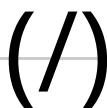


[Docs \(/guide\)](#)[Docs \(/guide\)](#)

You are looking at documentation for an older release. Not what you want? See the current release documentation ([../current/index.html](#)).

[Elasticsearch Reference \[5.3\] \(index.html\)](#) » [Setup Elasticsearch \(setup.html\)](#) » [Installing Elasticsearch \(install-elasticsearch.html\)](#) » [Install Elasticsearch with Debian Package](#)

« [Install Elasticsearch with .zip or .tar.gz \(zip-targz.html\)](#)

[Install Elasticsearch with RPM](#) » ([rpm.html](#))

Install Elasticsearch with Debian Package

[edit \(https://github.com/elastic/elasticsearch/edit/5.3/docs/reference/setup/install/deb.asciidoc\)](#)

The Debian package for Elasticsearch can be downloaded from our website ([deb.html#install-deb](#)) or from our APT repository ([deb.html#deb-repo](#)). It can be used to install Elasticsearch on any Debian-based system such as Debian and Ubuntu.

The latest stable version of Elasticsearch can be found on the [Download Elasticsearch \(/downloads/elasticsearch\)](#) page. Other versions can be found on the [Past Releases page \(/downloads/past-releases\)](#).



Elasticsearch requires Java 8 or later. Use the official Oracle distribution (<http://www.oracle.com/technetwork/java/javase/downloads/index.html>) or an open-source distribution such as OpenJDK (<http://openjdk.java.net>).

Import the Elasticsearch PGP Key

[edit \(https://github.com/elastic/elasticsearch/edit/5.3/docs/reference/setup/install/deb.asciidoc\)](#)

We sign all of our packages with the Elasticsearch Signing Key (PGP key D88E42B4 (<https://pgp.mit.edu/pks/lookup?op=vindex&search=0xD27D666CD88E42B4>), available from <https://pgp.mit.edu> (<https://pgp.mit.edu>)) with fingerprint:

```
4609 5ACC 8548 582C 1A26 99A9 D27D 666C D88E 42B4
```

Download and install the public signing key:

```
wget -q0 - https://artifacts.elastic.co/GPG-KEY-elasticsearch | sudo apt-key add -
```

Installing from the APT repository

edit (<https://github.com/elastic/elasticsearch/edit/5.3/docs/reference/setup/install/deb.asciidoc>)

You may need to install the `apt-transport-https` package on Debian before proceeding:

```
sudo apt-get install apt-transport-https
```

Save the repository definition to `/etc/apt/sources.list.d/elastic-5.x.list`

```
echo "deb https://artifacts.elastic.co/packages/5.x/apt stable main" | sudo tee -a /etc/apt/sources.list.d/elastic-5.x.list
```



NOTE

These instructions do not use `add-apt-repository` for several reasons:

1. `add-apt-repository` adds entries to the system `/etc/apt/sources.list` file rather than a clean per-repository file in `/etc/apt/sources.list.d`
2. `add-apt-repository` is not part of the default install on many distributions and requires a number of non-default dependencies.
3. Older versions of `add-apt-repository` always add a `deb-src` entry which will cause errors because we do not provide a source package. If you have added the `deb-src` entry, you will see an error like the following until you delete the `deb-src` line:

```
Unable to find expected entry 'main/source/Sources' in Release file
(Wrong sources.list entry or malformed file)
```

You can install the Elasticsearch Debian package with:

```
sudo apt-get update && sudo apt-get install elasticsearch
```



WARNING

If two entries exist for the same Elasticsearch repository, you will see an error like this during `apt-get update`:

```
Duplicate sources.list entry https://artifacts.elastic.co/packages/5.x/apt/ ...`
```

Examine `/etc/apt/sources.list.d/elasticsearch-5.x.list` for the duplicate entry or locate the duplicate entry amongst the files in `/etc/apt/sources.list.d/` and the `/etc/apt/sources.list` file.



On systemd-based distributions, the installation scripts will attempt to set kernel parameters (e.g., `vm.max_map_count`); you can skip this by setting the environment variable `ES_SKIP_SET_KERNEL_PARAMETERS` to `true`.

Download and install the Debian package manually

[edit \(https://github.com/elastic/elasticsearch/edit/5.3/docs/reference/setup/install/deb.asciidoc\)](https://github.com/elastic/elasticsearch/edit/5.3/docs/reference/setup/install/deb.asciidoc)

The Debian package for Elasticsearch v5.3.2 can be downloaded from the website and installed as follows:

```
wget https://artifacts.elastic.co/downloads/elasticsearch/elasticsearch-5.3.2.deb
shasum elasticsearch-5.3.2.deb ①
sudo dpkg -i elasticsearch-5.3.2.deb
```

- ① Compare the SHA produced by `shasum` or `shasum` with the published SHA (<https://artifacts.elastic.co/downloads/elasticsearch/elasticsearch-5.3.2.deb.sha1>).

