Abstract

This paper presents a comparative study of performance and efficiency of various networks commissioned on different campuses of six universities in the western Himalayan region of India, within the framework of B-Node theory and its abstraction given by Cikara et al. (2006). It has been done in three phases: i) The data handling capacity per user in the respective network has been presented and discussed in terms of the throughput of the core-switch and the efficiency of the network. ii) Using the efficiency parameters given by Cikara et al, for different nodes, efficiency of different networks have been found and compared among each other. iii) Finally, the segment/component-wise efficiencies were measured for the real network system on the H.P. University campus, as a typical case, using JPerf software tool, which are compared with those given by Cikara et al. It was found that coupling factors play a vital role in the measurement of efficiency of the networks.
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Index Terms

Computer Science  Networking
Key words

Throughput

performance

efficiency

B-node theory

core switch