

**NAME**

`grl.open` – OPEN/CAESAR connection for the GRL language

**SYNOPSIS**

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grl.open [-print pp_file[.grl]] [-silent | -verbose] [-version] [-about] [-ignore] [-warnings] [-merge]
[-sync] [-warning] [-showall] [-force] [-relabel] [-root system] [-labels] [lnt_options] filename[.grl]
[cc_options] user[.a|.c|.o] [user_options]
```

**DESCRIPTION**

Taking as input *filename.grl* (which contains the principal program of a GRL specification) and an OPEN/CAESAR program *user*[.a|.c|.o], **grl.open** operates as follows:

- First, it translates the GRL specification *filename.grl* (including all transitively imported programs) into a LNT specification using **grl2lnt**(LOCAL). See **grl2lnt**(LOCAL) for more information.
- Then, it calls “**lnt.open** [*lnt\_options*] *filename.lnt* [*cc\_options*] *user*[.a|.c|.o] [*user\_options*]”, passing to **lnt.open** (and, transitively, **caesar.open**, **caesar.adt** and **caesar**) appropriate options that depend on the options passed to **grl.open** (see below). See **lnt.open**(LOCAL), **caesar.open**(LOCAL), **caesar.adt**(LOCAL), and **caesar**(LOCAL) for more information.

However, if *user* is the “-” string (instead of the name of an OPEN/CAESAR application program), **grl.open** will execute only the first step (translation into a LNT specification) and then stop without invoking **lnt.open**. In such case, the files generated during the first step are not removed.

**OPTIONS****-print pp\_file[.grl]**

Perform syntax and semantic analysis of *filename.grl*, prints an indented form of the file in *pp\_file.grl* and stops execution.

**-silent**

Execute silently, reporting only errors. This is the opposite of **-verbose**. The default option is **-verbose**. This option is passed to **grl2lnt**(LOCAL), and **lnt.open**(LOCAL). See **grl2lnt**(LOCAL), **lnt.open**(LOCAL) for more information.

**-verbose**

Report activities and progress, including errors, to the user’s screen. This is the opposite of **-silent**. The default option is **-verbose**. This option is passed to **grl2lnt**(LOCAL), and **lnt.open**(LOCAL). See **grl2lnt**(LOCAL), **lnt.open**(LOCAL) for more information.

**-version**

Display the version number of **grl2lnt**(LOCAL) and stop.

**-about**

Display information about **grl.open**(LOCAL) and stop.

**-ignore**

Do not stop execution after an error is issued, force the generation of an LNT file (possibly with errors). This option is passed to **grl2lnt**(LOCAL). See **grl2lnt**(LOCAL) for more information.

**-warnings**

Stop execution when a warning is issued in GRL specification and exit with status 1. This option is passed to **grl2lnt**(LOCAL). See **grl2lnt**(LOCAL) for more information.

**-merge**

Use merge mode. It simulates the merge of transitions with adding a special merged transition and hiding everything else. This option is passed to **grl2lnt**(LOCAL). See **grl2lnt**(LOCAL) for more information.

**-sync**

Use synchronous mode. It enables the generation of merged transitions. The option should be used only on synchronous programs. This option is passed to **grl2lnt(LOCAL)**. See **grl2lnt(LOCAL)** for more information.

**-warning**

No warning is issued in the GRL specification. This option is passed to **grl2lnt(LOCAL)**, and **lnt.open(LOCAL)**. See **grl2lnt(LOCAL)**, **lnt.open(LOCAL)** for more information.

**-showall**

Show all transitions. This option is passed to **grl2lnt(LOCAL)**. See **grl2lnt(LOCAL)** for more information.

**-force**

Overwrite output files, even if they were edited by the user or do not need to be updated. This option is passed to **grl2lnt(LOCAL)**, and **lnt.open(LOCAL)**. See **grl2lnt(LOCAL)**, **lnt.open(LOCAL)** for more information.

**-relabel**

Generate a rename file to match formal definition of LTS labels (required by other tools). This option is passed to **grl2lnt(LOCAL)**. See **grl2lnt(LOCAL)** for more information.

**-root instantiation**

where *instantiation* can take two different forms: **system**, or a character string of the form "*system* (*X1*, ..., *Xn*)" where *X1*, ..., *Xn* are values of the constant parameters of the system. It is highly recommended to type given parameters using syntax *of type*.

If the option is specified, only the system **system** will be treated. **grl2lnt** will generate a Main process calling the process of the root system in the LNT specification. By default, if the **-root** option is absent, it is assumed that there is only one system in the program or that there exists a system called **Main**. This option is passed to **grl2lnt(LOCAL)**, and **lnt.open(LOCAL)**. See **grl2lnt(LOCAL)**, **lnt.open(LOCAL)** for more information.

**-labels**

Display on user's screen the list of labels expected to be printed in the LNT specification and for example on the generated LTS.

*lnt\_options*

if any, are passed to **lnt.open(LOCAL)**.

*cc\_options*

if any, are passed to the C compiler.

*user\_options*

if any, are passed to *user*.

**OPERANDS**

<i>filename.grl</i>	GRL specification (input)
<i>pp_file.grl</i>	GRL code (optional output)
<i>filename.o</i>	object code (output)
<i>filename.err</i>	detailed error messages (output)
<i>user.a</i>	exploration module (archive, input)
<i>user.c</i>	exploration module (source, input)
<i>user.o</i>	exploration module (object code, input)
<i>user</i>	executable program (output)

**FILES**

**\$CADP\_TMP/lnt.\*** temporary files

**\$GRL\_LOCATION/Int/GRL\_V1.lnt**

GRL predefined library (LNT code)

**\$GRL\_LOCATION/incl/GRL\_V1.h**

GRL predefined library (C code)

#### EXIT STATUS

If the translation was successful the exit status is 0. If any error occurred during translation, the exit status is 1 and error messages are issued.

#### AUTHOR

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#### SEE ALSO

**grl(LOCAL)**, **grl2lnt(LOCAL)**, **lnt.open(LOCAL)**, **lnt2lotos(LOCAL)**, **caesar.adt(LOCAL)**, **caesar(LOCAL)**,

Additional information is available from the CADP Web page located at <http://cadp.inria.fr>

Directives for installation are given in files **\$GRL\_LOCATION/INSTALLATION**.

Recent changes and improvements to this software are reported and commented in file **\$GRL\_LOCATION/VERSION**.

#### BUGS

Please report any bug to [cadp@inria.fr](mailto:cadp@inria.fr)