

**COMPARISON BCP OVER PPTP AND PPPOE
BASED IN MIKROTIK**

THESIS



Arranged by

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16.61.0082

**DEGREE PROGRAM
STUDY PROGRAM INFORMATICS
FACULTY OF COMPUTER SCIENCE
AMIKOM UNIVERSITY YOGYAKARTA
YOGYAKARTA
2020**

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Submitted the requirements achieve a Bachelor's degree
in the Informatic Engineering Study Program



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APPROVAL

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THESIS

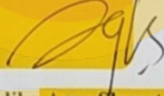
COMPARISON BCP OVER PPTP AND PPPOE
BASED IN MIKROTIK

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AUTHORIZATION

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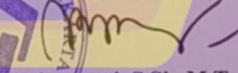





This thesis has been accepted as one of the requirements
to obtain a Bachelor of Computer degree
February 11th, 2020

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STATEMENT

STATEMENT

I, the undersigned below state that, this thesis is my own work (ORIGINAL), and the contents of this Thesis can not be used by others to buy academic degrees conducted by higher education themselves, and all my knowledge has no work or articles that have been written and / or published by other people, except those stated in this text and in the bibliography.

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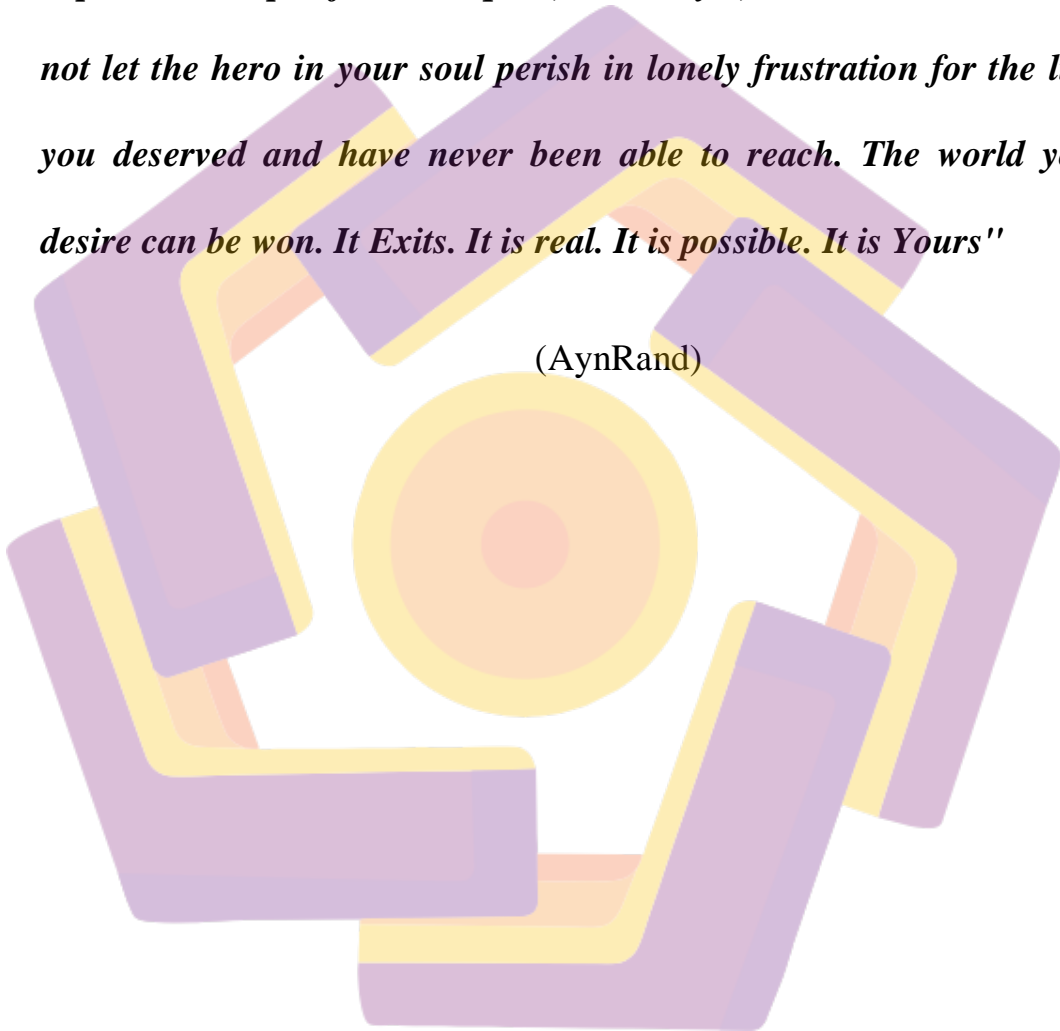
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MOTTO

