



## Modeled Network Examples

This chapter provides examples of typical optical networks you can model using the Cisco Transport Planner.

This chapter contains the following section:

- [Supported Cisco Transport Planner Topologies, on page 1](#)

## Supported Cisco Transport Planner Topologies

The Cisco Transport Planner supports the following topologies:

- Linear ([Single Span Topology, on page 1](#) or [Multiple Span Topology, on page 1](#))
- Ring ([Hubbed Ring Topology, on page 2](#) or [Closed Ring Topology, on page 2](#))
- [Mesh Topology, on page 3](#)

An example of each topology is given in this chapter.

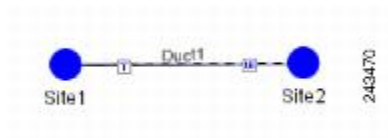
### Linear Topologies

In a linear topology, the nodes are arranged in a line and are connected to two other adjacent nodes. However, the first and last node are not connected. There are two types of linear topologies, single-span and multispan.

#### Single Span Topology

The following figure shows an example of a single-span topology. This topology is characterized by a single span link. It can support only two terminal sites (full terminal or flexible channel-count terminal) without any intermediate line amplifier or optical add/drop multiplexing (OADM) sites.

**Figure 1: Single-Span Topology Example**

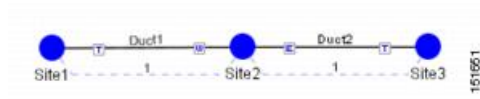


#### Multiple Span Topology

The following figure shows an example of a multispan topology. This configuration is characterized by the presence of two terminal sites (full terminal or flexible channel-count terminal) with intermediate OADM or

line amplifier nodes. In a multispan configuration, specific wavelengths are terminated at different points in the span and only unprotected traffic can be provisioned.

**Figure 2: Multispan Topology Example**



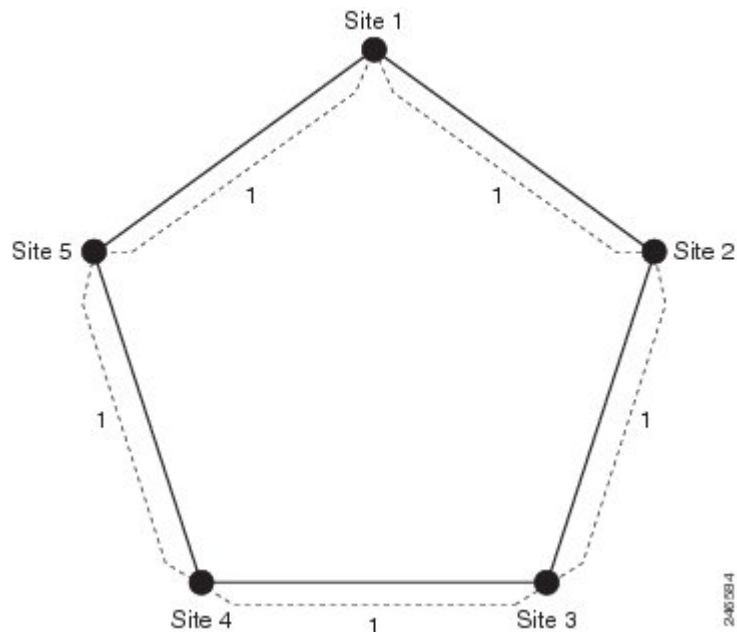
## Ring Topology

In a ring topology, each node is connected to exactly two other nodes, forming a circular configuration. It requires at least three nodes to form a ring. There are two types of ring topologies—closed ring and hubbed ring.

### Closed Ring Topology

The following figure shows an example of a closed ring configuration. Here the traffic flows in a circular manner across the network.

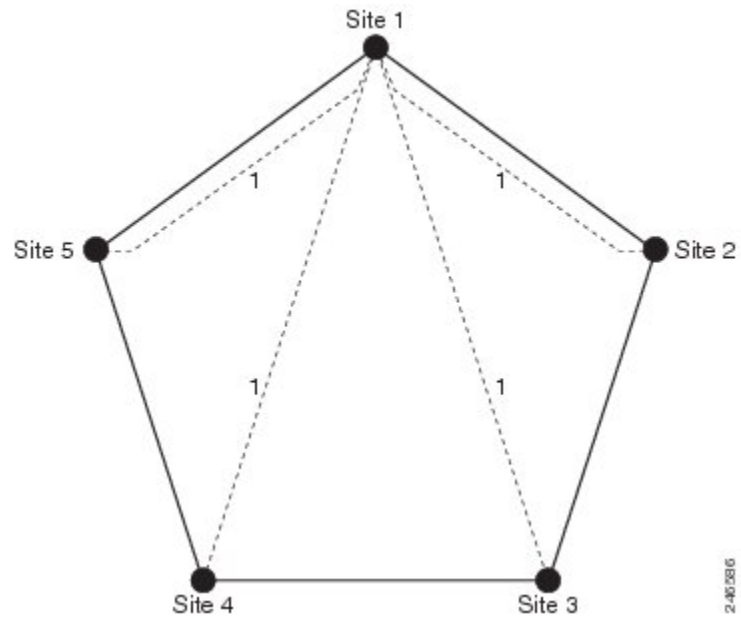
**Figure 3: Closed Ring Topology Example**



### Hubbed Ring Topology

The following figure shows an example of a hubbed ring topology, also known as an open ring. In this configuration, at least one of the sites must be a hub site, where all channels are terminated. At the hub site, no traffic is expressed from one side to another, hence forming a break in the ring.

Figure 4: Hubbed Ring Topology Example



## Mesh Topology

The following figure shows an example of a mesh topology where each node is connected to one or more nodes. This configuration provides maximum redundancy to the network.

Figure 5: Mesh Ring Topology Example

