Learning ElasticSearch 5.0

Ethan Anthony

Video 2.3

What Is a Cluster?



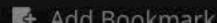
Continue >











In this Video, we are going to take a look at...

- What is an ElasticSearch cluster?
- Nodes defined and explained
- Partitioning the index into shards
- Replicas and failover



What Is an ElasticSearch Cluster?

One or more instances of ElasticSearch running on a given network



Nodes

- Instance of ElasticSearch
- Handle http and transport protocols
- Types of nodes:
 - o Master-eligible node
 - o Data node



About Shards

- Partitions that make up an index
- 5 shards per index (default setting)
- Make ElasticSearch distributed
- Failover auto-balances shards



How Shards Work

- Distributed across ElasticSearch instances
- Single Node cluster
 - Development / testing
- Multi-Node cluster
 - o Production



Shards, a Closer Look (5 Primary Shards)

Single Node cluster

Node1

[P0 P1 P2 P3 P4]

Multi-Node cluster

Node1

Node2

[P0 P1 P3]

[P2 P4]

* P = Primary shard



Replicas and Failover

- Duplication of primary shard
- Takes over if primary fails
- Node rejoins cluster after failure
- New node synchronizes with others



Replicas, a Closer Look (2 Nodes, 5 Shards and 1 Replica)

Node1 [P0 P1 P2 R3 R4]

Node1 [P0 P1 P2 R3 R4]

* P = Primary shard R = Replica shard Node2

[R0 R1 R2 P3 P4]

* cluster status: GREEN (good)

Node2 [Started & Synced]

[RO R1 R2 P3 P4]

* cluster status: GREEN (good)

Node2 [FAILED]

[RO R1 R2 P3 P4]

* cluster status: YELLOW (warning)



Next Video

Setting Shards and Replicas

