

Abstract

Network traffic and threat increment that are exist in the computer network, challenges intrusion detection system (IDS) to keep giving a good performance to detect any malicious packet in the network. High Graphic Processing Unit (GPU) computation performance have made it become another solution for IDS to process more packet than before in the network. Every single packet that come into system will be processed by GPU parallel to increase system computation capacity. The used of CPU resource are less than before, so CPU can compute another process while GPU in it works. System performance measured with the value of CPU usage and the number of packet drop ratio. From research result, it was the transfer of the IDS pattern matching process from the CPU to the GPU has not been able to reduce the packet drop happens.

Keywords: Intrusion Detection System, OpenCL, GPU, pattern-matching