SysV init vs systemd

[edit \(https://github.com/elastic/elasticsearch/edit/5.3/docs/reference/setup/install/init-systemd.asciidoc\)](https://github.com/elastic/elasticsearch/edit/5.3/docs/reference/setup/install/init-systemd.asciidoc)

Elasticsearch is not started automatically after installation. How to start and stop Elasticsearch depends on whether your system uses SysV `init` or `systemd` (used by newer distributions). You can tell which is being used by running this command:

```
ps -p 1
```

Running Elasticsearch with SysV init

[edit \(https://github.com/elastic/elasticsearch/edit/5.3/docs/reference/setup/install/deb.asciidoc\)](https://github.com/elastic/elasticsearch/edit/5.3/docs/reference/setup/install/deb.asciidoc)

Use the `update-rc.d` command to configure Elasticsearch to start automatically when the system boots up:

```
sudo update-rc.d elasticsearch defaults 95 10
```

Elasticsearch can be started and stopped using the `service` command:

```
sudo -i service elasticsearch start
sudo -i service elasticsearch stop
```

If Elasticsearch fails to start for any reason, it will print the reason for failure to STDOUT. Log files can be found in `/var/log/elasticsearch/`.

Running Elasticsearch with systemd

edit (https://github.com/elastic/elasticsearch/edit/5.3/docs/reference/setup/install/systemd.asciidoc)

To configure Elasticsearch to start automatically when the system boots up, run the following commands:

```
sudo /bin/systemctl daemon-reload
sudo /bin/systemctl enable elasticsearch.service
```

Elasticsearch can be started and stopped as follows:

```
sudo systemctl start elasticsearch.service
sudo systemctl stop elasticsearch.service
```

These commands provide no feedback as to whether Elasticsearch was started successfully or not. Instead, this information will be written in the log files located in `/var/log/elasticsearch/`.

By default the Elasticsearch service doesn't log information in the `systemd` journal. To enable `journalctl` logging, the `--quiet` option must be removed from the `ExecStart` command line in the `elasticsearch.service` file.

When `systemd` logging is enabled, the logging information are available using the `journalctl` commands:

To tail the journal:

```
sudo journalctl -f
```

To list journal entries for the elasticsearch service:

```
sudo journalctl --unit elasticsearch
```

To list journal entries for the elasticsearch service starting from a given time:

```
sudo journalctl --unit elasticsearch --since "2016-10-30 18:17:16"
```

Check `man journalctl` or

<https://www.freedesktop.org/software/systemd/man/journalctl.html>

(<https://www.freedesktop.org/software/systemd/man/journalctl.html>) for more command

line options.

Checking that Elasticsearch is running

You can test that your Elasticsearch node is running by sending an HTTP request to port 9200 on localhost:

```
GET /

COPY AS CURL    VIEW IN CONSOLE (HTTP://LOCALHOST:5601/APP/KIBANA#/DEV_TOOLS/CONSOLE?
LOAD_FROM=HTTPS://WWW.ELASTIC.CO/GUIDE/EN/ELASTICSEARCH/REFERENCE/5.3/SNIPPETS/DEB/1.JSON)
```

which should give you a response something like this:

```
{
  "name" : "Cp8oag6",
  "cluster_name" : "elasticsearch",
  "cluster_uuid" : "AT69_T_DTp-1qgIJlatQqA",
  "version" : {
    "number" : "5.3.2",
    "build_hash" : "f27399d",
    "build_date" : "2016-03-30T09:51:41.449Z",
    "build_snapshot" : false,
    "lucene_version" : "6.4.2"
  },
  "tagline" : "You Know, for Search"
}
```

Configuring Elasticsearch

Elasticsearch loads its configuration from the `/etc/elasticsearch/elasticsearch.yml` file by default. The format of this config file is explained in *Configuring Elasticsearch* (settings.html).

