Abstract

The IPv4 address space is about to vanish. Networks will need to transition to IPv6, which allows for larger address space however it has limitations that hinder its growth. IPv6 addresses inherent problems in the earlier version protocol and it provides new opportunities too. However, due to the increased overhead in IPv6 and its interaction with the operating system that hosts this communication protocol, there may be network performance issues. This paper will focus
on the considerations that affect network performance analysis for IPv4 and IPv6 based networks for ubuntu10.0.4 open source Linux based Operating System deployed on top of a virtual infrastructure. Here, ubuntu is configured with the two versions of IP and empirically evaluated for performance difference. Performance related metrics like throughput, delay, and jitter are measured on a test-bed implementation.

References

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Index Terms

Computer Science  Communication and Networks

Keywords
IPv4  IPv6  Performance  Analysis  Ubuntu  Virtual  TCP  Bandwidth  Jitter