"Do not allow your fire to go out, spark by irreplaceable spark in the hopeless swamps of the not-quite, the not-yet, and the not at all. Do not let the hero in your soul perish in lonely frustration for the life you deserved and have never been able to reach. The world you desire can be won. It Exists. It is real. It is possible. It is Yours"

(AynRand)



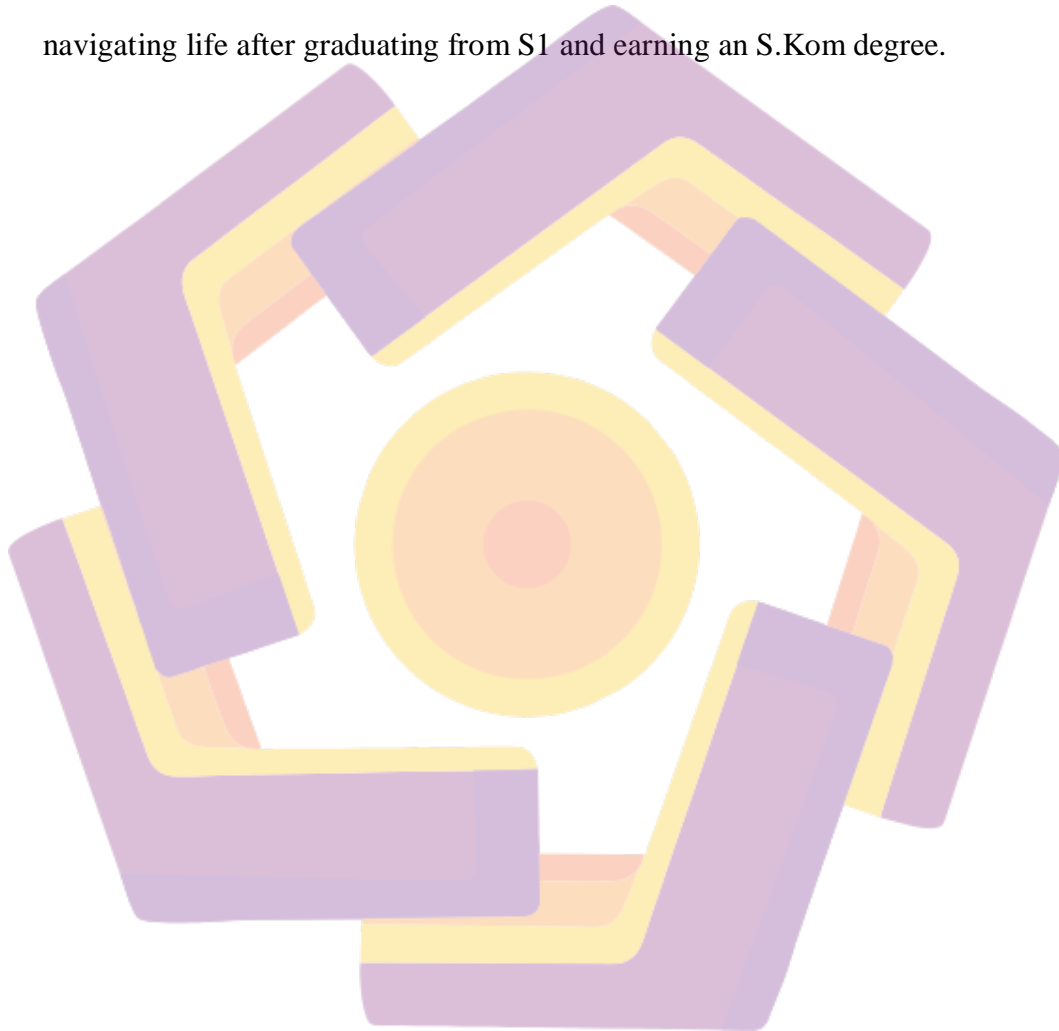
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Prostration of my gratitude to God Almighty, blessings and blessings are given so that I can finish this thesis well. I also present this thesis to myself and thank you for struggling all this time. I present this thesis to:

1. Dear my lovely parents Pai e Mama. Thank you for all the attention, prayer, guidance and support that I have received with love and patience.
2. My brother sister and dear niece M.Helder, Mn. San Mn Mito, M.Neco, Mn.Ina, M.Tala, Bin Lou, Bin Kinoy, Bin Melan, M.Bosco, M.Bidy, Alin Fifa, Cheva, Romit, Indio, You, Sahe, Uma, Kimmy, and Baino who always supports and encourages me
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PREFACE

Praise and gratitude of Almighty God for blessings, grace, and protection, so that this thesis can be completed.

