ANALISIS MENENTUKAN TRAFIK TERTINGGI PADA JARINGAN INTERNET STTA MENGGUNAKAN KONSEP JAM SIBUK (*BUSY HOUR*) DENGAN GUI MATLAB

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ABSTRAK

Internet menjadi sebuah kebutuhan pokok disemua kalangan, khususnya pada perguruan tinggi baik itu dari mahasiswa, dosen maupun staff. Di satu sisi yang lain, semakin banyak penggunaan internet pasti mengalami peningkatan trafik yang semakin tinggi. Dengan meningkatnya trafik, maka akan menyebakan koneksi jaringan internet lambat. Tujuan dari penelitian yaitu menentukan trafik tertinggi pada jaringan internet STTA.

Jam sibuk (*busy hour*) digunakan untuk menyatakan suatu jam tertentu dimana trafik pada suatu segmen jaringan adalah tertinggi. Dalam konsep jam sibuk terdapat tiga teknik dalam menetukan trafik tertinggi pada jaringan internet, yaitu FDMH (*Fixed Daily Measurement Hour*), ADPH (*Average Daily Peak Hour*), dan TCBH (*Time Consistent Busy Hour*).

Hasil penelitian menunjukan bahwa intesitas trafik tertinggi pada jam kerja, dengan menggunakan teknik FDMH diperoleh nilai Tx = 303.93 MB, Rx = 37,4126 MB, Paket Tx = 257893,33 pps, Paket Rx = 182157 pps. Untuk teknik ADPH diperoleh nilai Tx = 349.33 MB, Rx = 52.1531 MB, Paket Tx = 299355,33 pps, Paket Rx = 210154,67 pps. Dan untuk teknik TCBH diperoleh nilai Tx = 273.98 MB, Rx = 22.36 MB, Paket Tx = 237253,67 pps, Paket Rx = 159803,67 pps. Sedangkan untuk intesitas trafik tertinggi setelah jam kerja dengan menggunakan teknik FDMH, diperoleh nilai Tx = 333.34 MB, Rx = 27.84 MB, Paket Tx = 293749,67 pps, Paket Rx = 205957,33 pps. Untuk ADPH diperoleh Tx = 333.34 MB, Rx = 61.42 MB, Paket Tx = 293749,67 pps, Paket Rx = 205957,33 pps. Dan untuk teknik TCBH diperoleh nilai Tx = 333.34 MB, Rx =39.4743 MB, Paket Tx = 293749,67 pps, Paket Rx = 205957,33 pps.

Kata Kunci: Trafik, Internet, Jam Sibuk, Intesitas Trafik

ANALYSIS OF THE HIGHEST TRAFFIC IN STTA INTERNET NETWORK BASED ON BUSY HOUR CONCEPT USING MATLAB GUI

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ABSTRACT

The internet has become a staple necessity for all groups, especially at universities, both from students, lecturers and staff. On the other hand, the more use of the internet, the higher the increase in traffic. With increasing traffic, it will cause a slow internet network connection. The purpose of this research is to determine the highest traffic on the STTA internet network.

Rush hour is used to express a certain hour where the traffic on a network segment is the highest. In the concept of rush hour there are three techniques in determining the highest traffic on the internet network, namely FDMH (Fixed Daily Measurement Hour), ADPH (Average Daily Peak Hour), and TCBH (Time Consistent Busy Hour).

The results showed that the highest traffic intensity during working hours, using the FDMH technique, obtained Tx = 303.93 MB, Rx = 37,4126 MB, Packets Tx = 257893,33 pps, Packets Rx = 182157 pps. For ADPH technique, the value of Tx = 349.33 MB, Rx = 52.1531 MB, Packets Tx = 299355,33 pps, Packets Rx = 210154,67 pps. And for TCBH technique, the value of Tx = 273.98 MB, Rx = 22.36 MB, Packets Tx = 237253,67 pps, Packets Rx = 159803,67 pps. As for the highest traffic intensity after working hours using the FDMH technique, the value of Tx = 333.34 MB, Rx = 27.84 MB, Packets Tx = 293749,67 pps, Packets Rx = 205957,33 pps. For ADPH, the value of Tx = 333.34 MB, Rx = 61.42 MB, Packets Tx = 293749,67 pps, Packets Rx = 205957,33 pps. And for TCBH technique, the value of Tx = 333.34 MB, Rx =39.4743 MB, Packets Tx = 293749,67 pps, Packets Rx = 205957,33 pps.

Keywords: *Traffic, Internet, Busy Hours, Traffic Intensity*