

FlowScale

Overview

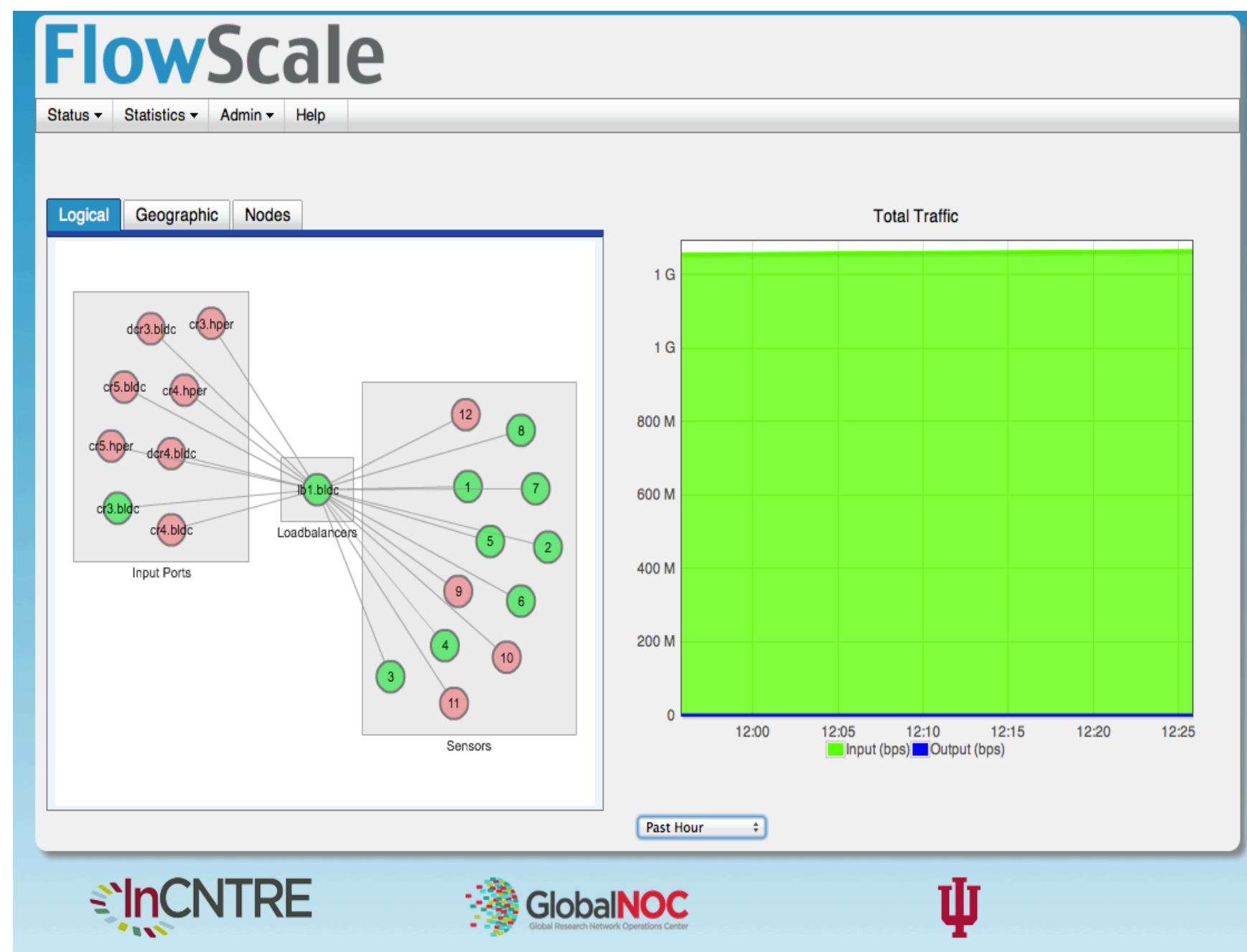
FlowScale is a project to provide scalable high capacity traffic load balancing, utilizing OpenFlow, on simple switch hardware. FlowScale provides a way to provide Load Balancing-as-a-service taking the edge switch hardware existing in a data center or access switch and adding functionality in software without having to purchase additional custom hardware.

Deployment

The Initial Production deployment of FlowScale at Indiana University is as a component of the central Intrusion Detection System (IDS). FlowScale provides a means to distribute mirrored traffic in a intelligent manner at extremely high data rates.

