Abstract

The process of developing a platform is a process that consists of various stages. Still, until now, there has been no awareness in utilizing available data and information sources to serve as the basis for developing or creating a platform that can improve the quality of an integrated system. For this reason, a Platform as a Service (PaaS) architecture was built that provides application development and deployment services to process data and information obtained from relevant agencies at Telkom University to monitor the performance achievements of units within Telkom University, especially the Human Centric Engineering Research Center (HUMIC RC). This requires a service-oriented system platform design that can integrate various diverse information systems into a single unit. In this study, the Service Oriented Architecture (SOA) method from Thomas Erl was used to design a service-oriented system platform, where every business process is built in the form of services. REST Service Modeling Process technology is used in modeling services, which produces an integrated service design. In making the platform architecture this time, the API gateway is one of the middleware used on a microservice-based platform. The service-oriented platform that has been built can assist the Institutional Planning, Development, Control or Perencanaan, Pengembangan, Pengendalian Institusi (P3I) unit of Telkom University in monitoring the performance achievements of units within Telkom University so that there is no duplication of data, facilitates the storage of evidence of accomplishments, and reduces the stage and time of the process of searching for proof of performance achievements.

Keywords : Cloud Computing, Platform as a Service, Service Oriented Architecture (SOA), REST Service Modeling Process, API