Abstract

Traffic Grooming has become a very important issue on optical Network, as optical networks provide a very high speed data transmission for huge amount of data. A Sparse grooming Network with only a fractional of nodes having grooming functionalities may achieve the same performance as the one in which all the nodes are grooming, but with much lower cost. In literature different algorithms, models and techniques have been proposed to design the sparse grooming networks. With Proper assignment of routing and wavelengths in the network reduces the blocking probability ultimately increases the bandwidth of the network. In this paper, we studied and analyzed the different sparse traffic grooming and RWA assignment strategies with its performance metrics for optical mesh networks.
- M. El Houmaidi, M. A. Bassiouni and G. Li, \textquoteright;Optimal traffic grooming in WDM mesh networks under dynamic traffic\textquoteright;, in Optical Fiber Communication Conference, Technical Digest (CD) (Optical Society of America, 2004).
- W. Yao, M. Li. and B. Ramamurthy, \textquoteright;Design of Sparse Grooming Networks for Transporting Dynamic Multi-granularity Sub-wavelength Traffic\textquoteright;, 2004.
- Jun Zhou and Xin Yuan, \textquoteright;A study of dynamic Routing and Wavelength assignment with Imprecise network State information\textquoteright;, IEEE Parallel Processing workshop,2002.
- Ashok Kumar Pradhan, S. Barat and tanmay De, \textquoteright;A heuristic approach for multicast Traffic grooming in optical WDM Mesh network\textquoteright;, I. J. computer Network and information security, 2014.
- Amrinder S. Arora and Suresh Subraamaniam, \textquoteright;Converter placement in Wavelength Routing Mesh Topologies\textquoteright;, IEEE publication 2000.
- Gangxiang shen and Rodney S. Tucker, \textquoteright;Sparse Traffic Grooming in Translucent Optical Networks\textquoteright;, IEEE, journal of lightwave technology, VOL. 27, NO. 20, october 15, 2009
- Bishwanath Mukherjee, \textquoteright;Optical WDM Networks\textquoteright;, Springer Publication 2006.
- Keyao Zhu, Hongyue Zhu and Bishwanath Mukherjee, \textquoteright;Traffic Grooming in Optical WDM Mesh Networks\textquoteright;, Springer Publication 2006.

Index Terms

Computer Science

Networks
Keywords

OXC - Optical Cross Connect  OC - Optical carrier  RWA - Routing & wavelength assignment  WDM - Wavelength division multiplexing

G-Fabric - Grooming Fabric

G-Node – Grooming Node

G-OXC – Grooming Optical Cross Connect