**Advanced Network Analytics**

Ciena’s Blue Planet provides a vendor agnostic SDN solution that enables infrastructure analytics collection from all layers of the network from applications to the photonics level. This demonstration showcases an application of the analytics’ insight of the network working in conjunction with provisioning and orchestration engines to improve service velocity and network operational efficiency.

**Objective**

The Ciena Environment for Network Innovation (CENI) is an international R&E testbed designed to test and experiment proof of concepts of new upcoming technologies on a live network. Using the Analytics and Orchestrate applications of Blue Planet on this live network, we demonstrate end to end performance monitoring and analysis of network metrics to recommend the orchestration engine to adjust service parameters.

**Setup and Operation**

The Service spans from Ottawa to Hanover over three Ciena 8700’s on the CENI Testbed. Analytics gathers performance data using CLI-based Resource Adaptors which is then used to plot graphs and perform analysis of state of service.

BP Analytics sends a recommendation through a feedback loop to Orchestrate to modify the service bandwidth profiles on CENI elements based on the dropped packets, current Rx rate and past trends.