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Ubuntu and LTSP5

An introduction
to the latest Thin Client
technology development

What is LTSP ?

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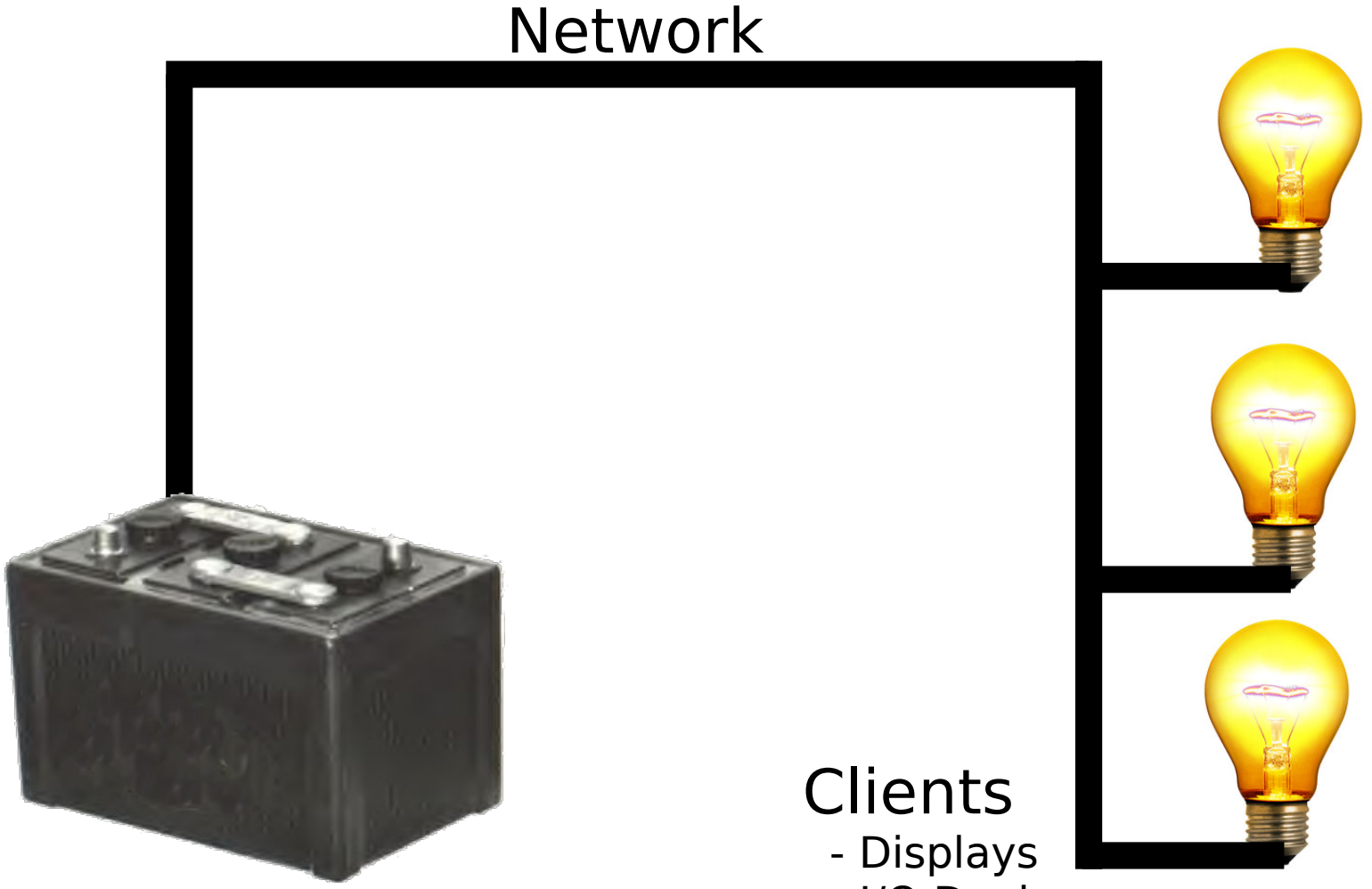

Server

- Provides boot services
- Provides root File system
- Does user management
- Runs the actual desktop session after login

Clients

- Displays
- I/O Devices
- Sound output
- Managing CD roms, USB keys and other block devices

How does LTSP work ?

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- A client retrieves a kernel from the server via some kind of boot protocol (PXE, Etherboot, bootp ...).
- The Kernel does a tftp connection to the server, retrieves the initramfs, unpacks and executes it.
- The initramfs mounts a readonly root filesystem from the server and merges this with a tmpfs created on the client for the writeable bits.
- A Thin Client setup initscript is executed to detect hardware and set up basic configuration (Xorg, network settings, sound, support for local block devices, etc.).
- An LTSP initscript that starts the LTSP display manager is executed.
- If a user logs in with the display manager an ssh connection to the server is established, a desktop session gets executed on the server.

