# Introduction

Elasticsearch is a search and analytics engine in what is called the Elastic Stack.

# CRUD Operations - Index API

## Create Index

The PUT keyword is used to create an empty index, which can be filled later:

|  |
| --- |
| PUT index\_name |

An index can be created with settings and/or mappings. Mappings contain the index’s schema, meaning its fields and their configuration (type, format, properties/sub-fields, etc.). For example:

|  |
| --- |
| PUT index\_name {  "settings": {  "number\_of\_shards": 3,  "number\_of\_replicas": 2  },  "mappings": {  "properties": {  "field1": {  "type": "date",  "format": "yyyy-MM-dd"  },  "field2": {  "type": "text",  "fields": {  "keyword": {  "type": "keyword",  "ignore\_above": 256  }  }  }  }  }  } |

Mappings, for example, can directly be set from index\_name/\_mapping. The following two examples are thus equivalent:

|  |  |
| --- | --- |
| PUT index\_name {  "mappings": {  "properties": {  ...  }  }  } | PUT index\_name/\_mapping {  "properties": {  ...  }  } |

# Command Line

## Opening a Terminal

On a Server installation, or using SSH, there is no user interface by default, the terminal is always opened. To install the Desktop, enter the following commands:

|  |  |
| --- | --- |
| $  $  $ | sudo apt update && sudo apt upgrade  sudo apt install ubuntu-desktop  sudo reboot |

You will be prompted for the password the first time. It will appear invisible.

On a Desktop installation, or after installing a desktop as above, a terminal can be opened by right-clicking and choosing “Open in Terminal”, or by using Ctrl+Alt+T.

The rest of the document will be working on the terminal.

## Superuser

Some commands need to be run as a superuser (equivalent to administrator in Windows). For examples, some files and directories cannot be manipulated by anyone except a superuser, as is the case for manipulating network services, firewall rules, etc.

To switch to superuser mode in the terminal only, use the su command. To go back, use the logout command. Superuser mode is dangerous to use since it can affect important files with no going back. It is recommended to use this mode only when necessary and the user knows what they are doing.

For more safety, superuser mode can be run temporarily on a single command before automatically switching back by typing sudo before the rest of the command. Still, it is recommended to only use sudo if the user knows what following the command does.