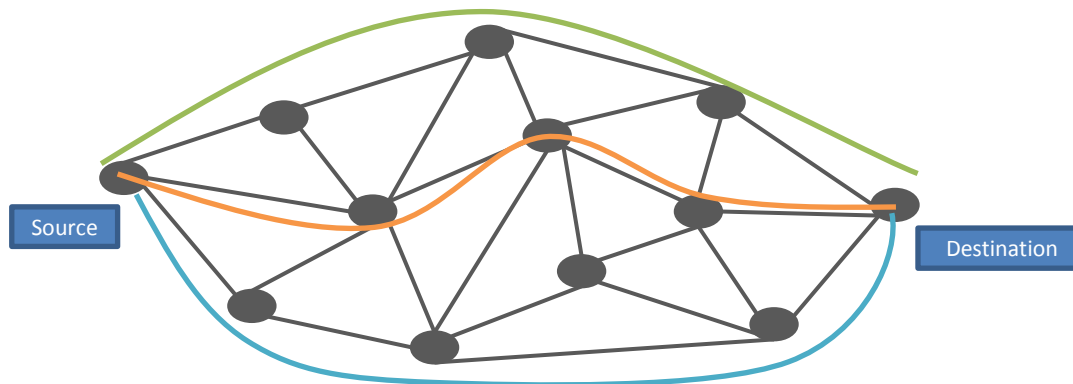# Load Balacer Intent

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Objective

- Create a mechanism that allows to split the traffic between a given source to a given destination in multiple disjoint paths to share the load.

Proposal

- Create a new Intent (Load Balancer Intent)
  - LoadBalancerIntent.java
    - Taking as basis the HostToHostIntent.java we adapt the intent to retrieve three parameters
      - Source node
      - Destination node
      - Máximum number of disjoint paths to split the traffic (N)
  - LoadBalancerIntentCompiler.java
    - Assumes that simmetric services.
    - Computes N disjoint paths
    - Generates and installs a group entry for the source node and the flow entries for the remaining nodes of each path.
  - Create a CLI (addLoadBalancerIntentCommand)
    - Taking as basis the AddHostToHostIntentCommand we adapt the CLI command to retrieve the additional third parameter

Status

- Currently it only splits the traffic between two paths.
- We managed to compile the new ONOS version with the Load Balancer Intent
- The CLI command to add a load balancer intent worked ok, it was available to use it in ONOS.
- Once an intent was requested, the intent appeared as INSTALLED.
- We detected a problem with the group and flow entries, the programming of the switches did't work properly.

Next Steps

- Solve the problem with the programming of the switches.

- Compute the N disjoint paths to share the load between the given source and the given destination.

- Contribute to the ONOS repository.