

**TABLE OF CONTENTS**

<b>APPROVAL PAGE</b> .....	i
<b>SELF DECLARATION AGAINST PLAGIARISM</b> .....	ii
<b>ABSTRACT</b> .....	iii
<b>PREFACE</b> .....	iv
<b>ACKNOWLEDGEMENT</b> .....	v
<b>TABLE OF CONTENTS</b> .....	vi
<b>PICTURE LIST</b> .....	ix
<b>TABLE LIST</b> .....	x
<b>INTRODUCTION CHAPTER</b> .....	1
1.1. Background .....	1
1.2. Objective Research .....	3
1.3. Problem Identification .....	4
1.4. Scope of Problem .....	4
1.5. Methodology .....	5
1.6. Research Method .....	6
1.7. Hypothesis .....	8
<b>CHAPTER II</b> .....	9
<b>LITERATURE REVIEW</b> .....	9
2.1. Private Network .....	9
2.2. Multiprotocol Label Switching (MPLS) .....	9
2.3. Virtual Private Network (VPN) .....	10
2.4. Layer 3 Virtual Private Network (L3VPN) .....	10
2.5. Routing Protocol .....	11

---

2.6.	Border Gateway Protocol (BGP).....	12
2.7.	Revenue Model.....	12
2.8.	Marketing Model.....	13
2.9	Economic Analysis.....	13
2.9.1	Capital Expenditure.....	13
2.9.2	Operational Expenditure .....	13
2.9.3	Economic Feasibility Indicator .....	13
2.10	Regulation of Private Networks.....	15
<b>CHAPTER III</b>	.....	<b>16</b>
<b>MPLS L3VPN IMPLEMENTATION SYSTEM MODEL</b>	.....	<b>16</b>
3.1.	Overview .....	16
3.2.	System Model and Scenarios .....	16
3.3.	Simulation Scenarios .....	19
3.4	Simulation Scenario .....	19
3.5	Scenario Analysis .....	19
<b>CHAPTER IV</b>	.....	<b>20</b>
<b>TECHNO-ECONOMIC ANALYSIS AND REGULATION OF MPLS L3VPN IMPLEMENTATION IN JAKARTA</b>	.....	<b>20</b>
4.1	Technical Analysis .....	20
4.1.1	Network Topology .....	20
4.1.2	IP Addresses.....	22
4.1.3	Core MPLS L3VPN .....	23
4.1.4	VRF Configuration between PE Router and CE Router.....	26
4.1.5	Conclusion of Technical Analysis .....	28
4.2	Economic Analysis.....	28
4.2.1	Capex Opex Fee Plan .....	29

---

4.2.2 Revenue.....	33
4.2.3 Feseability Analysis .....	34
4.2.4 Conclusion of Analytical Economics.....	35
4.3 Regulation of Analysis.....	36
4.3.1 Policy Brief Introduction.....	36
4.3.2 Identification Problem in Policy Brief .....	37
4.3.3 Policy Brief SWOT Analysis .....	40
4.3.4 Policy Brief Related Regulation .....	42
4.3.5 Impact of Regulation.....	44
4.3.6 Policy Recommendation .....	46
<b>CHAPTER CONCLUSION .....</b>	<b>48</b>
<b>BIBLIOGRAPHY .....</b>	<b>50</b>