Contents

1 swiftwrap.wrapperstaging

Table 1: Command line arguments

Argument	Description
-a	Command line arguments passed to app
-d	List of directories to create
-e	App to execute
-err	Where to write stderr
-i	Set stdin
-if	Input file(s)
-jobdir	Swift job directory
-of	Ouput file(s)
-out	Where to write stdout
-scratchdir	Swift scratch directory
-sk	Sitedir keep, true/false
-status	Provider or files
-urlprefix	URL Prefix
-wt	Wrapper log always transfer, true/false

2 Swift properties related to wrapper staging

Setting	Description
use.wrapper.staging	If set to true, enable wrapper staging. Defaults to false.
wrapper.staging.local.server	Swift passes a URL prefix to swiftwrap.wrapperstaging that determines how to access local files. This setting determines what the prefix is (for example, file://).

3 Protocols

Below is a list of protocols supported by _swiftwrap.wrapperstaging and a brief explanation of how they are implemented.

3.1 direct://

The direct protocol allows you to bypass file staging to the swift created work directory. Instead of making a copy of the file, a symlink will be created which points to the original location of the file.

```
file data <"direct:///home/davidkelly999/staging/absolute/direct/data.txt">;
```

3.2 file://

By default, files that use the file:// URI, or files that specify no URI at all, will act in a way that is similar to the behavior or direct://. A symlink will be created in the Swift work directory that points to the original location of the file.

```
file data <"file:///home/davidkelly999/staging/absolute/file/data.txt">;
file data2 <"/home/davidkelly999/staging/absolute/normal/data.txt">;
```

3.3 gsiftp://

GSIFTP files will be transferred using the globus-url-copy command.

3.4 http://

HTTP is implemented in _swiftwrap.wrapperstaging via the wget command.

3.5 stage://

If a file begins with stage://, a copy of the file will be made in the work directory. Files get copied using dd with a 10MB block size.

```
file data <"stage:///home/davidkelly999/staging/absolute/stage/data.txt">;
```

3.6 Adding new protocols

The file cog/modules/provider-local/resources/cog-provider.properties allows you to set aliases. Define your new file protocol as an alias to "local". Suppose you would like to add a new protocol called "megaftp", you could add a line that looks like this:

```
alias=megaftp:local
```

In your swift script, you would reference the file as megaftp://path/to/file.txt.

Note
You will need to recompile after making this change.

4 Examples of how swiftwrap is called

4.1 Using absolute pathnames

In this example, Swift tries to map the file below using an absolute path

```
file data <"/home/davidkelly999/staging/dd-absolute/data.txt">;
```

Table 2: _swiftwrap.wrapperstaging arguments

-if	file://localhost//home/davidkelly999/staging/dd-absolute/-data.txt
-of	catsn.0001.out
-urlprefix	file:///home/davidkelly999/staging/dd-absolute
-d	*_root_*/home/davidkelly999/staging/dd-absolutel.
-a	*_root_*/home/davidkelly999/staging/dd-absolute/data.txt

4.2 Using relative pathnames

Here is an example using relative pathnames in Swift.

```
file data <"data.txt">;
```

Table 3: _swiftwrap.wrapperstaging arguments

-if	file://localhost/data.txt
-of	catsn.0001.out
-urlprefix	file:///home/davidkelly999/staging/dd-relative
-d	|.
-a	data.txt