



UNIVERSITY OF STAVANGER

BACHELOR THESIS

DATBAC

Make the Internet Faster!
Improving Alternative Backoff with
ECN in Linux

Students

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Abstract

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Chapter 1

Introduction

Donec vitae metus pretium [GMS93], tempus sapien eget, maximus [Knu]. Nam dictum aliquam mi, ut fringilla nunc vehicula a. Morbi vitae dictum eros. Phasellus non urna felis. Etiam eu lectus justo. Etiam et ex ultrices, elementum erat laoreet, hendrerit lorem. Vivamus imperdiet consectetur dictum. Sed ac orci placerat quam rutrum pellentesque. Proin sollicitudin diam et erat feugiat feugiat. Quisque tempus velit viverra sem aliquet feugiat vitae et augue. Donec at odio viverra, posuere tortor eu, volutpat quam. Proin id rutrum metus, id mollis ipsum.

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1.1 Section

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1.1.1 Subsection

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Chapter 2

Background Theory and Motivation

Chapter 3

Methods

Chapter 4

Experiments and Analysis

Chapter 5

Conclusion

Appendix A

The PI4-Cluster Testbed

A.1 Setting Up Dual Boot

First install Ubuntu. When asked for partitioning the disk, choose manual, select the disk and confirm creating a new empty partition with yes. Select the newly created empty partition followed by create a new partition and set a size for it. The type should be of primary, location at beginning and mounting point root. Finish off with done setting up the partition followed by finish partitioning and write changes to disk.

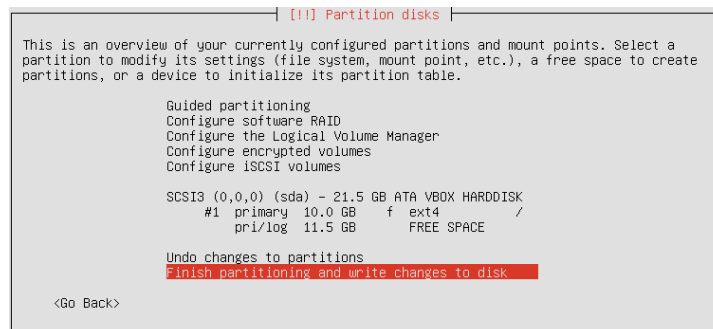


Figure A.1: The partition editor for Ubuntu.

Next, install FreeBSD. When asked for partitioning the disk, choose **auto** (UFS) followed by partition. Set a size, hit ok and finish.



Figure A.2: The partition editor for FreeBSD.

After installing both systems, only Ubuntu is presented in the GRUB boot-loader. To add FreeBSD as an option, run `sudo nano /etc/grub.d/40_custom` in Ubuntu, and add the following entry:

```
1 menuentry "FreeBSD" {
2     insmod ufs2
3     set root=(hd0,2)
4     kfreebsd /boot/loader
5 }
```

Then update the GRUB bootloader with `sudo update-grub`. The FreeBSD option should now be available when rebooting. If the bootloader won't display, hold the RIGHT SHIFT key upon booting.

To enable a one-time reboot into FreeBSD from Ubuntu, run the command `grub-editenv /boot/grub/grubenv set next_entry="FreeBSD"` and reboot with `sudo reboot`.

Bibliography

- [GMS93] Michel Goossens, Frank Mittelbach, and Alexander Samarin. *The L^AT_EX Companion*. Addison-Wesley, Reading, Massachusetts, 1993.
- [Knu] Donald Knuth. Knuth: Computers and typesetting.