A quality improvement plan for a wireless network as HelpAge International to improve the network performance

Introduction

HelpAge International is a Non-Governmental Organization with the organizations headquarters located in Westlands Nairobi city in Kenya. The organization supports older people in thematic areas of HIV/AIDS, social protection, rights as well as entitlements, advocacy and emergences. It is affiliated to several organizations that are partners and affiliates in the work. HelpAge International uses the local area network (LAN).

The Information Technology department has realized that the speed of the network is very slow due to its low level of bandwidth transfer. The management has requested the Regional Representative Officer (RRO) to install the wireless network which is not very much limited with the bandwidth transfers. This is aimed at improving the network performance for the organization since it implements various programs in support of the older people world wide. To effectively communicate with its partners, affiliates and the older people, a stable and cost-effective network has to be installed and maintained.

How the network will be optimized

The optimization of the wireless network is to provide a framework for data collection as well as analysis for the proposed network, establish the causes or factors that responsibly affect the quality for a network operation, make the necessary adjustments of the parameters and carefully adopt some technical measures purposively to achieve improved network performance while utilizing the available network resources and offering some relevant suggestions in maintaining as well as planning for the network at HelpAge International (Kelley, 1998).

Network optimization for HelpAge International will meet such aims as proper allocation of the resources, improvement in device rate of use to optimize the quality of network operation at HelpAge International. As a result, the network bandwidth will be improved. On the end-users' satisfaction point of view, the optimization of the network will requirements related to the quality of network services that are reliable and stable. This will be achieved through the improvement of major indices, for instance, connection rate as well as the rate of call rate which are the direct determinants for end-user satisfaction (Kelley, 1998).

Wireless network system optimization steps

A proven plan will be followed to successfully troubleshoot and make the necessary improvements in the network. The following processes will be involved in the optimization;

A review of the performance goals for the network

This process will involve the detailed assessment of the network system specifications as provided the vender prior to the design of the wireless network. Evaluation of the design criteria as well as definitions, assessment of the performance calculations and the identification of design specifications that are critical will be undertaken to match them for effective achievement of performance goals from the network system (Kelley, 1998).

Review of the parameter settings for the network system

Under this process understanding the parameters for CDMA system and settings will be considered. Such parameters as well as values will be set efficiently determine the general performance in the wireless network at HelpAge International.

Analysis of the available RF of Network plan

The simulation tool known as the computer-based CDMA will be used to evaluate the cell coverage and capacity with the available network at HelpAge International. Duties to be conducted will include site locations, site configurations and the switch data cells an example to base on is the time-based kind of traffic loading.

Perform the cell site auditing

This auditing on the cell site, will ensure the proper functioning of the network independent of the CDMA and will involve some independent audit of the entire cell sites in order to validate as well as verify that commissioning of the equipment and the proper installation of the wireless network is achieved at HelpAge International.

Collection of sample data for the network system and take some field measurements

Data collection will involve researching from infrastructure vendors and later correlate the obtained data into very useful as well as meaningful format. In addition, the drive routes in collaboration with the repeatable conditions will be defined. Careful data logging at forward and the reverse links will be considered (Kelley, 1998).

Post-process, data analysis and corrective action

Post-process and analysis of the data will be undertaken prior to taking the corrective measures and actions to achieve the final results from the new network system at HelpAge International.

Conclusion

Effective management of the challenges associated with the log on as well as network maintenance, the contemporary wireless CDMA service providers have to consider the challenges related to network optimization to achieve improved services from the network. In addition, the entire staff at HelpAge International will have to be taught on how to effectively use and maintain the wireless network in their program implementation.

Reference

1. Kelley, M., (1998).QUALCOMM Network Optimization Services, 6455 Lusk Blvd., San Diego. Nelson Publishing. (619) 651-3919.