This thesis entitled "Comparison of BCP Over PPTP and PPPOE Based on Mikrotik". Created as one of the requirements to obtain a S.Kom degree in the Informatics study program, at AMIKOM Yogyakarta University.

The research and writing process of this thesis is certainly inseparable from the many parties who assisted various parties, therefore on this occasion the author would like to express respect and gratitude

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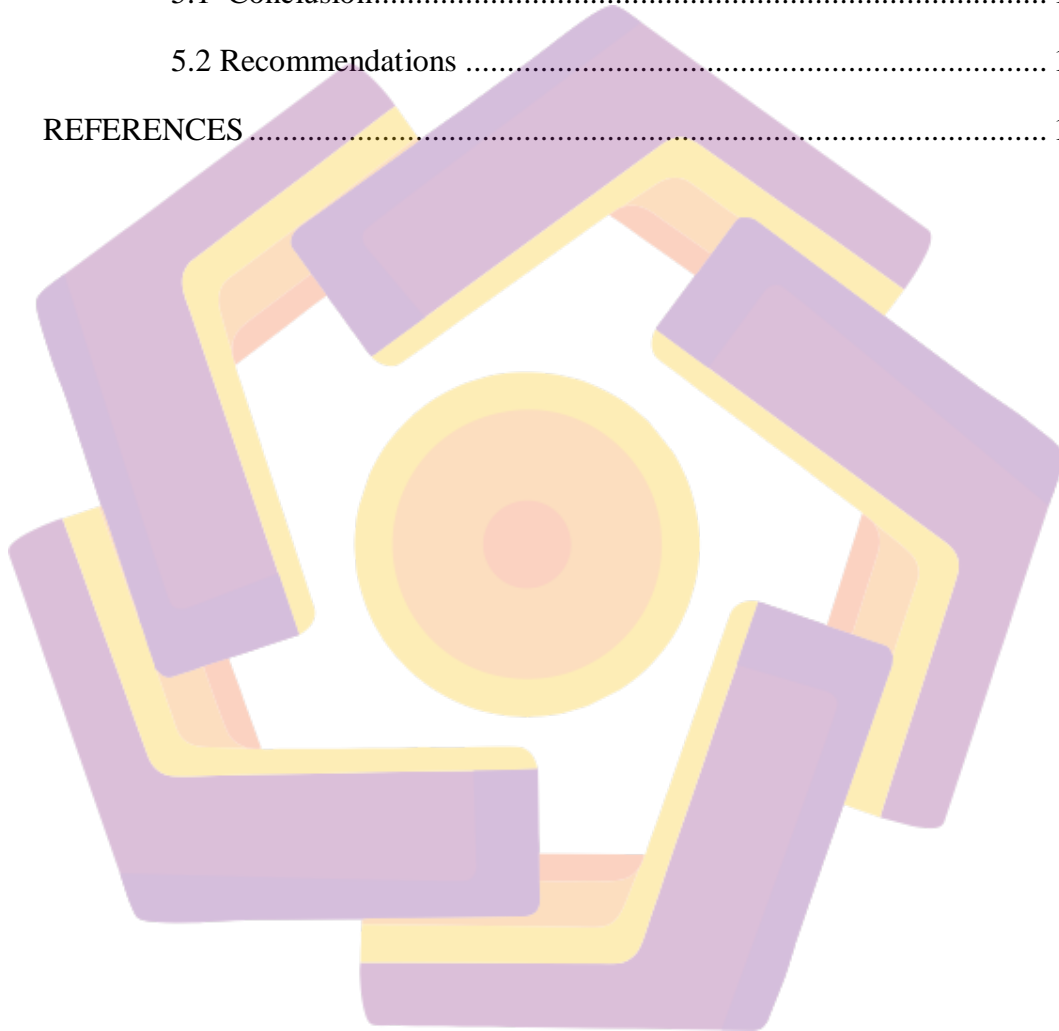
The author realizes, this thesis still has many weaknesses and weaknesses. Therefore constructive criticism and suggestions will be welcomed, hopefully the existence of this Thesis can be useful and add to our insight.