Why **you** should use it in your IT

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Extremely low TCO through:

- Centralized user management
- Centralized data management
- Centralized backup
- Actually only one single machine to maintain

The “ancient” past (LTSP up to 4.2)

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- Maintained like it's own distribution in a binary tarball
- To add software to the client you had to recompile the whole thing
- Lots of manual post install configuration work
- Passwords were exchanged in clear text over the network
- Lacking developers for maintaining the basic bits like kernel, Xorg. Security updates were hogging a lot of Manhours that were then missing from actual LTSP development.

MueCow, the LTSP5 implementation

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- Client environment is built from distribution packages so the maintenance load is off the LTSP developer sholders.
- Using the distributions hardware detection and Setup mechanisms.
- Securing the network traffic (Passwords, display forwarding over the network, etc)
- Developers can concentrate only on the LTSP bits
- Upstream development moved mainly into Ubuntu. Debian adopted it, RedHat, Gentoo and OpenSuse are about to follow up.
- A plugin system (its trivially easy to write your own kiosk plugin, MythTv Server/Client setup, Presentation System ...)
- Maintenance of the Client File System is done with standard distribution tools (apt-get etc).

Maintaining Client Sessions

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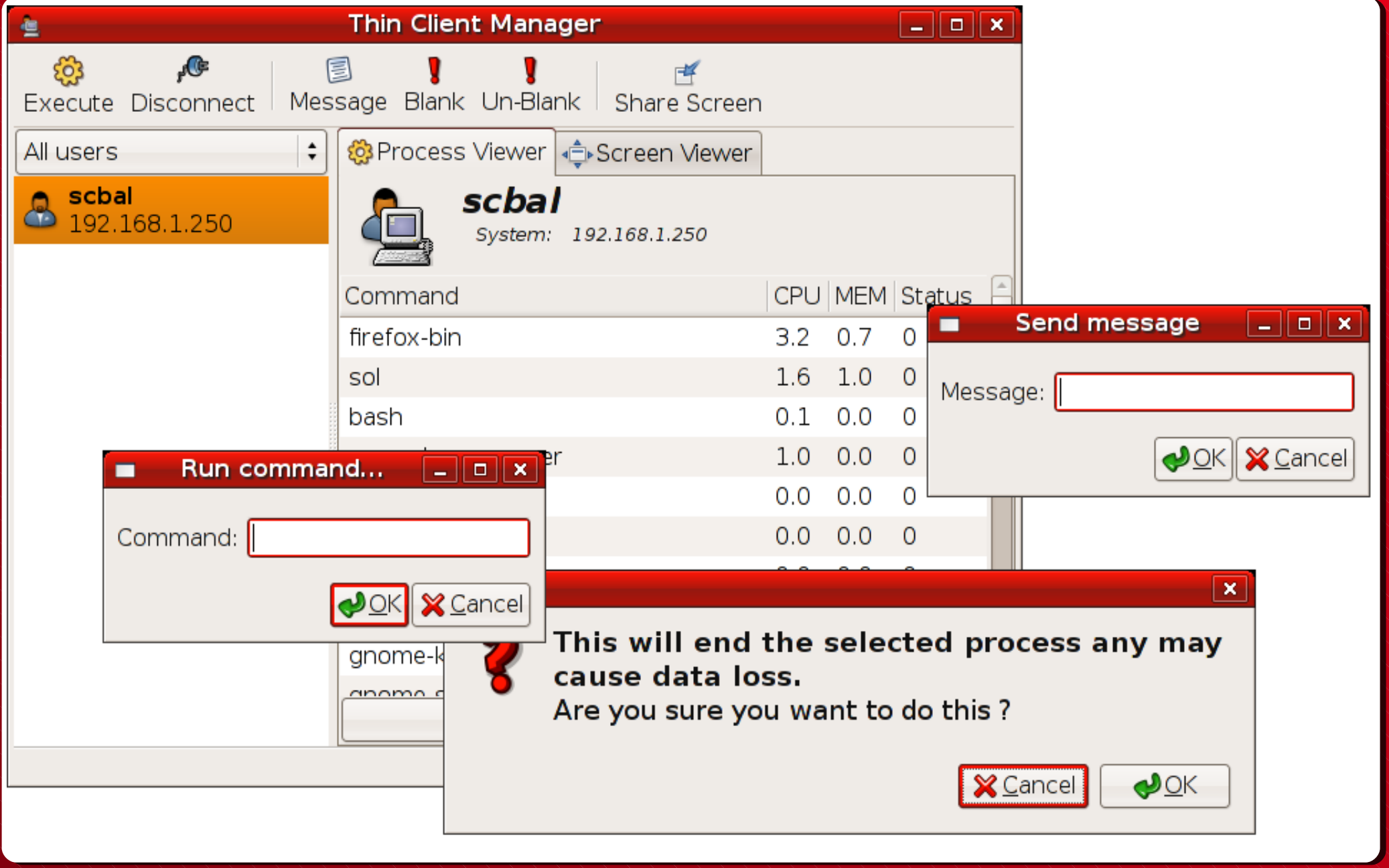
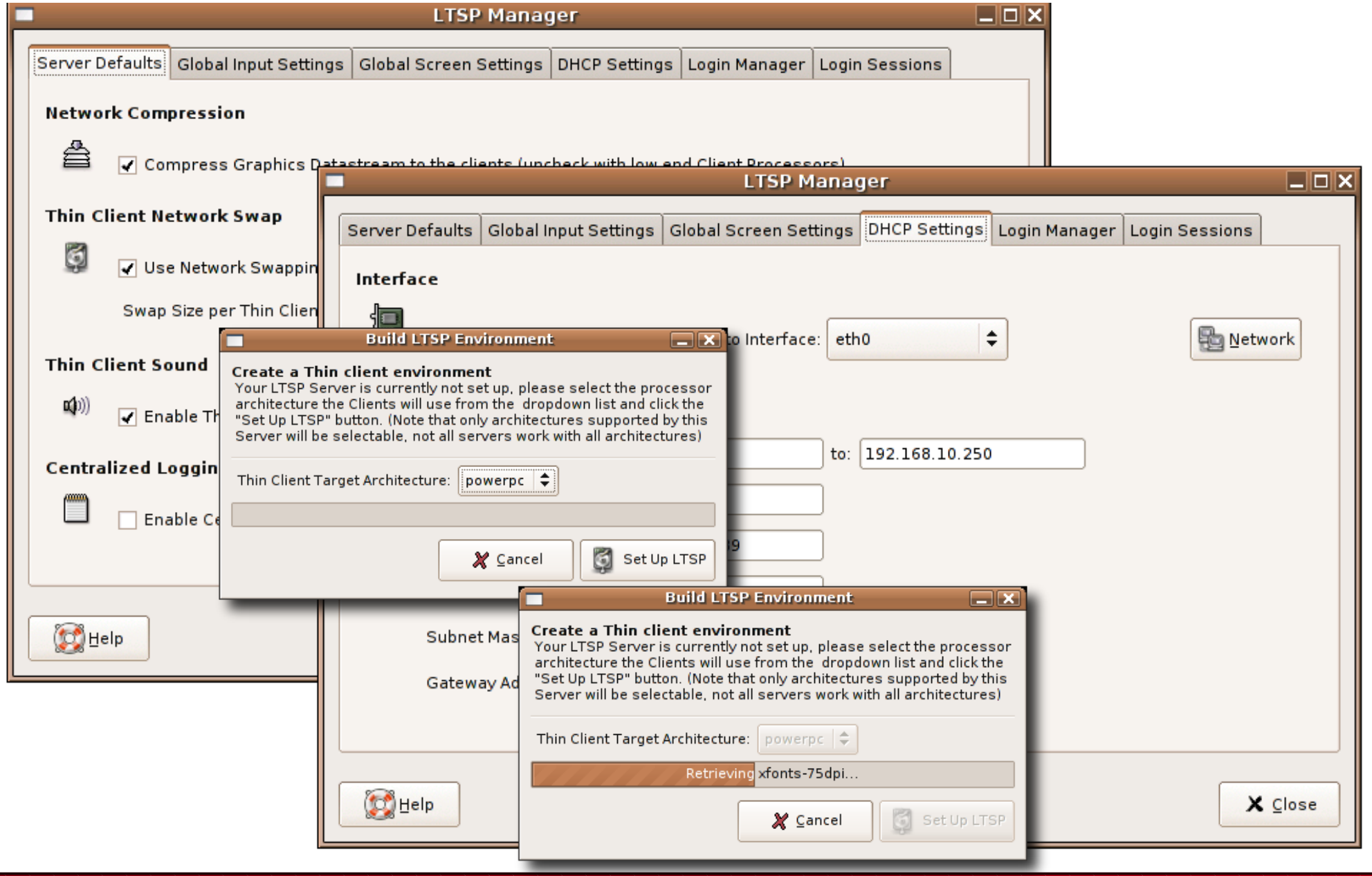


Future tools (next LTS)



More Future Bits

Fat Clients, the Future of the corporate Desktop!

- Out of the box support planned for next LTS
- One “Golden Workstation” to maintain the whole Company Network
- Trivially small Server footprint possible

Load Balancing Support over several application servers

- Centralized User Management Server out of the box
- Automatic choice of the least loaded application server through the Login Manager
- Dedicated application Servers (i.e. one server per department).

Integrated Ubuntu LTSP CD

- Bringing the Edubuntu reference implementation that automatically sets up LTSP during install to Ubuntu Server.

Infos and documentation

General Info and Documentation

https://help.ubuntu.com/community/UbuntuLTSP
http://wiki.ltsp.org
https://lists.sourceforge.net/lists/listinfo/ltsp-developer

People

Jim McQuillian, jam@ltsp.org
Oliver Grawert, ogra@ubuntu.com
Scott Balneaves, sbalneav@ltsp.org
Vagrant Cascadian, vagrant@freegeek.org (Debian port)

Places

IRC:
#ltsp on freenode
#edubuntu on freenode
Lauchpad:
https://launchpad.net/~ltsp-drivers

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Thank You !