://opensearch-host:9200/_cluster/health' -u 'username:password'
```

Check cluster health

```
curl -X GET 'https://opensearch-host:9200/_cat/indices' -u 'username:password'
```

List all indices

Index Management

```
curl -X PUT 'https://opensearch-host:9200/index-name' -u 'username:password' -H 'Content-Type: application/json' -d '{"settings":{"index":{"number_of_shards":3,"number_of_replicas":2}}}'
```

Create an index with settings

```
curl -X DELETE 'https://opensearch-host:9200/index-name' -u 'username:password'
```

Delete an index

```
curl -X GET 'https://opensearch-host:9200/index-name/_settings' -u 'username:password'
```

Get index settings

```
curl -X PUT 'https://opensearch-host:9200/index-name/_mapping' -u 'username:password' -H 'Content-Type: application/json' -d '{"properties":{"field1":{"type":"text"}}}'
```

Update index mapping

Document Operations

```
curl -X POST 'https://opensearch-host:9200/index-name/_doc' -u 'username:password' -H 'Content-Type: application/json' -d '{"field1":"value1"}'
```

Index a document with auto-generated ID

```
curl -X PUT 'https://opensearch-host:9200/index-name/_doc/id1' -u 'username:password' -H 'Content-Type: application/json' -d '{"field1":"value1"}'
```

Index a document with specified ID

```
curl -X GET 'https://opensearch-host:9200/index-name/_doc/id1' -u 'username:password'
```

Get a document by ID

```
curl -X DELETE 'https://opensearch-host:9200/index-name/_doc/id1' -u 'username:password'
```

Delete a document by ID

```
curl -X POST 'https://opensearch-host:9200/index-name/_update/id1' -u 'username:password' -H 'Content-Type: application/json' -d '{"doc":{"field1":"new_value"}}'
```

Update a document

Search and Query

```
curl -X GET 'https://opensearch-host:9200/index-name/_search' -u 'username:password' -H 'Content-Type: application/json' -d '{"query":{"match_all":{}}}'
```

Search all documents in an index

```
curl -X GET 'https://opensearch-host:9200/index-name/_search' -u 'username:password' -H 'Content-Type: application/json' -d '{"query":{"match":{"field1":"value1"}}}'
```

Search documents matching a field value

```
curl -X GET 'https://opensearch-host:9200/index-name/_search' -u 'username:password' -H 'Content-Type: application/json' -d '{"query":{"bool":{"must":{"match":{"field1":"value1"}},"filter":{"range":{"age":{"gte":30}}}}}}'
```

Complex boolean query

```
curl -X GET 'https://opensearch-host:9200/index-name/_search' -u 'username:password' -H 'Content-Type: application/json' -d '{"query":{"match_all":{}}, "sort":[{"timestamp":"desc"}], "size":20, "from":0}'
```

Paginated search with sorting

Aggregations

```
curl -X GET 'https://opensearch-host:9200/index-name/_search' -u 'username:password' -H 'Content-Type: application/json' -d '{"size":0,"aggs":{"avg_value":{"avg":{"field":"numeric_field"}}}'
```

Calculate average of a field

```
curl -X GET 'https://opensearch-host:9200/index-name/_search' -u 'username:password' -H 'Content-Type: application/json' -d '{"size":0,"aggs":{"categories":{"terms":{"field":"category"}}}'
```

Group by and count values in a field

```
curl -X GET 'https://opensearch-host:9200/index-name/_search' -u 'username:password' -H 'Content-Type: application/json' -d '{"size":0,"aggs":{"date_histogram":{"field":"timestamp","calendar_interval":"day"}}}'
```

Time-based aggregation

Cluster Management

```
curl -X GET 'https://opensearch-host:9200/_cluster/health' -u 'username:password'
```

Check cluster health status

```
curl -X GET 'https://opensearch-host:9200/_cat/nodes?v' -u 'username:password'
```

List all nodes in the cluster

```
curl -X GET 'https://opensearch-host:9200/_cluster/stats' -u 'username:password'
```

Get cluster statistics

```
curl -X GET 'https://opensearch-host:9200/_cat/shards?v' -u 'username:password'
```

View shard allocation across nodes

Templates and Aliases

```
curl -X PUT 'https://opensearch-host:9200/_index_template/template_name' -u 'username:password' -H 'Content-Type: application/json' -d '{"index_patterns":["pattern*"],"template":{"settings":{"number_of_shards":1}}}'
```

Create an index template

```
curl -X POST 'https://opensearch-host:9200/_aliases' -u 'username:password' -H 'Content-Type: application/json' -d '{"actions":[{"add":{"index":"index-name","alias":"alias-name"}}}]'
```

Create an alias for an index

Monitoring & Diagnostics

```
curl -X GET 'https://opensearch-host:9200/_cat/indices?v' -u 'username:password'
```

List all indices with stats

```
curl -X GET 'https://opensearch-host:9200/_cat/allocation?v' -u 'username:password'
```

View disk allocation

```
curl -X GET 'https://opensearch-host:9200/_nodes/stats' -u 'username:password'
```

Get detailed node statistics

```
curl -X GET 'https://opensearch-host:9200/_tasks' -u 'username:password'
```

List running tasks