The Debian package also has a system configuration file (`/etc/default/elasticsearch`), which allows you to set the following parameters:

| | |
|----------------|--|
| ES_USER | The user to run as, defaults to <code>elasticsearch</code> . |
| ES_GROUP | The group to run as, defaults to <code>elasticsearch</code> . |
| JAVA_HOME | Set a custom Java path to be used. |
| MAX_OPEN_FILES | Maximum number of open files, defaults to <code>65536</code> . |

| | |
|--------------------|--|
| MAX_LOCKED_MEMORY | Maximum locked memory size. Set to <code>unlimited</code> if you use the <code>bootstrap.memory_lock</code> option in <code>elasticsearch.yml</code> . |
| MAX_MAP_COUNT | Maximum number of memory map areas a process may have. If you use <code>mmapfs</code> as index store type, make sure this is set to a high value. For more information, check the linux kernel documentation (https://github.com/torvalds/linux/blob/master/Documentation/sysctl/vm) about <code>max_map_count</code> . This is set via <code>sysctl</code> before starting elasticsearch. Defaults to <code>262144</code> . |
| LOG_DIR | Log directory, defaults to <code>/var/log/elasticsearch</code> . |
| DATA_DIR | Data directory, defaults to <code>/var/lib/elasticsearch</code> . |
| CONF_DIR | Configuration file directory (which needs to include <code>elasticsearch.yml</code> and <code>log4j2.properties</code> files), defaults to <code>/etc/elasticsearch</code> . |
| ES_JAVA_OPTS | Any additional JVM system properties you may want to apply. |
| RESTART_ON_UPGRADE | Configure restart on package upgrade, defaults to <code>false</code> . This means you will have to restart your elasticsearch instance after installing a package manually. The reason for this is to ensure, that upgrades in a cluster do result in a continuous shard reallocation resulting in high network traffic reducing the response times of your cluster. |

**NOTE**

Distributions that use `systemd` require that system resource limits be configured via `systemd` rather than via the `/etc/sysconfig/elasticsearch` file. See [Systemd configuration \(setting-system-settings.html#systemd\)](#) for more information.

Directory layout of Debian package

[edit \(https://github.com/elastic/elasticsearch/edit/5.3/docs/reference/setup/install/deb.asciidoc\)](https://github.com/elastic/elasticsearch/edit/5.3/docs/reference/setup/install/deb.asciidoc)

The Debian package places config files, logs, and the data directory in the appropriate locations for a Debian-based system:

| Type | Description | Default Location | Setting |
|------|-------------|------------------|---------|
|------|-------------|------------------|---------|

| | | | |
|----------------|---|---|---------------------------|
| home | Elasticsearch home directory or <code>\$ES_HOME</code> | <code>/usr/share/elasticsearch</code> | |
| bin | Binary scripts including <code>elasticsearch</code> to start a node and <code>elasticsearch- plugin</code> to install plugins | <code>/usr/share/elasticsearch/bin</code> | |
| conf | Configuration files including <code>elasticsearch.yml</code> | <code>/etc/elasticsearch</code> | <code>path.conf</code> |
| conf | Environment variables including heap size, file descriptors. | <code>/etc/default/elasticsearch</code> | |
| data | The location of the data files of each index / shard allocated on the node. Can hold multiple locations. | <code>/var/lib/elasticsearch</code> | <code>path.data</code> |
| logs | Log files location. | <code>/var/log/elasticsearch</code> | <code>path.logs</code> |
| plugins | Plugin files location. Each plugin will be contained in a subdirectory. | <code>/usr/share/elasticsearch/plugins</code> | |
| repo | Shared file system repository locations. Can hold multiple locations. A file system repository can be placed in to any subdirectory of any directory specified here. | Not configured | <code>path.repo</code> |
| script | Location of script files. | <code>/etc/elasticsearch/scripts</code> | <code>path.scripts</code> |

Next steps

edit (<https://github.com/elastic/elasticsearch/edit/5.3/docs/reference/setup/install/next-steps.asciidoc>)

You now have a test Elasticsearch environment set up. Before you start serious development or go into production with Elasticsearch, you will need to do some additional setup:

- [Learn how to configure Elasticsearch \(settings.html\).](#)
- [Configure important Elasticsearch settings \(important-settings.html\).](#)
- [Configure important system settings \(system-config.html\).](#)

« [Install Elasticsearch with .zip or .tar.gz \(zip-targz.html\)](#)

[Install Elasticsearch with RPM » \(rpm.html\)](#)

Top Videos

- [Elasticsearch Demo \(https://www.elastic.co/webinars/getting-started-elasticsearch?baymax=default&elektra=docs&storm=top-video\)](https://www.elastic.co/webinars/getting-started-elasticsearch?baymax=default&elektra=docs&storm=top-video)
- [Kibana 101 \(https://www.elastic.co/webinars/getting-started-kibana?baymax=default&elektra=docs&storm=top-video\)](https://www.elastic.co/webinars/getting-started-kibana?baymax=default&elektra=docs&storm=top-video)
- [Logstash Primer \(https://www.elastic.co/webinars/getting-started-logstash?baymax=default&elektra=docs&storm=top-video\)](https://www.elastic.co/webinars/getting-started-logstash?baymax=default&elektra=docs&storm=top-video)

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