Protocol:	**Run PAUP on the server**
Version:	1.0
Date:	6/18/2008
Author:	Michael Matschiner (michaelmatschiner@mac.com)
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Howto:

Run PAUP on the server

Yes I know, this Howto is basically a modified copy of the Howto: Run STRUCTURE on the server (command line version). Doesn't make it less useful:

1. Modify .bashrc on evo-lutra

In order to run the command line version of PAUP on evo-lutra, you'll first need to modify one certain file on evo-lutra (.bashrc). The reason for this is that whenever you type a shell command (e.g. paup), the system needs to know which software to start. It searches for an executable file called "paup" in a list folders (this list is called $PATH). However, the folder which contains the PAUP executable is not yet in this $PATH, so we'll have to include it first.
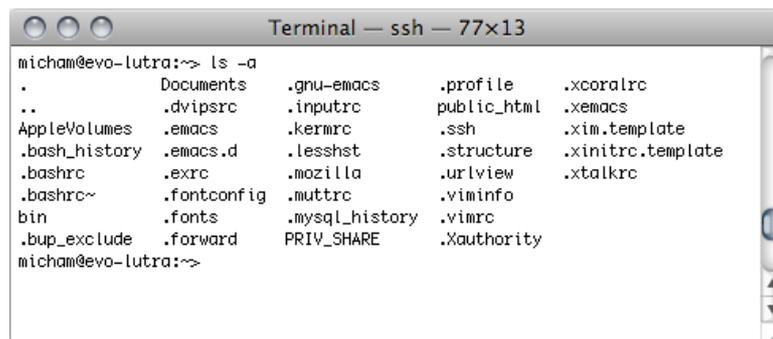
Connect to evo-lutra using Secure Shell. I explained this in detail in the Howto: Run software on the server (general). Here's the short version: Use the Terminal and type:

ssh yourusername@evo-lutra.zoo.unibas.ch

and enter your password. Then type:

ls -a

You know the ls command already. Using the -a option, hidden files (those starting with a period) are also shown. The file .bashrc is included in the list:
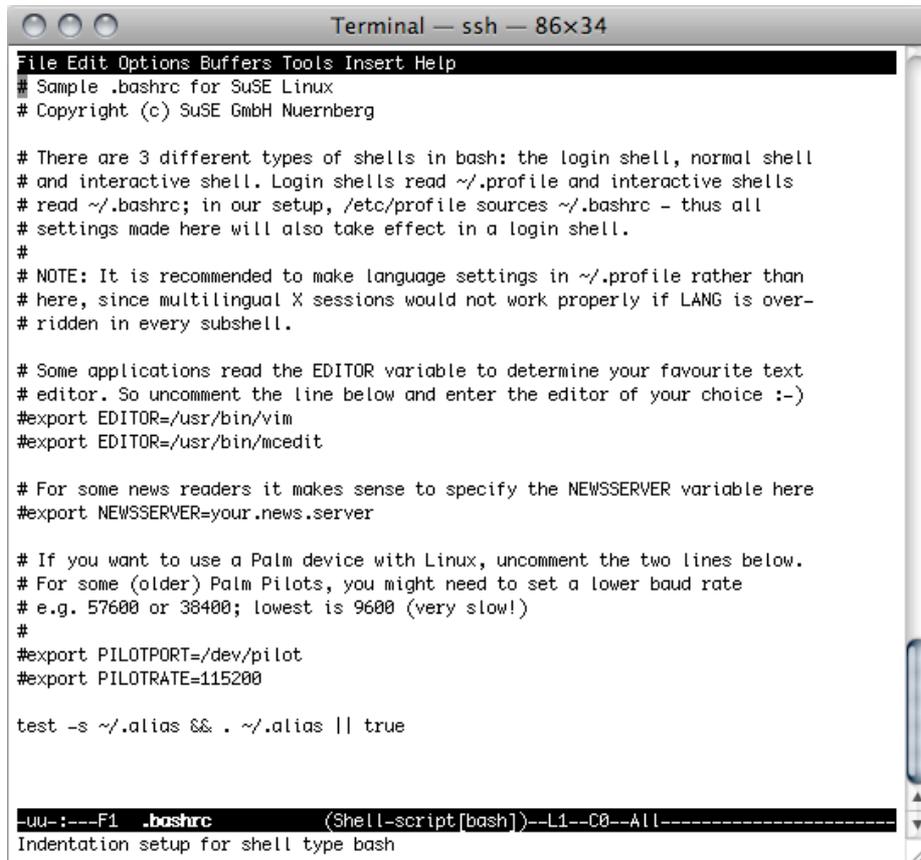

Use the command line text editor emacs to modify .bashrc. To do so, type:

emacs .bashrc

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You'll see the following:

```
○ ○ ○                    Terminal — ssh — 86×34
File Edit Options Buffers Tools Insert Help
# Sample .bashrc for SuSE Linux
# Copyright (c) SuSE GmbH Nuernberg

# There are 3 different types of shells in bash: the login shell, normal shell
# and interactive shell. Login shells read ~/.profile and interactive shells
# read ~/.bashrc; in our setup, /etc/profile sources ~/.bashrc - thus all
# settings made here will also take effect in a login shell.
#
# NOTE: It is recommended to make language settings in ~/.profile rather than
# here, since multilingual X sessions would not work properly if LANG is over-
# ridden in every subshell.

# Some applications read the EDITOR variable to determine your favourite text
# editor. So uncomment the line below and enter the editor of your choice :-)
#export EDITOR=/usr/bin/vim
#export EDITOR=/usr/bin/mcedit

# For some news readers it makes sense to specify the NEWSSERVER variable here
#export NEWSSERVER=your.news.server

# If you want to use a Palm device with Linux, uncomment the two lines below.
# For some (older) Palm Pilots, you might need to set a lower baud rate
# e.g. 57600 or 38400; lowest is 9600 (very slow!)
#
#export PILOTPORT=/dev/pilot
#export PILOTRATE=115200

test -s ~/.alias && . ~/.alias || true


-uu-:---F1  .bashrc        (Shell-script[bash])--L1--C0--All-----------------------
Indentation setup for shell type bash
```

Move the cursor to the end of the file, below "test -s ~/.alias...", and type:

export PATH=/usr/local/paup:$PATH

Close emacs by typing the key combination

Ctrl-X, Ctrl-C

before closing, emacs will ask you whether you want to save the file (in the window's bottom line).
Confirm with "y".
Close the Terminal window and open a new Terminal session. Log back in to evo-lutra. See whether the system knows now where paup is by typing

which paup

You should receive the answer

/usr/local/paup/paup

2. Start PAUP

Simply type:

paup