Title Placeholder

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Networks and Distributed System
Group 1025 - 10th semester

Aalborg University
Department of Electronic Systems
Fredrik Bajers Vej 7B
DK-9220 Aalborg

Department of Electronic Systems
Fredrik Bajers Vej 7
DK-9220 Aalborg Ø
http://es.aau.dk

AALBORG UNIVERSITY
STUDENT REPORT

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Martí Boada Navarro

Supervisors:
Jimmy Jessen Nielsen
Andrea Fabio Cattoni

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Abstract:

Nowadays networks use different kind of mechanisms in order to give priority to a certain sort of traffic to process the packets in a different way depending on their application. The most common way to achieve this is using Differentiated Service, marking the packets depending on their application (giving higher preference to those that are more important or time sensitive such as Voice over IP, or Video on Demand). However, determining resource allocation per class of service must be done with knowledge about traffic demands for the various traffic classes, keeping a fixed amount of bandwidth for each class, which results in a poor utilization of resources.

In the last years, a new networking approach called Software-Defined Networking (SDN) is emerging fast. This approach is based on the separation of data and control planes. Such approach allows the network administrator to have a more dynamic control of the network behaviour. The purpose of this project is to analyse the possibilities that SDN provides to develop a more efficient resources allocation along the network.

Preface

This is a report of a student project conducted on the 4^{th} semester of Networks and Distributed Systems, at Aalborg University. This project serves as a Master Thesis as the requirements of the master's programme dictate. This is applied in the comparison of a designed application used for Cognitive Networks concepts over a Software-Defined Network (SDN).

In this project Floodlight is used as an SDN controller, and the network is simulated using mininet software.

Aalborg University, May 8, 2014

Martí Boada Navarro
<mboada14@student.aau.dk>

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