

Computational Linguistics: Linux and LKB Suggestions

1 Connecting to the IFI Linux Environment Remotely

- (a) For our practical exercises, we recommend the use of the LKB installation on all Linux machines at IFI. Most of the IFI student laboratories are installed with Linux, where it is sufficient to just log in and start the LKB—following the first-time instructions on our Exercise (2b).

When working from home or one of the IFI student laboratories with Windows installations, one needs to connect to a Linux machine first—using the X Window System to allow remote applications to display on the local screen. The standard IFI Windows image includes a link on the desktop (labeled ‘*xterm*’) to launch an X server and connect to a Linux machine. When working from home, one can either use Windows remote desktop to first connect to the IFI Windows universe or `ssh(1)` (the secure remote shell protocol) with X forwarding.

- (b) For a remote desktop session, connect to ‘`windows.ifi.uio.no`’, log in, and follow the instructions for Windows above; note that Windows remote desktop clients are available for Linux and MacOS too, and the remote desktop protocol appears to make quite effective use of lower-bandwidth network connections.
- (c) To use `ssh(1)`, connect to the Linux server ‘`login.ifi.uio.no`’ and make sure to request X forwarding; this is achieved by virtue of the ‘`-Y`’ command line option to the `ssh(1)` client.

2 Obtaining a Personal Installation of the LKB

The LKB is open-source software, hence it is in principle possible to install a copy on a personal laptop or computer at home. We will consider the installation at IFI our common reference point and generally recommend that to everyone, at least to get well underway with the grammar engineering exercises.

However, for those feeling a little adventurous (or, of course, anyone who no longer can imagine life without the LKB), we will be quite happy to try and help with individual installations. Please direct all questions to both Stephan and Sindre (as always).

- (a) Installing the LKB at home will require a reasonably modern Linux distribution (on 32- or 64-bit x86 platforms). For starters, just try the following:

```
wget http://lingo.delph-in.net/etc/install
bash install
```

Here, the first command retrieves the installation script, which is then executed in the second command to actually download the LKB components and unpack them to your local directory. By default, the script will install to a new directory ‘`delphin/`’ in the user home directory. Upon completion, the script will print instructions about how to extend your personal ‘`.bashrc`’ and ‘`.emacs`’ to enable the software for your user account. Follow these instructions, and with a bit of luck you can then run the LKB within emacs, by issuing the command ‘`M-x lkb RET`’. If the above sounds mysterious, maybe do some background reading on emacs first.

The LKB installation uses 32-bit binaries, even on a 64-bit Linux environment. Hence, you will need to make sure the 32-bit compatibility libraries are installed (which tends to be the case on Fedora- and RedHat-derived distributions, but recently no longer seems to be the default on Ubuntu and derivatives). The exact name of the 32-bit compatibility packages will depend on your distribution, but typically should not be hard to find. For further instructions and troubleshooting advice, please see:

```
http://moin.delph-in.net/LkbInstallation
```

- (b) The above site also includes links to a bootable Live CD, which can provide a convenient way of running the LKB for non-Linux users.