

# Network Analytics with Machine Learning Orchestration

Demonstration at Ciena booth #1281

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## ABSTRACT

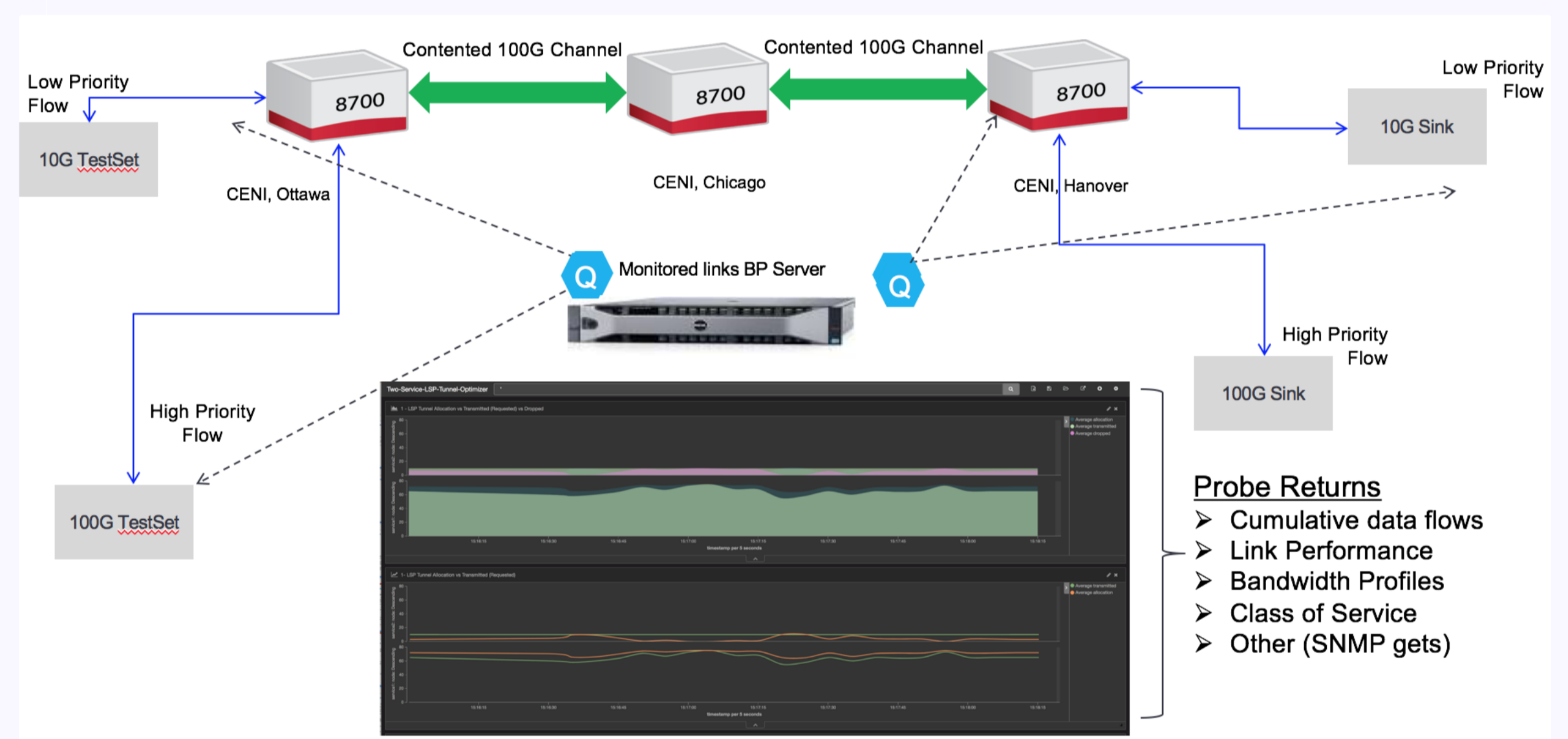
Shown over a fully operational live network, small and large dataflows compete (conflict) for committed Quality of Service performance levels. Through use of Ciena developed network machine learning algorithms that anticipates traffic fluctuations, and through use of Blue Planet SDN orchestration, the network autonomously self-adjusts parameters, that reduces the impact of sudden flow surges and creates graceful adjustments of bandwidth that preserve operational commitments of the service at hand.

## OBJECTIVE

The Ciena Environment for Network Innovation (CENI) is an International R&E testbed designed to test and experiment with proof of concepts of new upcoming technologies on a live network. Real-time visualization of key network parameters on this testbed confirms the efficiency of recommendations given out by Machine Learning algorithms in a feedback loop.

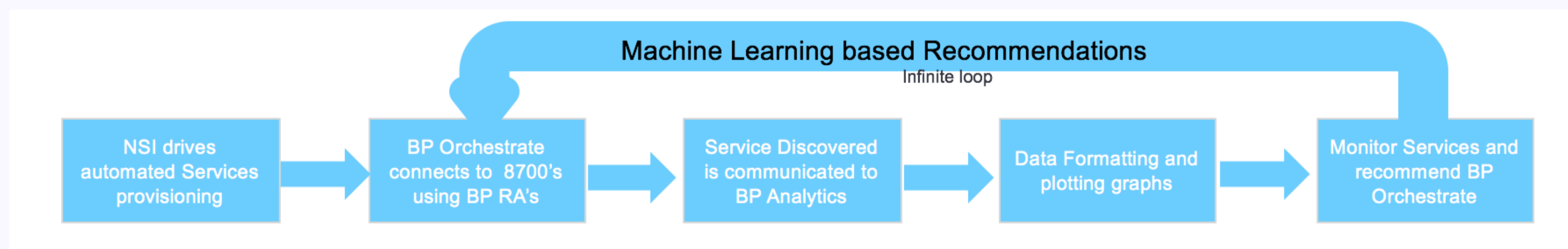
## DEMO SCENARIO

Two services with low and high priority compete for the common 100G channel. Analytics engine monitors the service real time to predict the traffic patterns of the incumbent service and incorporates the low priority traffic when inadequate channel usage is predicted, keeping in mind to not affect the high priority service during this orchestration.



## OPERATIONAL PERSPECTIVE

Provisioned services are discovered using BP Orchestrate and communicated to BP Analytics which continuously monitors the service parameters. Machine Learning algorithms predict the traffic patterns and recommend an optimum strategy for network operation. Orchestrate configures the network elements with new recommended configurations.



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