

## RINGKASAN

Citranet Purwokerto adalah perusahaan Jasa Penyedia Layanan Internet atau perusahaan ISP (Internet Service Provider). Untuk menjalankan aktifitas usaha dibidang jasa tersebut Citranet Purwokerto harus memiliki layanan non stop pada kantornya. Namun Office di Citranet hanya menerapkan satu ISP sehingga sering terjadi overload penggunaan bandwidth bahkan terputusnya koneksi karena tidak adanya backup jaringan. Sehingga penelitian ini bertujuan untuk memperoleh solusi untuk menghindari overload penggunaan bandwidth serta backup jaringan kemudian mengimplementasikan load balancing dan juga mengamati kinerja dari load balancing serta fail over. Metode pengembangan sistem yang digunakan adalah NDLC (Network Development Life Cycle) yang memiliki tahapan Analisis, Design, Simulation Prototyping, Implementation, Monitoring dan Management. Hasil dari penelitian adalah berupa implementasi load balancing dan fitur fail over dan mendapatkan kesimpulan bahwa penggunaan load balancing dan fitur fail over bisa mengatasi permasalahan yang ada yaitu menghindari overload penggunaan bandwidth dan backup jaringan.

Kata kunci: ISP, Load Balancing, Fail Over, NDLC

## **ABSTRACT**

*Citranet Purwokerto is an Internet Service Provider or ISP (Internet Service Provider) company. To run business activities in the field of services Citranet Purwokerto must have non-stop service at his office. But Office in Citranet only apply one ISP so that frequent overload of bandwidth usage and even disconnection of the connection in the absence of network backup. So the aim of this research is to get solution to avoid overload of bandwidth usage and network backup then implement load balancing and also observe performance of load balancing and fail over. The system development method used is NDLC (Network Development Life Cycle) which has stage of Analisis, Design, Simulation Prototyping, Implementation, Monitoring and Management. The result of the research is the implementation of load balancing and feature over fail and get the conclusion that the use of load balancing and fail over feature can overcome the existing problem that is avoiding overload of bandwidth usage and network backup.*

*Keywords: ISP, Load Balancing, Fail Over, NDLC*