

Wireless LAN Solution Report

Introduction

Computer networks are the backbones of any computer-based infrastructure and are essential for the ensuring that there is the needed connection, communication links as well as the required sharing of computing resources. As such, it is very important for organizations to ensure that they have effective computer networks. An organization will basically pick amongst a broad range of types of networks based on its size and its needs. The major types of networks that an organization can consider include; Personal Area Network (PAN), Local Area Network (LAN), Wireless Local Area Network (WLAN), Wide Area Network (WAN) , Storage-Area Network (SAN), and System-Area Network (also known as SAN). In the given case study, the university needs to be provided with a wireless LAN Solution for their network hence this report entails a description, analysis, and exposition of the key details needed in implementing the solution.

Body

Requirements Analysis

In coming up with a wireless LAN Solution for their network, it is imperative to understand the needs of the institution and how to encapsulate them within the solution. In this case, it is noted that the designed solution not only needs to improve on the existing IT infrastructure but it also needs to offer the needed levels of satisfaction among the key stakeholders. The requirements are divided into two broad categories, that is, functional requirements and non-functional requirements. The functional requirements include the technical requirements of the network whereas the non-functional requirements encompass the non-technical requirements. The following table thus presents on the key requirements of the wireless LAN Solution and their brief descriptions:

Functional Requirements	Non-functional Requirements
Ability to support all applications – the users will have various computing and communication applications and the network needs to be able to support all of them.	The provided solution needs to offer maximum security for all users, that is, there should be ample security for information that is shared within the network.
Support big number of users – the institution has more than 800 employees and the designed solution needs to be able to support all of them.	The internet coverage provided by this wireless network needs to be strong enough to support the sharing of information among the users.
The network needs to take into consideration the coverage areas consisting of the institutions seven buildings which are within an urban area.	The network needs to be easy to use by all the intended stakeholders and this may entail provision of key details for easy connection.

The network needs to align with the existing information technology infrastructure and hence be able to support existing connections so as not to warrant an overhaul which would be very expensive.	The design also needs to be appealing to the users, that is, all communication gadgets needs to be strategically placed so as not to have any negative impact on their surroundings.
The network needs to ensure that there is transmission robustness and security and that users are provided with a high quality connectivity.	The network needs to be easy to maintain and have high levels of fault tolerance so as to offer high levels of reliability to its various range of users.

Network Design - 400 words + diagram

Critical Analysis – 600 words

Constraints and Limitations – 500 words

Conclusion – 200 words

References

SAMPLE