

Elasticsearch and Android

2019

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# Introduction

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| This White Paper is regarding the study done on ElasticSearch and how to connect elasticseach with Android. Elasticsearch is a real-time distributed search and analytics engine. It allows you to explore your data at a speed and at a scale never before possible. It is used for full-text search, structured search, analytics, and all three in combination , used in Wikipedia,github,etc  A distributed real-time document store where every field is indexed and searchable  A distributed search engine with real-time analytics  Capable of scaling to hundreds of servers and petabytes of structured and unstructured data  The only requirement for installing Elasticsearch is a recent version of Java.  A node is a running instance of Elasticsearch. A cluster is a group of nodes with the same cluster.name that are working together to share data and to provide failover and scale.  Sense is a [Kibana](https://www.elastic.co/guide/en/kibana/current/index.html) app that provides an interactive console for submitting requests to Elasticsearch directly from your browser.  Elasticsearch uses JavaScript Object Notation, or [JSON](http://en.wikipedia.org/wiki/Json), as the serialization format for documents.  The act of storing data in Elasticsearch is called indexing, but before we can index a document, we need to decide where to store it.  to do phase search, we use a slight variation of the match query called the match\_phrasequery  Many applications like to highlight snippets of text from each search result so the user can see why the document matched the query. Retrieving highlighted fragments is easy in Elasticsearch using \*highlight\* feature.  Elasticsearch has functionality called aggregations, which allow you to generate sophisticated analytics over your data.  Elasticsearch tries hard to hide the complexity of distributed systems. |

# Description

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| Elasticsearch being a document-oriented database is designed to store, retrieve and manage document oriented or semi-structured data. It uses Lucene Standard-Analyzer to index for automatic category guessing and high precision.  Every feature of Elasticsearch is uncovered as a REST API:   * Index API – Used to document the Index * Get API – Used to retrieve the document * Search API – Used to submit your query and get the result * Put Mapping API – Used to override default choices and define our own mapping   Elasticsearch does not have multi-language support  Various keywords in ElasticSearch are-   1. Q - This parameter is used to specify query string. 2. Lenient - Format based errors can be ignored by just setting this parameter to true. It is false by default. 3. Fields - This parameter helps us to get response from selective fields.We can get sorted result by using this parameter, the possible values for this parameter is fieldName, fieldName:asc/fieldname:desc 4. Timeout - We can restrict the search time by using this parameter and response only contains the hits in that specified time. By default, there is no timeout. 5. From - The starting from index of the hits to return. Defaults to 0.  * Logstash Manages events and logs. It collects , parses , enriches and stores data. It is capable of having multiple inputs and outputs   Platform and technologies-  The platforms and technologies are-   * Elasticsearch 6.4.2 - one of the powerful open source search engine * Android Application Developer * Volty Software – to connect Anroid and ElasticSearch * Logstash * Kibana |
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| AboutContributor- Riyanshi Mittal“A research and development enthusiast, passionate about learning new things ” Areas of Interest: Data Science, Research and Development, Coding  Languages: C, C++, Python, HTML, SQL   * Achieved 1st position for aptitude in Zenith-2018 * Achieved 4th position in inter-college project presentation for IR SENSOR * Research paper published in INDIACom-2018 * Research paper published in IJERT-2018 * Attended MRIU-MUN 2016 * Achieved 1st position in MRIIRS semester 5 for excellent performance in French.  1. Mentors  * Mr.Rajesh Nath-Associate Vice-President of JP Tokyo and co.   rajesh.nath@jptokyo.co.jp   * Ms.Charu Virmani-Associate professor in MRIIRS   charu.fet@mriu.edu.in   * JP Tokyo-info@jptokyo.co.jp * MRIIRS - delhi@mrei.ac.in |
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