Group 5 - SDN support for Dynamic Service Relocation

Scenario: With reference to Figure 1, consider a client that dynamically requests a service to a service platform. A service can be equivalently provided by a set of servers. The connectivity among the clients and the servers is provided by a set of SDN-enabled switches. From the client perspective, the service is hosted at a VIRTUAL_IP. The service platform handles the server-to-service association, and can dynamically change said association requesting the SDN controller to update the network accordingly.
Design and realize a system that allows

- clients to subscribe/unsubscribe to a service;
- a service platform to associate a server to a service and relocate it dynamically.

At any time, the system will configure the SDN network to allow the client to access the service at its current location.

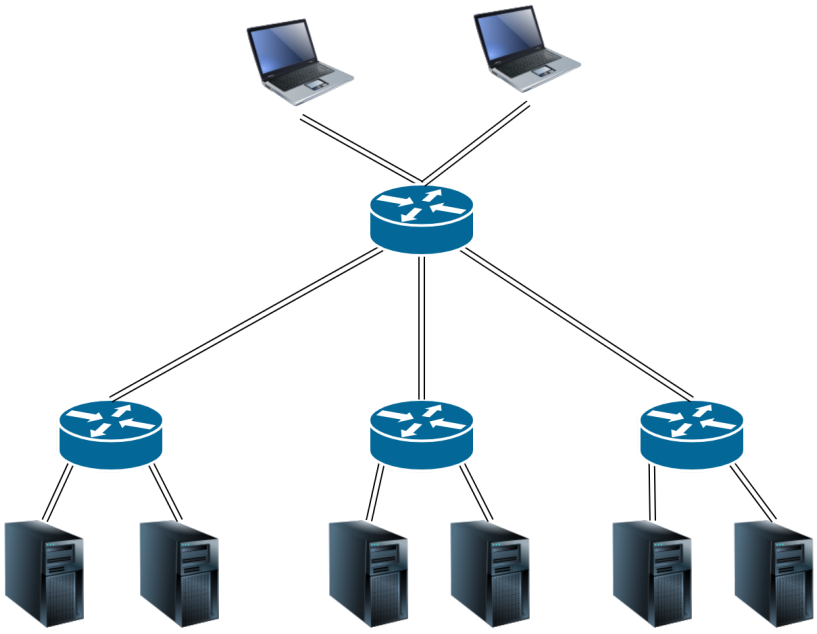

Figure 1 - Dynamic service relocation scenario

Detailed objectives:

- Implement a Floodlight module that exposes a RESTful interface: 1) allowing the subscription/unsubscription of a client to a service; 2) allowing to associate a server to a service and relocate it dynamically.
- Implement two simple client and server applications, and one simple service-platform manager exemplifying the behavior described in the scenario.
- Test and demonstrate the overall system using mininet and Floodlight. The scenario of figure 1 can be used as an example.