We are deploying a Pronto 3920 switch in the Indianapolis and Bloomington campuses. This provides a capacity of 480 Gb/sec in total.

User Interface

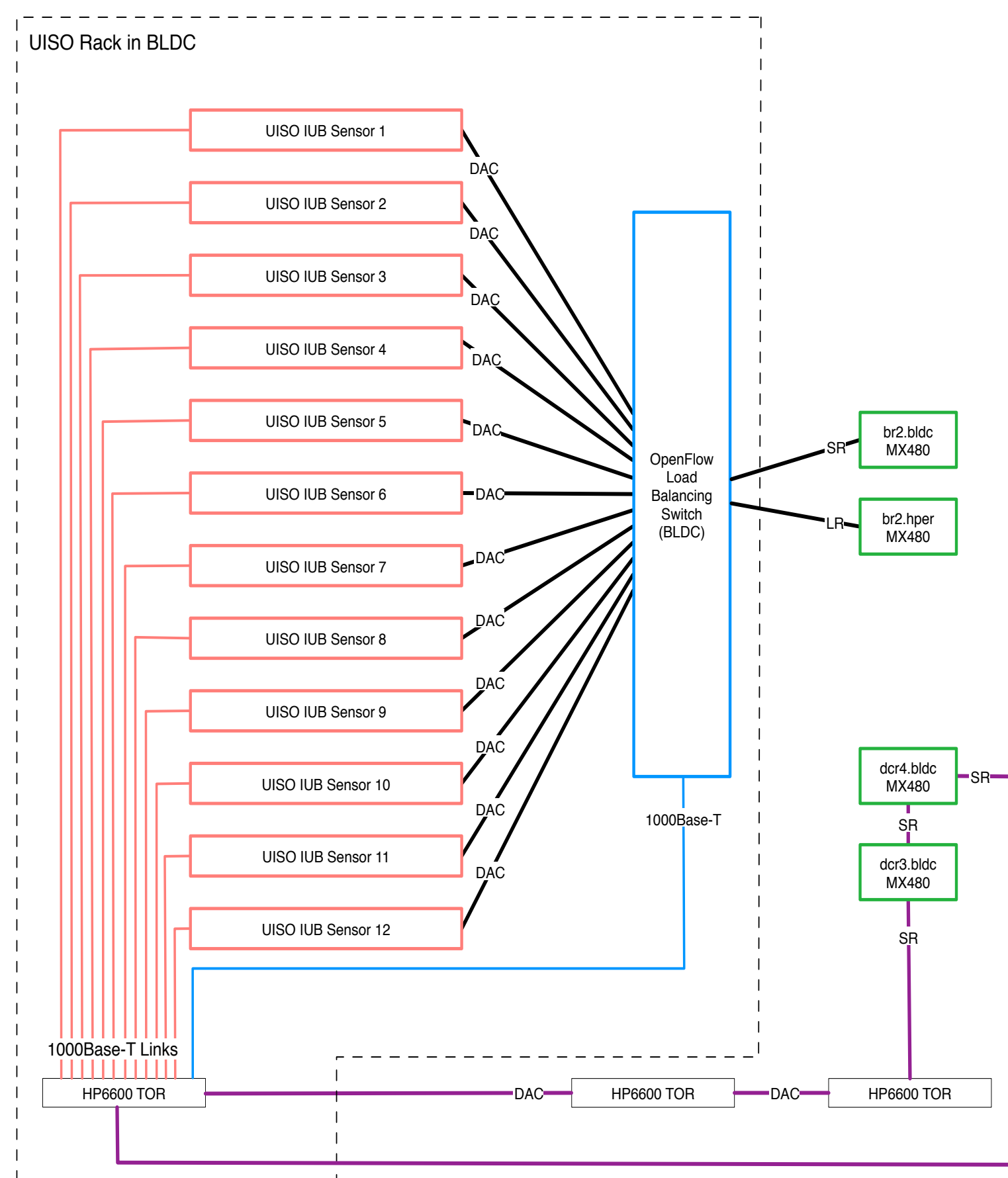
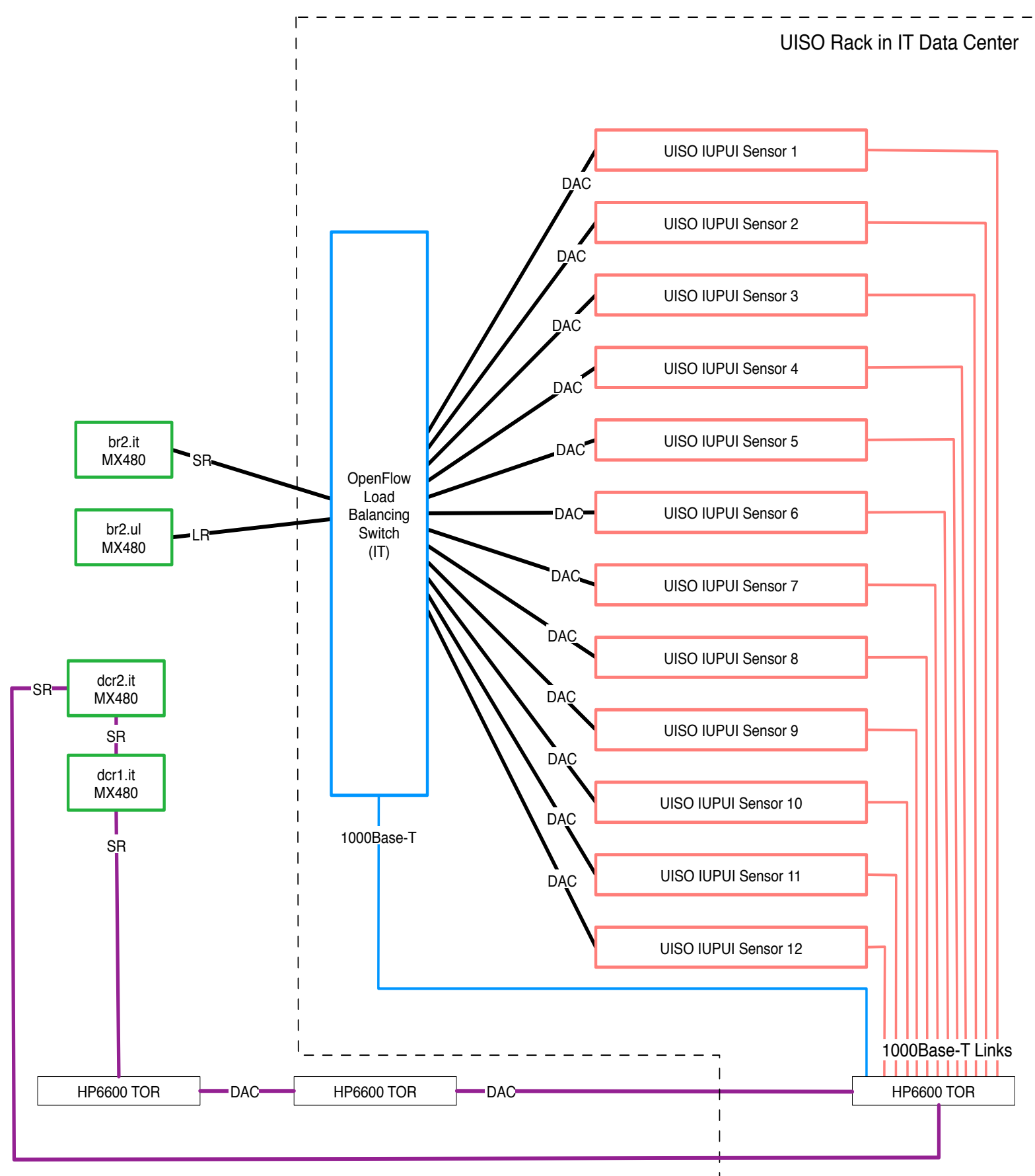


Design

FlowScale uses IP src/dst values to hash traffic. As hashing done in hardware and other features are made available we will add these to FlowScale to decrease the number of flow rules and increase the flexibility of FlowScale

IU Core Upgrade 2011 UIISO Sensor Net

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Note: OpenFlow controller not depicted.
 — OpenFlow control plane path
 — UIISO Sensor control plane path
 — OF/Sensor control plane path combined
 — Mirrored traffic data plane path
 DAC = 10 Gb direct-attach cable