

ABSTRACT

Currently, Pertamina has implemented a cashless transaction system in their SPBU, using *Electronic Data Capture* (EDC) devices in its operation. However, this device has several weaknesses, one of which is the dependence on a stable network connection, which is still a challenge in certain areas.

The proposed solution to address these weaknesses is the creation of a failover system, which will automatically switch the network to a backup network if the main network is disrupted so that the EDC devices can continue to operate until the main network is restored. This system will hopefully reduce the experienced downtime when there is a network disruption, increasing the reliability of the cashless transaction system used in the SPBU.

Implementation and testing of the proposed failover design shows that the system is able to switch to the backup network in 435ms when the main network experiences disruption, and quickly return to the main network in 36ms once the disruption ends. This switching time should be quick enough to maintain the connectivity during operations with only minimal delays.

Keywords: *EDC, Failover, SPBU*