



NCS 1020 Overview and Optical Applications

This chapter gives a brief overview of the optical apps on NCS 1020.

NCS 1020 software has multiple optical applications to help bring up the link and maintain traffic on the link.

- [Document Objective, on page 1](#)
- [Document Organization, on page 1](#)

Document Objective

The Cisco NCS 1020 Configuration Guide describes how to configure various card modes for the line cards that are supported in the Cisco NCS 1020 chassis.

Document Organization

This document is organized into the following chapters:

Chapter	Description
Internode Topology Discovery and Communication	NCS 1020 uses OSPF for topology discovery.
Span Loss	Span Loss application measures span loss between two nodes for a given direction and verifies if span loss is within the configured range.
Gain Estimator	Gain Estimator computes power that is transmitted from the upstream node, analyzes incoming span loss, sets the gain mode of the EDFA amplifier, and provides the initial target gain for the amplifier.
Link Tuner	Link Tuner uses actual optical measurements like span loss to compute and configure the target PSD (power spectral density) for each span.
Automatic Power Control	Automatic Power Control configures amplifier and attenuator setpoints to achieve target PSD across the link.

Chapter	Description
Automatic Network Turn Up	All the optical applications work together to bring up the DWDM link. This chapter describes the link bring up process and how the applications working together.
Configure OTDR	OTDR application scans and determines loss in signal power and location on the fiber path where the loss occurs.