Ubuntu 12.04 - slideToolkit installation instructions

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0. Dependency installation guide for the slideToolkit

Hi,

Here are the installation instructions for Ubuntu 12.04 LTS (https://wiki.ubuntu.com/LTS). Ubuntu 12.04 is probably the most documented and most supported version of Linux available today. I tried to create as few steps as possible with one-liners that are 'easy' to read. Commands can span over multiple lines. You can copy/paste commands. Oh, and the double ampersand, `&&`, means 'if previous was successful, continue with the next'. And yes, all steps run in the Terminal.

- Points (like the one preceding this line) and the `mono-type font` illustrate commands.

Follow this document from top-to-bottom.

GL,
Bas

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1. Make shure you have the 'latest & greatest'

The system must be up-to-date. Install updates, answer `--yes` to everything. This can take a while.

- `sudo apt-get --yes update && sudo apt-get --yes upgrade && sudo apt-get --yes dist-upgrade && sudo apt-get --yes autoremove`

Reboot.

- `sudo reboot`

Now we are up to date, and ready to continue the installation.

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2. Install required libraries and packages using apt-get

This apt-get oneliner will install most of the important packages we need and takes take of most dependencies as well.

- `sudo apt-get --yes update && sudo apt-get --yes install autoconf automake "build-essential" cvs gimp git "libgtk2.0-dev" "libjpeg-dev" "libopenjpeg-dev" "libopenslide-dev" "libsqlite3-dev" libtool "libxml2-dev" parallel perl "pkg-config" vim wget wmctrl`

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3. Install zlib

Install the latest zlib compression libraries.

- `mkdir -p ~/src && cd ~/src`
- `wget http://zlib.net/zlib-1.2.8.tar.gz -O zlib-1.2.8.tar.gz && tar xzvf zlib-1.2.8.tar.gz && rm zlib-1.2.8.tar.gz`

Install libtiff:

- cd ~/src/zlib-1.2.8
- ./configure
- make
- sudo make install && make clean

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4. Install libtiff

Install the latest libtiff library using cvs. When asked for a password, just press enter. The funny thing is, sudo apt-get install libtiff4 does install libtiff 3.9.* We need libtiff 4.* for BigTIFF support. Download the latest source:

- mkdir -p ~/cvs && cd ~/cvs
- export CVSROOT=:pserver:cvsanon@cvs.maptools.org:/cvs/maptools/cvsroot
- cvs login # no password, just press enter
- cvs checkout libtiff

Install libtiff

- cd ~/cvs/libtiff
- ./configure
- make
- sudo make install && make clean

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5. Install ImageMagick

Download the latest ImageMagick source from there website:

- mkdir -p ~/src/ && cd ~/src
- wget http://www.imagemagick.org/download/ImageMagick.tar.gz -O ImageMagick.tar.gz && tar xzfv ImageMagick.tar.gz && rm ImageMagick.tar.gz

Install ImageMagick:

- cd ~/src/ImageMagick*
- ./configure
- make
- sudo make install && make clean
- sudo ldconfig /usr/local/lib

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6. Install openslide

Download the latest version of openslide using github:

- `mkdir -p ~/src/ && cd ~/src`
- `wget https://github.com/openslide/openslide/releases/download/v3.4.0/openslide-3.4.0.tar.gz && tar xzfv openslide-3.4.0.tar.gz && rm openslide-3.4.0.tar.gz`

Install openslide:

- `cd ~/src/openslide-3.4.0`
- `./configure`
- `make`
- `sudo make install && make clean`

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7. Install bfconvert

Install the latest version of bfconvert:

- `mkdir -p ~/usr && cd ~/usr`
- `wget http://downloads.openmicroscopy.org/latest/bio-formats5/artifacts/bftools.zip -O bftools.zip && unzip -o bftools.zip && rm bftools.zip`
- `printf "\n# Add the bfconvert directory to the PATH \nPATH=\"$HOME/usr/bfconvert:\$PATH\" \n\n" >> ~/.profile`

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8. Download the slideToolkit

Download the latest version of the slideToolkit using git. Pull if already exists; clone if none existing.

- `mkdir -p ~/git/ && cd ~/git`
- `if [ -d ~/git/slideToolkit/.git ]; then cd ~/git/slideToolkit && git pull; else cd ~/git/ && git clone git://github.com/bglnelissen/slideToolkit.git && cd ~/git; fi`
- `printf "\n# Add the slideToolkit directory to the PATH \nPATH=\"$HOME/git/slideToolkit:\$PATH\"\n\n" >> ~/.profile`

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9. Cleanup, restart & you're done!

Fix linked libraries and restart.

- `sudo ldconfig`
- `sudo reboot`