Glossary

Address (or IP Address): An object which was initially defined to be used as a “Locator” but in practice an “Address” combines both identification information and host attachment information.

Default Free Zone (DFZ): A portion of the Internet where involved routers maintain full routing tables (i.e., routes for all reachable destinations). In particular, routers in the DFZ are not configured with default routes.

Egress Tunnel Router (ETR): Denotes a functional entity responsible for handling encapsulated packets received from an ITR. Precisely, an ETR is responsible for de-capsulating received packets before forwarding them to their ultimate destinations.

Host: Refers to a device that can send and receive packets but, unlike a router, it does not forward packets.

Identifier: A topology-independent object bound to a node, one of its interfaces or even a software instance. An “Identifier” is generally structured as a “name”, e.g., FQDN (Fully Qualified Domain Name) or URI (Unique Resource Identifier). “Identifier” objects must not be used for forwarding purposes. Early IP specification documents adopt the following definition: “name” (i.e., “Identifier”) of a resource indicates “what” we seek, an “address” indicates “where” it is, and a “route” tells us “how to get there”.

Ingress Tunnel Router (ITR): Denotes a functional entity responsible for encapsulating received packets (from a “Host”) to an ETR (identified by an RLOC). The source is not aware of the presence of ITRs/ETRs in the forwarding path. An ITR is likely to be close to the source while the ETR is close to the ultimate destination.

IP Connectivity Provider (ICP): An administrative entity which offers IP connectivity service to customers. “Nodes” connected to a network owned by an “IP Connectivity Provider” can send and receive packets to/from destinations reachable in the Internet.

Locator: A topology-dependent object used to identify a topological attachment of a “Host” or an interface belonging to a “Host”. A “Locator” is also referred to as host attachment information. A “Host” identified by an “Identifier” can be reached using a “Locator” as input to invoke the underlying IP transfer capabilities.

Node: Refers to a “Host” or a “Router”.

Provider Assigned or Provider Aggregatable (PA): Refers to an address space belonging to an “IP Connectivity Provider”. Addresses belonging to this space can be aggregated as part of the IP Connectivity Provider’s routing advertisements.

Provider Independent (PI): Refers to an address space independent of any IP Connectivity Provider. This space meets the portability requirement of some networks (e.g., owned by adminis-
trative entities which want to avoid renumbering when re-homing for instance).

**Router:** Refers to a device that forwards packets at the network layer of the OSI (Open Systems Interconnection) model.

**Routing Locator (RLOC):** A flavor of “Locator”. An RLOC is not assigned to a “Host” (or one of its interfaces) but it is used by intermediary nodes for forwarding purposes. The mapping between the actual host identification and an RLOC is not perceived by the “Host” or the application running on the “Host”. The mapping function between the RLOC and “Identifiers” is part of the underlying routing and forwarding system.