Ellexus Healthcheck User Manual

2.13.0

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1 Introduction

Ellexus Healthcheck automatically generates an I/O report for your application.

2 Installing Ellexus Healthcheck

Download and extract your copy of Ellexus Healthcheck in a convenient directory. If you have saved ellexus-healthcheck_2.12.0_x86_64.tar.gz in your home directory, then typing

```
$ tar -xzf ellexus-healthcheck_2.12.0_x86_64.tar.gz
```

will unpack the program in `~/ellexus-healthcheck_2.12.0_x86_64`.

Before you can run Ellexus Healthcheck you must have a license and the `BREEZE_RLM_LICENSE` environment variable must be set to the location of the license. This can be either:

- The full path of a directory containing a license file.
- The IP address and port of the license server expressed as `<ip-address>:<port>`. The port number used by the license server will usually be 5053.

For example:

```
$ export BREEZE_RLM_LICENSE=/home/ellexus/license/
```

or

```
$ export BREEZE_RLM_LICENSE=10.33.0.1:5053
```

If you do not have a license, please contact Ellexus on support@ellexus.com

3 Generating a Healthcheck Report

To generate a report for an application called "app" in `~/myapplication` you would `cd` to the top level directory of your application and run `ellexus-healthcheck.sh`. For example:

```
$ cd ~/myapplication
$ ~/ellexus-healthcheck_2.11.2_x86_64/ellexus-healthcheck.sh -f ~/tmp ./app
```

The `-f` command line option specifies a directory where Ellexus Healthcheck will store its temporary files. Ellexus Healthcheck will report an error and exit if this directory already exists.

This will run your application, tracing its use. At the end of this process the trace files that have been generated are analysed to create the Healthcheck report. This will be created in the output directory you specified e.g.

```
~/tmp/app-healthcheck/
```

In this folder there will be up to 4 files created:

- `healthcheck_report.html:` the main Healthcheck report;
- `report.txt`: the main Healthcheck report in text format;
- `dependencies.txt`: a list of dependencies that your application used;
- `network.csv`: information about the network locations that your application accessed, this file is only created if network access is detected;
- `programs.csv`: detailed information about each process in your application.

The report is human readable and has recommendations for changes that could be made to your application.

3.1 Creating an Empty Sample Report

You can generate the output documentation for Healthcheck by running:

```
$ ~/ellexus-healthcheck_2.12.0_x86_64/ellexus-healthcheck.sh --docs
```

This will generate a full `report.txt` file, so you can see what could potentially be reported when running your application under Ellexus Healthcheck. Where necessary, explanations should inform you as to what is reported, and how.

3.2 Healthcheck Command Line Options

The main command line options are described below. To get a full list of options, run the `ellexus-healthcheck.sh` script without any option.

`-f <output_directory>`

Specify the directory in which Ellexus Healthcheck will store its data. Ellexus Healthcheck will not generate a report if this option is not specified.

`--home <home_dirs>`

When generating a Healthcheck report it is possible to specify which directories should be treated as the users' home directory. By default Healthcheck uses the current users home directory if this is not specified. This could be useful for monitoring directories that programs should not be run from in a production environment. To do this specify the --home command line option with a comma separated list of paths as follows:

```
$ ~/ellexus-healthcheck_2.11.1_x86_64/ellexus-healthcheck.sh --home \
/home/staff/user1,/home/contractors/user2 -f ~/tmp ./app
```

--traceonly

Optional. If specified, Ellexus Healthcheck generates traces but doesn't create the report.

This option allows you to run the report generation later. Using the following command:

```
$ ~/ellexus-healthcheck_2.11.1_x86_64/ellexus-healthcheck.sh <trace directory>
```

--thresholds <threshold-file>

Optional. Specify the path to the file where thresholds are defined. The file should exist and be readable. Without this option, Ellexus Healthcheck will look for a file named 'healthcheck_thresholds' in your home directory and in its installation directory, and use default hard-coded values in last resort.

This file allows you to configure the output of the report, you can adjust the thresholds over which data is reported to suit your environment/applications.

--home <home_dirs>

Optional. Where <restricted_dirs> can either be:

- a comma separated list. In this case, the paths cannot contain commas (',');
- a path to a file containing a list of paths, each on its own line. In this case, the file path must be prefixed with 'file:', e.g. '--restricted=file:/tmp/r_dirs'. In this file, leading whitespace is ignored, and lines starting with '#' (comments) and blank lines are skipped.

Specify what directories should be considered restricted when creating the Healthcheck report. Any file accessed or program/script run from these directories will be listed in the report. If not specified, this section of the report will be empty.

--limit <max-trace-size>

Optional. Specify the maximum trace size that can generate a Healthcheck trace in gB. Defaults to 10gB. The argument must only contain numbers.

--mem <max-heap-size-for-JVM>

Optional. Sets the maximum heap size of the Java Virtual Machine. Use this option if you are working with big traces and get OutOfMemoryError. The argument must only contain numbers and may end with one of the following units: k, K, m, M, g, G.