



Technical Description

Zayo’s Dedicated Internet Access (DIA) offers symmetrical and dedicated bandwidth that features static or default routing for single-site public Internet access and is delivered over a fiber or Ethernet connection to Zayo’s network.

CONFIGURATION

Configuration options include standard, link aggregation, and burstable service capabilities. DIA provides Internet connections from a Zayo point of presence (PoP) or data center to one or more customer locations – normally within a metropolitan area. Zayo installs DIA services over our high capacity, globally interconnected network, using a single Tier-1 autonomous system (**AS6461**).

TECHNICAL FEATURES

- DIA over Ethernet handoff supports the ability to layer additional optional WAN services.
- Enterprise speeds of 10Mb to 10G (IP Transit Internet service offers 100G and higher)
- Single-homed Internet with static or default routing options
- Routing options include static, and BGP. BGP configurations offer optional Bi-directional Forwarding Detection (BFD).
- Protected access options include Link Aggregation Group (LAG/LACP) topologies, BGP multi-homing, and Virtual Router Redundancy Protocol (VRRP)
- Dual stack support for IPv4 and IPv6 simultaneously
- Dedicated and symmetrical bandwidth with burstable options available
- Aggregated DIA bandwidth billing options offer shared commit rates and burst capability across all customer location.

Interfaces and Protocol Standards

Standard Interfaces				
Protocol Channel	Speed and Line Rate	Typical Reach	Standard Handoff	Ports
100BaseT	100Mbps	100m	Copper	GigE
1000baseT	1Gbps	100m	Copper	GigE
1000baseSX, 1G-SX	1Gbps	275m-550m	MMF	GigE
1000baseLX, 1G-LX	1Gbps	5km-10km	SMF	GigE
10GbaseSR, 10G-SR	10Gbps	Varies (OM1-OM4)*	MMF	10GigE
10GbaseLR, 10G-LR	10Gbps	10km	SMF	10GigE
10GbaseER, 10G-ER	10Gbps	30km-40km**	SMF	10GigE
10GbaseZR, 10G-ZR	10Gbps	80km***	SMF	10GigE

* OM = Optical Multimode Fiber
 OM1 has a core size of 62.5 μm and can support up to 10G at lengths of 33 meters
 OM2 has a core size of 50 μm and can support up to 10G at lengths of 82 meters
 OM3 has a core size of 50 μm and can support up to 10G to 300 meters, or 100G to 100 meters
 OM4 is backwards compatible with OM3 fiber and supports 10G to 550m, or 100G to 150 meters
 ** ER beyond 30km requires link budget engineering
 *** ZR not defined by IEEE, requires coordination of transceiver specs

DELIVERY STANDARDS

Equipment

Zayo will install a Network Interface Device (NID) at the customer site to support the Dedicated Internet Access service. The customer will provide an appropriate space, power source and environment for the equipment’s sound operation. Zayo will own, monitor and maintain this equipment. Zayo works with many NID vendors. We choose the NID based on design requirements.

