Comparison between two types of computer for Industrial Ethernet performance

Abstract

Ethernet is now the dominant networking in the home and office environment. Advanced of the network technology and convergence of communications, control and computer enabled the Networked Control System (NCS). Industrial Ethernet (IE) is the applications of IEEE 802.3 standards with requirements of factory equipment and network protocols. The connection based on star topology for the real-time communication between a computer and PLC. Analysis of performance based on data transfer rate, packets speed, packets volume, sum volume (KByte), Central Processing Unit (CPU) usage, percent available Read Access Memory (RAM), available Read Access Memory (RAM) and Packet InterNet Groper (PING) are conducted. It is shown that packets speed and packets volume for two types of the computer is approximately same between computer 1 and computer 2.