Abstract

Owing to large scale computing using the cloud, services can be provisioned with reliable QoS performance. Existing Campus Wireless Network Nigerian tertiary institutions have various challenges in terms of performance, ease of integration, and cost effectiveness. In this paper, a distinct classification of functional network models, their attributes and characteristics was highlighted. Research gaps were identified and a proposed autonomic web services architecture that manages both the performance of service users and the interconnection of WiMax-Wifi infrastructure into a service overlay network was discussed. This represents an intelligent Campus Wireless Network Architecture for services convergence. Low scale and medium scale computing networks were also discussed while outlining their issues. For the large scale computing network model, the advantages of the system include: easing of management tasks through the autonomic systems, ability to self-configure, self-optimizeze and self-heal. Efficient resource management, virtualization and WiMax connectivity interfaces are the core features. This research is still on-going but have developed a workable system for both service deployment and migration without overhauling the generic platforms in existing systems.
In the long run, Nigerian institutions will benefit from the improved network resilience with improvement in overall performance.

References


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**Index Terms**

Computer Science | Wireless

**Keywords**

Campus, Wide area Network, Wifi, Access Point, Throughput, Latency, Enterprise servers