Mephisto Documentation

SAGA-Group

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Introduction

Mephisto is a perl script that supports SAGA (Simplified API for Grid Applications) installations. SAGA is an API that provides the basic functionality required to build distributed applications, tools and frameworks so as to be independent of the details of the underlying infrastructure []. More information on SAGA can be found on the website:

```
http://www.saga.cct.lsu.edu/
```

SAGA installations require to install various dependency packages. Mephisto is a tool that automates the installation of SAGA, installing all its dependencies specified for SAGA and SAGA adaptors too. The version number of all the packages and the type of packages can be specified by the user at the command line. The description of all the command line options available are described in the next section.
Example of the command line statement

```
perl mephisto install --target-dir=/home/user/saga --tmp-dir=/home/user/tmp-saga
```

Other examples with different command line options are explained in later section.

Command line options

This section discusses all the various options available at users disclosure. By default if no options are specified, mephisto pulls up the packages listed on

```
http://static.saga.cct.lsu.edu/mephisto/repository/latest/INDEX.
```

Expanded version of the Command to run mephisto

```
perl mephisto install/test --target-dir=/path/to/folder --tmp-dir=/path/to/folder
--with-saga-version= --with-boost-version= --with-globus-version=
--repository= --with-adaptors=
```

install
This can be used to install a working copy of SAGA and all its dependencies specified.
test
This option not only installs SAGA but also runs the command 'make check' to check the installation. It creates a log file displaying the test results.
target-dir
This option is used to specify the path you need to install SAGA and all packages libraries. By default, it creates a folder at tmp/meph_inst.
tmp-dir
This option is used to specify the path for a temporary folder to download all the packages and create log files. By default, it creates a folder at /tmp/meph_tmp
repository
Can be used to choose different repositories to install SAGA from. Two repositories available as of now are 'latest' (default) and svn_trunk. Recommended svn_trunk for the most recent SAGA version.
with-saga-version
Choose saga versions available.
with-boost-version
Choose boost versions available $>=1.40.0$
with-globus-version
Choose globus version available $>=4.0$. This option would automatically invoke installations of X509, globus adap-

tors too.
with-adaptors
Mention any adaptors to install that would invoke globus installations along with saga-adaptors too.

Example Command line options

NOTE: All commands are explained individually here. They can be used interchangeably. Choice has to be made been 'install' and 'test'

- Basic Default command

```
perl mephisto install
```

This would install SAGA. All the default options will be loaded as no option is chosen. As of now the default options are (can change): Repository: http://static.saga.cct.lsu.edu/mephisto/repository/latest/ SAGA= 1.5.2; Boost= 1.40.0; Python=2.6.2; Post-gre-sql=8.4.1; Sqlite=3.6.18; SAGA-PYTHON; SAGA-ADAPTORS-X509; SAGA-ADAPTORS-SSH. All the packages will be stored in temporary folders created by the script.

- Command with paths to folders

```
perl mephisto install --target-dir=/path/to/any/desired directory/
--tmp-dir=/path/to/temp/folder
```

This will install all packages in the folder specified.

- Install SAGA from svn_trunk repository

```
perl mephisto install --target-dir=/path/to/any/desired directory/
--tmp-dir=/path/to/temp/folder --repository=svn\_trunk
```

Choose snv_trunk repository to install SAGA. This will have the most recent and tested working SAGA version.

- Install SAGA will all saga, globus, boost versions specified

```
perl mephisto install --target-dir=/path/to/any/desired directory/
--tmp-dir=/path/to/temp/folder --with-saga-version=1.5.3
--with-boost-version=1.44.0 --with-globus-version=5.0.2
(or)
perl mephisto install --target-dir=/path/to/any/desired directory/
--tmp-dir=/path/to/temp/folder --with-saga=1.5.3
--with-boost=1.44 --with-globus=5.0.2
```

To install SAGA with different boost, SAGA and globus versions. Given here are two ways of defining the versions. Using all the three is not compulsory and any combination can be used. Any version not mentioned will infer default options.

- Globus installations

```
perl mephisto install --target-dir=/path/to/any/desired directory/
--tmp-dir=/path/to/temp/folder --with-globus-version=5.0.2
```

Specifying any globus installations will also invoke globus adaptors installations as required and necessary.

- Install SAGA with Globus adaptors

```
perl mephisto install --target-dir=/path/to/any/desired directory/
--tmp-dir=/path/to/temp/folder --with-adaptors=globus
```

To install globus adaptors. Automatically invokes globus installations which is required for adaptors. Also automates x509 adaptors too.

- How to install a SAGA Core Pre-Release with a specific Boost version (for developers)

```
perl mephisto install --target-dir=/path/to/any/desired directory/
--tmp-dir=/path/to/temp/folder --with-saga=1.5.3-pre
```

For developers, this would install the pre-release version from the given link shared in the email with boost and all other dependencies creating log files necessary for debugging.

- Install and proceed to TEST the installations

```
perl mephisto test --target-dir=/path/to/any/desired directory/
--tmp-dir=/path/to/temp/folder --with-saga-version=1.5.3
--with-boost-version=1.44.0 --with-globus-version=5.0.2
```

Choose 'test' option to first install SAGA and its dependencies and continue to perform 'make check' operation and create a log file.

Example of a Screen Shot after execution

Possible errors