SANE scanning in the network

Introduction
A machine has a scanner attached to it and this resource should be shared in the network. How to configure and install sane

Installation
server and client
The basic package that provides the scan daemon is saned, this needs to be installed on the server and the client

aptitude install sane

LTSP specific
If the packages need to be installed on the ltsp client first run the ltsp-chroot command

ltsp-chroot -m
apt-get install sane

No need to run the ltsp-update-image just yet, as the package needs to be configured

Configuration
server
On the server we need to enable the start of the daemon

/etc/default/saned

RUN=yes

Configure the network to where it should expose the scanner, adapt to actual configuration

/etc/sane.d/saned.conf

192.168.10.0/24

and add the saned user to the group lp, or whatever group write permissions are set

adduser saned lp

restart the saned service
Note for Jessie: the saned service is masked. So:

```sh
rm /lib/systemd/system/saned.service
systemctl daemon-reload
systemctl unmask saned.service
systemctl daemon-reload
systemctl restart saned.service
```

**client**

Configure the host it should connect to scanners, adapt to actual configuration

```sh
/etc/sane.d/net.conf
192.168.10.1
```

If the scanner is a HP and connected on the LAN (configured with cups/hplip): install the package `libsane-hpio`.

**LTSP specific**

Edit the file in the ltsp filesystem

```sh
/opt/ltsp/i386/etc/sane.d/net.conf
192.168.10.1
```

and now update the image

```sh
ltsp-update-image
```

**Trouble Shooting**

**no access to device**

**error message** "Access to resource has been denied"

1. check if the scanner is recognized by the system

```sh
# as root
lsusb
--snip--
Bus 002 Device 005: ID 03f0:3b17 Hewlett-Packard LaserJet M1005 MFP
--snip--
```

In this case, look at the permissions of bus 002 and device 005

```sh
ls -l /dev/bus/usb/002/005
crw-rw-r--+ root lp 189, 132 Jan 21 12:00 /dev/bus/usb/002/005
```

And see that the process that needs to access the scanner is in the correct group. To change the group, edit the udev rules in `/etc/udev/rules.d/`