Evaluation of delays in switches in computer networks

© M.K. Boychenko, I.P Ivanov

Bauman Moscow State Technical University, Moscow, 105005, Russia

The article presents the results of the experimental determination of the transmission delay of information in the Cisco Catalyst 3750. Research is conducted by measuring the value of RTT (Round Trip Time) when sending a frame between two computers by dint of utility "ping" which is modified in order to improve the accuracy of measurement to nanoseconds. Delay values in the switches are not included in the number of their characteristics, specified by manufacturers of network equipment, which does not allow developers to evaluate network response time on various routes of the transport system when designing the network topology and the choice of its transit nodes. The experimental estimates are in good agreement with the theoretical results based on technology coding for networks Ethernet, Fast Ethernet and Gigabit Ethernet, used at the physical layer model ISO/OSI.

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Ivanov I.P., Dr. Sci. (Eng.), vice-rector in informatization and modernization of the Bauman Moscow State Technical University, head of the Theoretical Informatics and Computer Technologies Department at the Bauman Moscow State Technical University. Author of more than 40 publications in the field of data-communication technologies. e-mail: ivanov@bmstu.ru

Boychenko M.K., leading programmer of the IT laboratory of the Administration on Informatization – Computing Center of the Bauman Moscow State Technical University. Specializes in the field of data-communication technologies. e-mail: noc@bmstu.ru