Abstract

Different internet services and network performance represented in end-to-end delay and jitter are studied with respect to different link utilization. Internet users will access the internet services through simulated internet network contains number of BGP routers and Multihomed links. Both link utilization effect on the different internet services and the inability of BGP to automatically redistribute the traffic over available Multihomed Links will be highlighted. This paper also introduce a simple network design which is very close to the real internet environment and covers internet users section, ISPs section and enterprise section which represents offered internet services hoping that this model give a hand in the BGP and internet services researches.

References

1. European Research council (ERC) NetVolution-project.
http://netvolution.eu/scientific-approach.html

2. Several RFCs define the BGP protocol, the following are the RFCs of interest to our research: RFC 4271, A Border Gateway Protocol 4 (BGP-4), RFC 4277, Experience with the BGP-4 Protocol, RFC 4276, BGP-4 Implementation Report, RFC 4274, BGP-4 Protocol Analysis, RFC 4273, Definitions of Managed Objects for BGP-4, RFC 3392, Capabilities Advertisement with BGP-4, RFC 5065, Autonomous System Confederations for BGP, RFC 2918, Route Refresh Capability for BGP-4, RFC 4893, BGP Support for Four-octet AS Number Space, RFC 2439, BGP Route Flap Damping, RFC 4760, Multiprotocol Extensions for BGP-4


### Index Terms

Computer Science  
Information Sciences

### Keywords

BGP; Multihomed; HTTP; FTP; Email; OPNET.