

And enable the service in the `_bin/fixlocal` file with:

```
echo $1 | sudo -S systemctl enable httpserver.service
echo $1 | sudo -S systemctl start httpserver.service
```

The `centos-logs` lab provides an example of forcing the student to login using the traditional login program, as described in section 4.7.

See section 14.9 for guidance on including 3rd party applications within your labs (e.g., ones that are not simply added to your container via package managers.)

## 4.6 Lab Text and Instructions for Students

Create a `'docs'` directory in the `[labname]` directory if there isn't one there. This is where most textual information about the lab, as well as the lab manual, should be stored and modified. The `'about.txt'` is an exception to this.

Use LaTeX to write and create PDF files in the docs directory. Look at other lab's docs directory on how to create a Makefile for the LaTeX file.

Display a message to the student before any of the lab virtual terminals are created by creating a `read_first.txt` in the `'docs'` directory. Any text within the

```
$LABTAINER_DIR/labs/[labname]/docs/read_first.txt
```

file will be displayed on the Linux host in the terminal in which the student starts the lab.

- Any “LAB\_MANUAL” string in that file will be replaced with the full path to a `[labname].pdf` file within that same docs directory. And “LAB\_DOCS” is replaced by the path to the lab docs directory.
- One intended use is to prompt the student to open a PDF lab manual and perhaps read parts of it prior to continuing with the lab. Another intended use is to display the path to a reporting template that a student is to use for answering lab-specific questions and note taking.
- If the name of the symbols are prefaced by “file://”, then the paths will display as links that can be opened via a right click.

An `'about.txt'` file will be present in the `'config'` directory of the lab. Any text inside will be displayed as a description to the lab when listed from running the `'labtainer'` command in `$LABTAINER_DIR/trunk/scripts/labtainer-student`. This text will also appear when clicking on the logo in the GNS3 environment of Labtainers.

If the `start.config` file includes “COLLECT\_DOCS YES”, the content of the `lab/docs` directory will be included with the student artifacts and available extracted into the instructor's `labtainer_xfer/[lab]/docs` directory.

A deprecated feature that still exists in a tiny handful of labs: “Lab instructions for students can be displayed in a virtual terminal by placing an `“instructions.txt”` file within the home directory of one of the containers. Refer to existing labs for conventions.”