SPS installation

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Installation instructions

Unzip the Spectral Networks package to a directory **<installation directory>** (any directory of your choice). This directory should then contain the following directories:

- sps/bin – Contains the binary executables
- sps/cgi – Contains CGI scripts used by the program
- sps/Doc – Documentation
- sps/example – Test project

Web server

SPS is a command line tool that outputs reports in HTML format. Report pages may accessed using a web browser to render the HTML report files generated. These files should be made available by SPS using a web server such as Apache.

To enable interactivity in protein sequencing reports (see results documentation), there are several **CGI** scripts needed that should be present in the web server's configuration file:

- **<installation directory>/sps/cgi/specplot.cgi**
- **<installation directory>/sps/cgi/contplot.cgi**
- **<installation directory>/sps/cgi/spsReports.cgi**

Configuration

The following change should be made in the installed scripts:

- Edit **<installation directory>/sps/cgi/ spsReports.cgi** at line 12. The line should be:
  - **$ENV{'LD_LIBRARY_PATH'} = "<installation directory>/sps/bin/libs";**
- Edit **<installation directory>/sps/cgi/ spsReports.cgi** at line 8. The line should be:
  - **$SPS_DIR = "<installation directory>/sps/";**

- Edit **<installation directory>/sps/cgi/ specplot.cgi** at line 32. The line should be:
  - **$ENV{'LD_LIBRARY_PATH'} = "<installation directory>/sps/bin/libs";**
- Edit **<installation directory>/sps/cgi/ specplot.cgi** at line 27. The line should be:
  - **$TMP = "<TMP_DIRECTORY>";**
    where TMP_DIRECTORY is a directory in the file system where the server process has write permissions

- Edit **<installation directory>/sps/cgi/ specplot.cgi** at line 28. The line should be:
  - **$SPS_DIR = "<installation directory>/sps/";**

- Edit **<installation directory>/sps/cgi/ contplot.cgi** at line 32. The line should be:
  - **$ENV{'LD_LIBRARY_PATH'} = "<installation directory>/sps/bin/libs";**
- Edit **<installation directory>/sps/cgi/ contplot.cgi** at line 27. The line should be:
  - **$TMP = "<TMP_DIRECTORY>";**
    where TMP_DIRECTORY is a directory in the file system where the server process has write permissions
- Edit **<installation directory>/sps/cgi/ contplot.cgi** at line 28. The line should be:
  - **$SPS_DIR = "<installation directory>/sps/bin/";**

Testing the installation

In order to test the installation, a test project and data are included in the package, in the directory named 'example'. To test the installation, execute the following procedures:

- cd to **<installation directory>/sps/example**
- edit the **sps.params** file.
  - **EXE_DIR** should point to **<installation directory>/sps/bin** (should be an absolute path).
  - **REPORT_DIR** defines the output directory for report files, should be in the webserver path, allowing for report pages to be served by the webserver (e.g. Apache).
  - **GRID_SGE_EXE_DIR** should point to where SGE binaries are located (qstat, qsub, etc.).
  - **GRID_EXE_DIR** should point to where SPS binaries (the same pointed by **EXE_DIR**) are *seen* on SGE.
  - **SERVER** should point to the server's CGI directory. Example:
    SERVER=http://myserver.com/cgi-bin/
- run **../bin/main_specnets sps.params**
- From a webserver, open '**<URL path in webserver>/index.html**' which is located inside the specified report location directory, considering your webserver path specifications. The report initial page should be displayed.