

NAME

`hwloc-gather-topology` – Saves the relevant Linux and x86 topology files and the `lstopo` textual and XML outputs for later (possibly offline) usage

SYNOPSIS

hwloc-gather-topology [*options*] <path>

OPTIONS

- io** Also gather I/O related files. The gathering may be much slower, and the generated archive may be much bigger.
- dmi** Also gather DMI/SMBIOS related files. The gathering requires root access, and the `dmi-sysfs` kernel module should be loaded.
- no-cpuid**
Do not gather x86 CPUID dump using `hwloc-gather-cpuid`.
- keep**
Keep the temporary copy of dumped files instead of destroying it.
- version**
Report version and exit.
- h --help**
Display help message and exit.

DESCRIPTION

hwloc-gather-topology saves all the relevant topology files into an archive (<path>.**tar.bz2**), the `lstopo` output (<path>.**output**), and the `lstopo` XML (<path>.**xml**). The utility for example stores the `/proc/cpuinfo` file and the entire `/sys/devices/system/node/` directory tree.

These files can be used later to explore the machine topology offline. Once the tarball has been extracted, it may for instance be given to some `hwloc` command-line utilities through their **--input** option. It is also possible to override the default topology that the `hwloc` library will read by setting the extracted path in the **HWLOC_FSROOT** environment variable.

The archive and the `lstopo` textual and XML outputs may also be submitted to `hwloc` developers to debug issues remotely.

hwloc-gather-topology is a Linux specific tool, it is not installed on other operating systems.

NOTE: **hwloc-gather-topology** gathers many hardware details about the platform. The outputs and tarball should not be posted on public lists or websites unless it is clear that they contain no sensitive information.

NOTE: The gathering may take several minutes, especially on large nodes.

NOTE: It is highly recommended that you read the `hwloc(7)` overview page before reading this man page.

EXAMPLES

To store topology information to be used later (possibly on a different host) please run:

```
hwloc-gather-topology /tmp/myhost
```

It will store all relevant topology files in the **/tmp/myhost.tar.bz2** archive, the `lstopo` output in the **/tmp/myhost.output** file, and the `lstopo` XML in the **/tmp/myhost.xml** file. These files can be transferred on another host for later/offline analysis and/or as the input to various `hwloc` utilities.

To use these data with `hwloc` utilities you have to unpack **myhost.tar.bz2** archive first:

```
tar jxvf /tmp/myhost.tar.bz2
```

A new directory named **myhost** now contains all topology files. Then you ask various `hwloc` utilities to use this topology instead of the one of the real machine by passing **--input myhost**. To display the topology just run:

```
lstopo --input ./myhost
```

It is not necessary that the topology is extracted in the current directory, absolute or relative paths are also supported:

```
lstopo --input /path/to/remote/host/extracted/topology/
```

To see how hwloc would distribute 8 parallel jobs on the original host:

```
hwloc-distrib --input myhost --single 8
```

To get the corresponding physical indexes in the previous command:

```
hwloc-calc --input myhost --po --li --proclist $(hwloc-distrib --input myhost --single 8)
```

Any program may actually override the default topology with a given archived one even if it does not have a **--input** option. The **HWLOC_FSROOT** environment variable should be used to do so:

```
HWLOC_FSROOT=myhost hwloc-calc --po --li --proclist $(hwloc-distrib --single 8)
```

All these commands will produce the same output as if executed directly on the host on which the topology information was originally gathered by the **hwloc-gather-topology** script.

RETURN VALUE

Upon successful execution, **hwloc-gather-topology** will exit with the code 0.

hwloc-gather-topology will return nonzero exit status if any kind of error occurs, such as (but not limited to) failure to create the archive or output files.

SEE ALSO

hwloc(7), lstopo(1), hwloc-gather-cpuid(1), hwloc-calc(1), hwloc-distrib(1)