

## **Abstract**

Authentication process is a system security mechanism by proving the user identity. Authentication mechanism plays a big role in network security to avoid an unauthorized user accessing restricted resource.

Kerberos protocol is an authentication protocol working in a local network. One of advantage provided by Kerberos is Single Sign-On where the client only need to do authentication once to the Key Distribution Center (KDC) to be able to access resources on any kerberized servers.

One of vulnerabilities of Kerberos protocol is not having capability to overcome offline password guessing attack attempted by attacker who got the packet as result of authentication request. The way to overcome the vulnerability is implementing pre-authentication mechanism. Flexible Authentication Secure Tunnelling (FAST) is a pre-authentication mechanism that able to avoid password guessing attack.

In addition to affect the security side of Kerberos protocol, addition of FAST mechanism will also affect the resource usage in server side, such as CPU dan memory.

**Keywords:** authentication, Kerberos, KDC, FAST, resource