on September 23, 2023

Setup Elasticsearch in Windows

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Prerequisites

- [Elasticsearch database introduction and terminology]

- In this post we will setup a simple single-node Elasticsearch database in windows using the Elasticsearch zip file
- Elasticsearch database can be installed to run as a windows service like any other database like Oracle or PostgreSQL

Step 1 - Download Elasticsearch

- Extract the Elasticsearch folder and place in C drive. For example `C:\elasticsearch-8.10.2`

Run Elasticsearch from command line (not recommended)

- Open a command prompt in the Elasticsearch folder
- Run Elasticsearch using the command

  `.\bin\elasticsearch.bat`

- Closing the command line will stop Elasticsearch. Hence it is recommended to run Elasticsearch as a windows service

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Step 2 - Run Elasticsearch as a windows background service

- Open a command prompt in the Elasticsearch folder
- Run the command `.\bin\elasticsearch-service.bat install` to install the Elasticsearch windows service
- Run the command `.\bin\elasticsearch-service.bat start` to start the Elasticsearch database
- Run the command `.\bin\elasticsearch-service.bat stop` to stop the database if required
- Run the command `.\bin\elasticsearch-service.bat remove` to uninstall the database service if required

- Open a command prompt in the Elasticsearch folder
- Run the command `.\bin\elasticsearch-reset-password.bat -i -u elastic` and reset the password of *elastic* user

Step 4 – Check if Elasticsearch is running

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- Go to a web browser and open the URL https://localhost:9200
- Enter the username and password of the *elastic* user
- Elasticsearch database details should be displayed. This means that the database is running with the desired *elastic* user credentials

Change the folder where data is stored

- By default Elasticsearch data is stored in the data folder of Elasticsearch folder
- Additional data folders or modification of existing data folder can be done using the `elasticsearch.yml` file
- Open `elasticsearch.yml` file in the config folder of Elasticsearch folder
- Search for `path.data` and set it to a single data folder or multiple data folder paths. For example, you can write
  `path.data: "C:\elasticsearch-8.10.2\data"` or

Set the memory limit of Elasticsearch windows service

- By default only 1 GB is allotted to elasticsearch windows service which can result in errors while running multiple queries or large data queries.
- The memory limit of elasticsearch windows service can be increased for this purpose
- Open a command prompt in the Elasticsearch folder
- Run the command `.\bin\elasticsearch-service.bat manager`. A configuration window will appear
- Go to *Java* tab and set the initial and maximum memory pool values to higher values, say 10 GB (=10240 MB)

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Disable HTTPS (Optional)

- Open `elasticsearch.yml` file in the config folder of Elasticsearch folder
- In the `xpack.security.http.ssl` section, set `enabled: false` to disable HTTPS

Restrict Elasticsearch access to remote connections (Optional)

- Set `http.host: localhost` to disable remote http connections to Elasticsearch. If required LAN IP address can also be used in http.host to restrict the access to only LAN
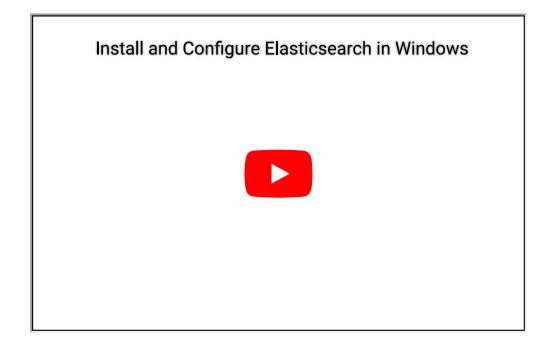
Change the Elasticsearch port (Optional)

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- By default Elasticsearch runs on port 9200
- Open `elasticsearch.yml` file in the config folder of Elasticsearch folder
- Change http.port to the desired value if required

Video

Video for this post can be found here

Install and Configure Elasticsearch in Windows

References

/current/zip-windows.html

- Elasticsearch configuration official docs – https://www.elastic.co/guide/en/elasticsearch/reference/current/settings.html

- difference between http.host and network.host in Elasticsearch configuration – https://discuss.elastic.co/t/difference-between-network-host-transport-host-and-http-host-settings/308215/2

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