

## ABSTRACT

*Development in IT worlds especially software development starting to become dynamic and mobile. This development create a new paradigm called microservices. I-Gracias as information system media for Telkom University academic data starting to develop services with microservices paradigm, this development is targeted to improve services for academic data and I-Gracias security so that will no abuse of data as schedule leak, presence cahnge and etc.*

*This last assignment implement Laravel framework and Laravel Passport library, to develop I-Gracias backend framework with OAuth 2.0 and Single ID implementation as authentication and authorization system. This implementation is expected to improve services and security of I-Gracias.*

*From this research, researcher get a result where in brute force scenario password with first and second combination can't be breached and for third password brute force breached it. For MITM, XSS and DDoS framework cannot breached by the attack, this prove that the framework is really secure for integrity and availability. For performance, framework server has average transaction 2619 Hits. data transferred 26,16 Mb. response time 9,6 second. transaction rate 14,55 Trans/sec. and throughput 0.15 Mb/s.*

**Keywords :** *microservices, framework, I-Gracias, OAuth 2.0, SSO, confidentiality, integrity, availability, backend*