

```
~/local/share/labainers/[hostv]
```

at a mount point on the container at:

```
~/[containerv]
```

The purpose is allow that host directory to be reused across labs to avoid re-installing licensed software, i.e., something where the student takes a distinct action to acknowledge a license.

A simple example of a two-container lab with network settings in the start.config file can be found in

```
$LABTAINER_DIR/labs/telnetlab
```

Entries in the start.config file can be parameterized as described in section 5, e.g., to allocate random IP addresses to components.

4.3 Lab-specific files in the student's home directory

Files that are to reside relative to the student's \$HOME directory are placed in the new lab container directory. For example, if a lab is to include a source code file, that should be placed in the lab container directory. The file will appear in the student's home directory within the container when the container starts. The lab container directory is at:

```
$LABTAINER_DIR/labs/[labname]/[container name]
```

The container name in labs with a single container matches the labname by default.

All files and directories in the lab container directory will be copied to the student's HOME directory except for the `_bin` and `_system` directories. Each initial Dockerfile from the templates include this line:

```
ADD $labdir/$lab.tar.gz $HOME
```

to accomplish the copying. Except as noted below, Dockerfiles should not include any other ADD commands to copy files to the HOME directory.

4.3.1 Large or numerous files in the home directory

If there are large sized, or a high quantity of files that are to be placed relative to a container home directory, those should be placed into a "home_tar" directory at:

```
$LABTAINER_DIR/labs/[labname]/[container_name]/home_tar/
```

Use of this technique prevents these files from being collected as student artifacts, which otherwise include copies of everything relative to the home directory⁹. This can save considerable time and space, e.g., on the instructor's computer that must collect all student artifacts. The individual files should exist in the home_tar directory, and the framework automatically creates the tar file for transfer to the Docker image, (and will do so if an existing tar file is older than any file in the directory). Manifests can be used for the home_tar content as described in 9.3.1. You can force collection of selected files from the home_tar by putting the filename into a file at:

⁹Actually, we only collect files whose modify dates are more recent than the container, so use of home_tar is not as important as it previously was.