

# Infinera Network Planning System (NPS)

Condition(s)	Source	
	Node	Endpoint
NCSETUPF...	NE1	0-A-4-T2-1
	NE14	12-A-6-T3-2
	NE14	12-A-6-T3-2
	NE13	1-A-4-T6-1
	NE13	1-A-4-T1-1

Cross-connect Manager:

*The Infinera Network Planning System (NPS) is a comprehensive toolkit for modeling and planning your Digital Optical Network. Infinera NPS speeds and simplifies the planning process, whether you're migrating from traditional DWDM, building a greenfield network, or evolving an existing Infinera network.*



## Powerful Planning Tools for Improved Insights

For network operators, the planning process can be an opportunity to create real economic advantage. Excellence in network planning can result in better asset utilization and thus lower network costs. Also, by ensuring the right network resources are in place at the right time, network planning can result in improved revenue and higher customer satisfaction. Infinera's NPS aims to enhance the insights and productivity of the network planner with the most powerful and valuable planning system in the optical market. Key features and benefits include:

### Integrated network capacity planning and link engineering

Network planners can load Infinera NPS with network location data, fiber characteristics, and A-Z traffic demands. NPS supports traffic engineering and protection/restoration parameters for your traffic load. Of course, it supports the full range of Infinera Line System options, including Raman amplification (for which you may choose to input point losses) and Dynamic Spectral Equalization. NPS uses this information to simultaneously provide optical link

designs and traffic engineering results, using GMPLS algorithms with options for Min-SPF and Min-TotalCycle. Optimization heuristics and an advanced optimization routing step study your traffic patterns to further reduce network costs. You can see required optical module types and any compensation devices if needed. You can also see traffic routing and circuit layouts, as well as bandwidth utilization. NPS's seamless integration of transport link engineering with traffic engineering means you don't need multiple, disjoint, third-party tools for optical and transport planning.

### Network planning life-cycle support

Infinera NPS is certainly a valuable tool for modeling a greenfield Digital Optical Network, or for planning an upgrade from a traditional DWDM network. But some customers find its value even greater for existing Infinera networks. NPS allows you to model your network under different releases of Infinera hardware and software, so you can determine whether a software upgrade might save cost or enable a new service capability. NPS also has hooks into Infinera's Digital Network Administrator EMS, allowing you to input your actual, as-built network configuration into NPS for offline



*The Infinera NPS Graphical User Interface (GUI) provides easy access to traffic demands, fiber and network characteristics, and resulting equipment requirements.*

what-if scenario planning. This integration capability makes prepping for an uncertain demand forecast easier and more precise.

**Open data exchange and reporting**

As mentioned, NPS can take its input data directly from Infinera’s Digital Network Administrator. It also supports manual input via GUI and imports .xls flat files. If you’re considering a switch to Infinera, our Professional Services team can work with you to massage your legacy EMS data for an easy import. Infinera NPS offers a flexible range of output formats as well to allow collaboration and sharing of design outputs, and also to facilitate network implementation.

**Implementable network designs**

Because Infinera understands the optical parameters of the Infinera line systems as well as the full traffic engineering capabilities, its outputs are fully implementable in the field. Infinera NPS enables you to go from desktop design to a live network implementation quickly and easily.

**Infinera NPS Functional Modules**

Module	Key Capabilities
Optical Link Designer	<ul style="list-style-type: none"> <li>• Optical link design &amp; verification</li> <li>• Multiple configurable link parameters</li> </ul>
Capacity Planner	<ul style="list-style-type: none"> <li>• Traffic engineering with multiple routing options</li> <li>• Diversity and inclusion/exclusion lists (full and partial)</li> <li>• Graphical display of topological links and circuits</li> </ul>
Network Configurator	<ul style="list-style-type: none"> <li>• Generate site &amp; network level equipment designs</li> <li>• Site engineering specs: slot assignments, fiber interconnect plan</li> <li>• Nodal flow viewer for inter- &amp; intra chassis traffic flows</li> </ul>
Network Reporter	<ul style="list-style-type: none"> <li>• Excel-based report generator</li> <li>• Network/site inventory &amp; BOMs, link utilization, etc.</li> <li>• Circuit route details</li> <li>• Module Key Capabilities</li> </ul>
Value-added Product Modules	<ul style="list-style-type: none"> <li>• Multi-phase, Incremental designs</li> <li>• EMS Import</li> <li>• Operational &amp; engineering analysis</li> </ul>

**Infinera NPS Requirements**

Requires Windows XP or Vista. 1 GB RAM required, 2GB RAM recommended.



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