

ABSTRACT

The internet traffic is important and success in few decades, so it is uses in everywhere and every segment. The important internet medium, Wide Area Network (WAN), which is used in inter-data center, enterprise and carrier, become critical infrastructure. Internet can used as business requirement for data transfer from branch to head office or otherwise, branch to branch such as enterprise business sector that has many branches, need connection with securely usually uses Very Small Aperture Terminal (VSAT)/ Multi Protocol Layer Switch (MPLS). Toward digital transformation, the customer need more bandwidth internet connection for work or for business continuity. The development WAN and new connection for new branch has spending time and makes business has impacted, in existing connection head office and branch using MPLS as connection and the price is expensive for slow speed connection. Manage and maintain branch has time and value.

This research focused on the implementation of Software Defined Wide Area Network (SD-WAN) on enterprise customer using real production to obtain data that represent the result of SD-WAN that can be used for customer by reducing cost of expensive VSAT private link, after that calculate the price using SD-WAN with link the required company and minimum link compare existing link to benefit of link cost saving, and finally recommended using SD-WAN with best price link option. The devices SD-WAN have been legalized by Indonesia Government and Fourth Generation Long Term Evolution (4G LTE) using Indonesia internet providers.

SD-WAN can be implemented on enterprise customer, replacing existing connection with multiple benefit, such as: Cost reduction existing expensive link replace to multi broadband internet with high bandwidth include encryption with Virtual Private Network Internet Protocol Security (VPN IPsec) standard to combine WAN connection, simplify management branch with single dashboard for covering many branches and can handle more than thousand branches even international branches. Based on economic aspects in terms of investment feasibility analysis, the implementation of SD-WAN for mining enterprise business sector. Implement SD-WAN makes Net Present Value (NPV) obtained is over 10 billion rupiah, the Internal Rate Return (IRR) is more than 100%, and Payback Period is under 1 (one) year

Keyword: SD-WAN, Private Link, Public Link, Business Visibility