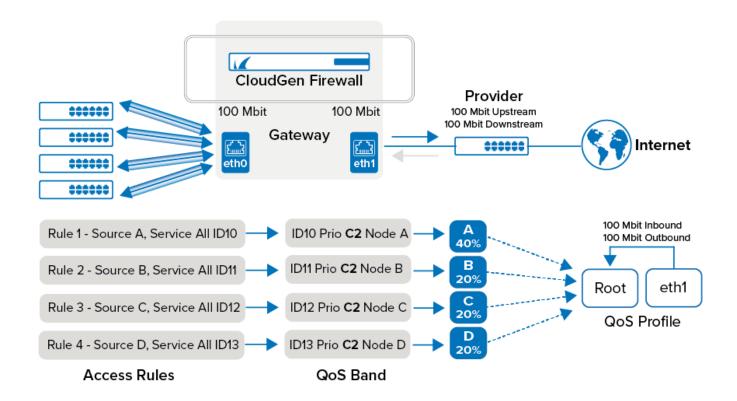# Example - ISP Customer Bandwidth Assignment

https://campus.barracuda.com/doc/79463011/

In this example, an ISP with an Internet access provides a total bandwidth of 100 Mbits. The bandwidth should be assigned to four customers. One customer should get 40 Mbits and the other three customers should get 20 Mbits each. The assigned bandwidth of each customer should not be exceeded, even if the total bandwidth is not saturated.

For This Setup, Configure the Following:

1. A virtual tree consisting of a virtual root interface and four subnodes (A-D) with a limiting bandwidth of 40% for one node and 20% for the remaining three nodes.
2. Four QoS bands where each one results in medium priority selection and points to each one of the subnodes.
3. A firewall ruleset with four rules that each refer to one of the four QoS bands.
4. A physical network device where network traffic should be delivered with the virtual tree attached to it.

With this configuration:

- The total bandwidth (sum over all customers) is never exceeded.
- The available bandwidth per customer is never exceeded. There is no bandwidth borrowing between customers (nodes).

- The setup can be extended by introducing more than one QoS band per customer with varying priorities.

Figures

1. isp_bandwidth_ass.png