infinera®

what THE NETWORK will be

SOFTWARE

INFINERA NETWORK PLANNING SYSTEM (NPS)

Realize your networks' potential:

Maximizing revenue through powerful, rapid planning.

Successful network operators spend considerable resources to optimize the economic returns from their networks through comprehensive planning, engineering, marketing and sales. While each process is equally important, Infinera Network Planning System (NPS) minimizes cost and maximizes revenue through simple, efficient and automated network planning. Using NPS, a network planner can ensure a cost-optimized network design, faster time to revenue and higher customer satisfaction.

Using a proven model, Infinera NPS considers multiple parameters in order to deliver a network that optimizes what, when and how resources are deployed across metro, long-haul or submarine networks as shown in Figure 1 below.

Key features and benefits include:

Integrated optical link and service planning: NPS is a single unified planning tool that supports all Infinera products—DTN-X, DTN, and ATN—and allows for seamless integration of optical link engineering, service routing and network reports. NPS provides optimal cost network designs by combining least-cost optical span designs with optimized service routing algorithms. NPS supports the entire range of Infinera products, including Raman amplification, point loss modeling, and dynamic spectrum equalization. The users can control GMPLS, service grooming, and protection parameters to customize solutions.

Flexible, automated support for multiple network scenarios: Using Infinera NPS, you can design linear, ring or complex mesh topologies for a variety of applications with any Infinera products—DTN-X, DTN, or ATN. Leveraging proven algorithms, NPS automatically enables rapid designs with multi-protocol and multi-rate services for both greenfield and brownfield networks. NPS supports planning

scenarios for per service/per fiber sub 50ms protection switching within a complex ring and mesh network. In addition, operators can plan for a mix of 10G, 40G and 100G DWDM wavelengths, thereby maximizing revenue from your installed fiber.

Ready-to-deploy network design: Using all optical parameters of Infinera Line Systems, full traffic engineering capabilities and detailed system characteristics, NPS automatically places equipment and generates designs that can be deployed in field with confidence.
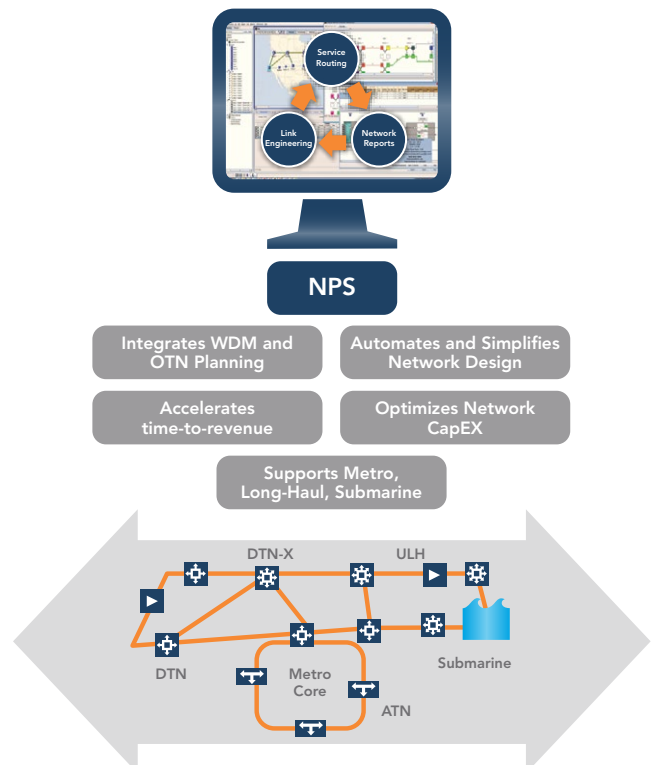

Figure 1: Carrier benefits of NPS

Infinera NPS enables you to go from desktop design to a live network implementation in minutes, rather than weeks, thereby shortening your time to revenue.

Support of network planning life-cycle: Infinera NPS is a valuable tool for modeling a greenfield Intelligent Transport Network™, creating automated network designs and generating detailed reports for analysis or deployment. NPS facilitates incremental planning above existing networks by importing snapshots of the deployed networks from Infinera's Digital Network Administrator (DNA). This capability also enables what-if scenario analysis for network growth, link failures and new service offerings.

Comprehensive network reports: Infinera NPS also offers a flexible range of output formats for integrating your network reports with your back-office system, and allows for the collaboration and sharing of design outputs. NPS network reports include site-specific equipment inventory, service availability and latency information and space and power details. Microsoft Visio-based diagrams of rack layout and fiber connections are also automatically provided, which can be directly used for deployment.
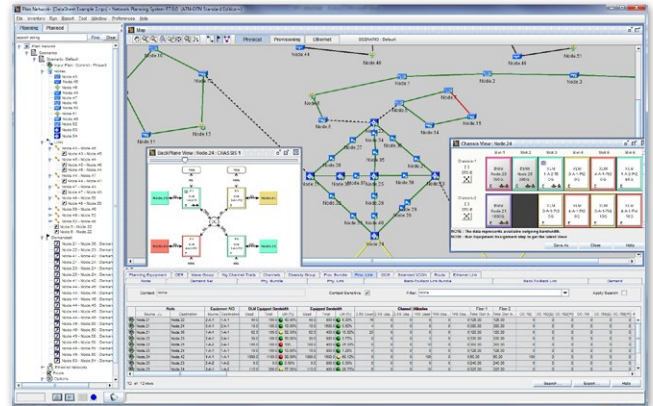
Rich and intuitive GUI: The Infinera NPS Graphical User Interface (GUI) provides easy access to traffic demands, fiber and network characteristics and resulting equipment details. NPS's dashboard displays comprehensive link and equipment inventory, detailed configuration of circuit traces, and network utilization information. For each optical link span, NPS shows all the details about equipment interconnections, optical modules types and compensation devices.

NPS Product Structure

ADD-ON MODULES	**Operational Planning**
	Visio Reports—Network documentation and system turn up procedure for deployment
	IP Address Management—Assigning DCN IP, OSC IP, and router ID to all nodes
	Service Availability Report—for SLA reports
	Advanced Planning
	Wave Group Trail Management—Create and control the resources equipped for a wave-group
	Optical Express—Specify express nodes and traffic threshold for automated optical express creation
	Traffic Matrix—Determine the available capacity between any two nodes
	Manual OCG# Assignment—Control to exact wave-group number for turning up a group of waves
	Detailed Circuit Trace Report—Detailed information on end-to-end service path
	Incremental Planning
	Phased Planning—Commit NPS Greenfield design
	Brownfield Planning—Incremental planning over DNA snapshot

CORE		
Planning DTN-X Network	Planning DTN Network	Planning ATN Network

Infinera NPS Requirements: Requires Windows XP or Vista or Windows 7.1 GB RAM required, 2GB RAM recommended.

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