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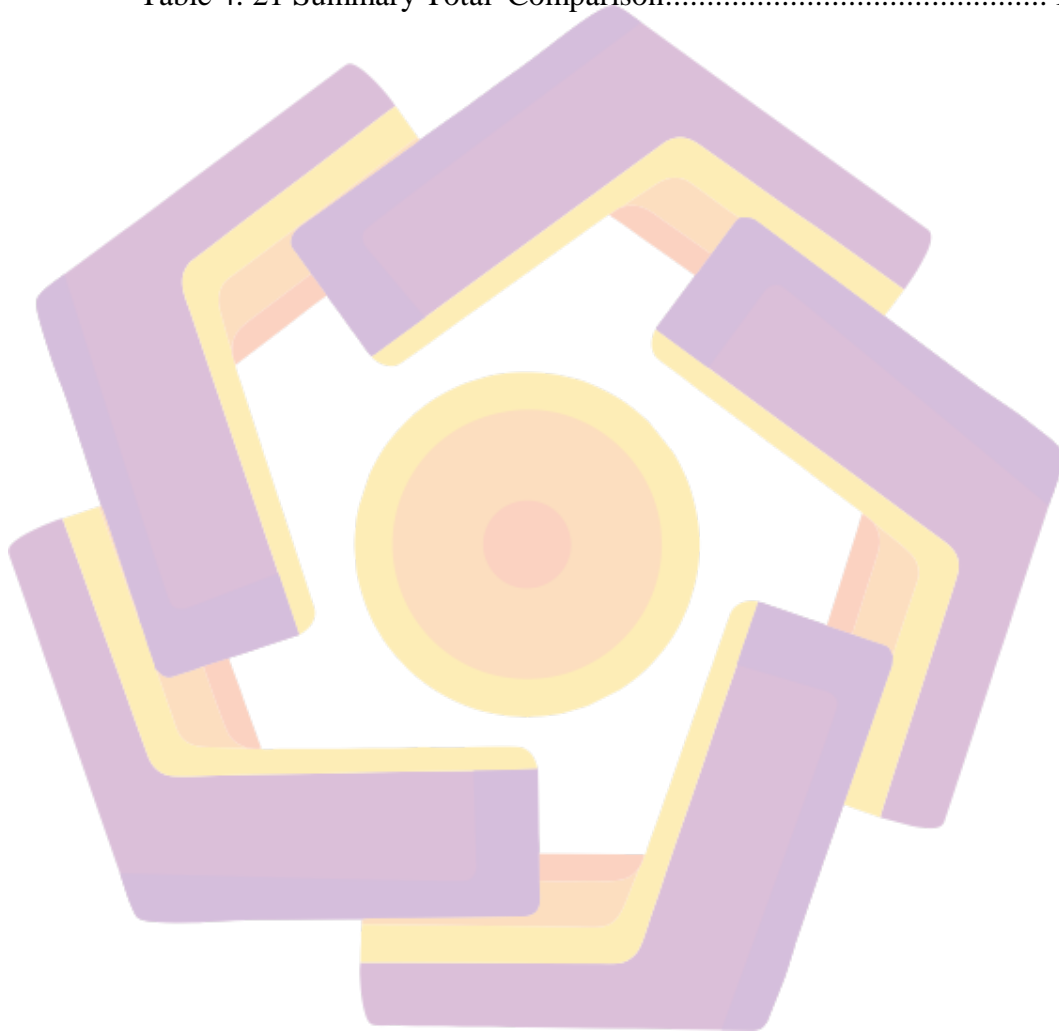
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ABSTRACT

VPN is a technology that can make a private network pass through a public network so that the data exchange process is secure. VPN technology is usually applied for connections between central and branch agencies, by building tunnels between the two agencies. Some tunneling that can be used includes the Point To Point Tunneling Protocol (PPTP) and Point To Point Protocol Over Ethernet. In this study only focused on the exchange between server and client to determine the level of performance of VPN technology. In this study, comparing the use of two different VPN technologies, namely between BCP Over PPTP and PPPOE, where the QoS parameters used are throughput, packet loss, delay, and jitter.

The data retrieval process is done by using a traffic load of 4 Mbps. Analysis of data packages obtained using Wireshark. From the results of the study it was found that the average throughput value generated by PPPOE is greater than BCP Over PPTP, the average delay on PPTP has a lower value than PPPOE which means it is better than PPPOE. The average jitter on BCP Over PPTP is superior (lower) than PPPOE, while the packet loss that occurs in each service is 0.

The results of this comparison can aim to compare the two methods that will make a reference for the reader to choose the method that is more appropriate to their needs.

Keywords: VPN, Tunneling, BCP, PPTP, PPPOE, QOS

