

ABSTRACT

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Utilization of Virtual Local Area Networks to Optimize Network Infrastructure in the Academic Environment at Pembangunan Jaya University

The use of Information and Communication Technology (ICT) has become an integral part of the global world of work. In the rapidly developing digital era, efficient and reliable computer networks play an important role in information technology. One important element in network management is Virtual Local Area Network (VLAN), which allows the distribution of logistics networks within the same physical network. VLANs help optimize data traffic, improve security, and enable more efficient management of network resources.

Implementing VLANs has a positive impact in managing complex network infrastructure, increasing security by separating network segmentation, and improving network performance. In the academic environment, especially at Pembangunan Jaya University (UPJ), VLAN helps support learning, research and administration. UPJ as a leading university in Indonesia emphasizes the importance of strong network infrastructure to achieve its vision and mission.

Professional work in the UPJ Information & Communication Technology (ICT) Unit provides practitioners with the opportunity to design and implement VLANs. During this period, interns gain practical knowledge, understand the realities of work in the field, and hone relevant skills. "This report aims to report on the professional work activities of practitioners as IT Network Support and in designing VLANs at UPJ to improve efficiency, security and quality of network services, ensure UPJ is ready to face technological challenges and maintain network infrastructure as a strong foundation for academic and administrative success.

Keywords: *Virtual Local Area Network (VLAN), Information and Communication Technology (ICT), IT Network Support.*