

1. The relay script is the facilitator of instantaneous communication within the distributed control plane of Software Defined Networking regime. It should exist in the Controller plane as it is just the transporter of information between other controllers. Subnets, as defined in this project, comprise of a single controller and root switch network. The relay is designed to facilitate communication within a number of such subnets. The Data plane is augmented to have an analogous entity, the Relay Switch which facilitates data flow within two subnets. Relay in the controller plane has been tested to be successful in blacklisting/whitelisting of certain hosts detected as malicious in any of the Subnets, network wide. The Relay can have any number of endpoints to which it extends its services to. These endpoints can be occupied by,
  1. Controllers compliant with SDN
  2. Other relays, just like the one extending the endpoints
2. Relay script is just a TCP server endlessly listening for connections on one of its ports. As soon as an endpoint is detected to be occupied by an entity, it forks a subprocess to handle that particular end point only. The forked subprocess inherits a way to make contact to other such forked processes. These processes in conjunction, form the broadcast mechanism of the relay. All of them continually expect to receive a message from their respective endpoint and on such an event, pass on the message to all other processes, essentially broadcasting it. Due to this simplistic design, the only dependency the relay has is, the existence of TCP/IP communication by the entity connected to its end point. It really is a management system for communication within multiple clients of a single server process. Thus, it can be employed to any existing framework of SDN controllers, may that be ONOS, POX, RYU etc. Mininet, on the other hand, is a simulation tool for the network, which loses its importance as soon as the hosts and switches are implemented as real hardware. Hence, the case of Mininet dependence is irrelevant.
3. As mentioned in the above point, any controller supporting TCP/IP communication is automatically eligible for a full duplex connection to the relay. Having said that, due to lack of testing on real propriety software, we would like to have reservation to certain extent as untested code can't really be trusted. The ideology though, doesn't assume anything that any propriety SDN controller cannot provide, or can't be extended to provide, for that matter.