ABSTRAK

JUDUL : ANALISA DAN PERANCANGAN LOAD BALANCE DAN FAIL

OVER TO DEVICE MIKROTIK ROUTER MENGGUNAKAN

METODE PCC (PER CONNECTION CLASSIFIER) PADA PT.

ARARA ABADI PERAWANG

PT. Arara Abadi Perawang membutuhkan jaringan internet yang stabil dan handal untuk mendukung aktivitas kerjanya. Saat ini, koneksi internet hanya mengandalkan satu ISP *(internet service priveder)*, sehingga rentan terhadap gangguan dan kegagalan koneksi. Penelitian ini bertujuan untuk menganalisis dan merancang sistem load balance dan fail over pada perangkat Mikrotik Router menggunakan metode PCC *(Per Connection Classifier)* untuk meningkatkan stabilitas dan keandalan koneksi internet di PT. Arara Abadi Perawang. Metode PCC *(Per Connection Classifier)* akan membagi beban trafik internet ke beberapa ISP secara merata, sehingga tidak ada satu ISP yang *overloaded*. *Fail over* akan secaraotomatis mengalihkan koneksi internet ke ISP lain jika terjadi kegagalan pada ISP utama. Hasil penelitian menunjukkan bahwa sistem load balance dan fail over dengan metode PCC *(Per Connection Classifier)* dapat meningkatkan stabilitas dankeandalan koneksi internet di PT. Arara Abadi Perawang. Sistem ini mampu mendistribusikan beban trafik internet secara merata dan secara otomatis mengalihkan koneksi internet ke ISP lain jika terjadi kegagalan..

Kata kunci : *Load Balance, Failover, Mikrotik,* **PCC** *(Per Connection Classifier), Bandwidth*

ABSTARCT

TITLE : ANALYSIS AND DESIGN OF LOAD BALANCE AND FAIL

OVER TO DEVICE MIKROTIK ROUTER USING THE PCC

(PER CONNECTION CLASSIFIER) METHOD AT THE PT.

ARARA ABADI PERAWANG

PT. Arara Abadi Perawang requires a stable and reliable internet network to support its work activities. Currently, internet connections only rely on one ISP (internet service provider), making them vulnerable to disruption and connection failure. This research aims to analyze and design a load balance and fail over system on Mikrotik Router devices using the PCC (Per Connection Classifier) method to improve the stability and reliability of internet connections at PT. Arara Abadi Perawang. The PCC (Per Connection Classifier) method will divide the internet traffic load evenly between several ISPs, so that no one ISP is overloaded. Fail over will automatically switch the internet connection to another ISP if the main ISP fails. The research results show that the load balance and fail over system using the PCC (Per Connection Classifier) method can improve the stability and reliability of internet connections at PT. Arara Abadi Perawang. This system is able to distribute the internet traffic load evenly and automatically switch the internet connection to another ISP if a failure occurs.