Where networks meet

DE-CIX CLOUDROUTER TECHNICAL SERVICE DESCRIPTION

I. GENERAL PROVISIONS

1. Overview, scope of application

DE-CIX CloudROUTER enables, data transfer between network service providers and cloud service providers, e.g. in multi- or hybrid cloud setups, by establishing a Layer 3 Virtual Private Network (L3VPN).

This document contains the Technical Service Description (TSD) for the CloudROUTER product. This TSD is part of the DE-CIX contractual framework.

This TSD shall apply only to the CloudROUTER product. The CloudROUTER product may, however, be a prerequisite for other DE-CIX services. This document contains only technical specifications and documentation. Please consult the CloudROUTER Special Service Level Agreement (Special SLA) for service levels.

2. Amendment

This document may be revised and amended at any time pursuant to the provisions of the DE-CIX Agreement.

3. Product prerequisites

CloudROUTER can host various Layer 2 connections such as DirectCLOUD and VirtualPNI to create the desired network setup. CloudROUTER product requires the following prerequisites for its normal operation:

- Either cloud environments at the enabled Cloud Service Providers between which the exchange and routing of traffic is desired.
- Or DE-CIX customer Accesses between which the exchange and routing of traffic is desired.
- Or a combination of cloud environments and DE-CIX Accesses.
- CloudROUTER service does not require customers to have a physical equipment or data center presence, and thus, DE-CIX Access is not mandatory.

4. Applicable standards

Customer's use of the DE-CIX network shall at all times conform to the relevant standards as laid out in STD0001 and associated Internet STD documents.

II. DATA LINK-LAYER CONFIGURATION (ISO/OSI LAYER 2)

For Layer 2 relevant documentation please refer to the underlying Technical Service Description of supplementary DE-CIX L2 services.

III. NETWORK-LAYER CONFIGURATION (ISO/OSI LAYER 3)

1. Bandwidth

Bandwidth of the CloudROUTER product must be explicitly configured. The CloudROUTER bandwidth must be dimensioned equal to or greater than the sum of all connections. Violation of this condition voids all CloudROUTER service warranties.

2. Prefixes per CloudROUTER instance

The default maximum of prefixes per CloudROUTER Instance is set to 5000.

3. ASN

Any CloudROUTER instance needs to be assigned a 2-byte or 4-byte ASN of the customer's choice. There is no restriction on private or public ASNs. Validity of assignment will not be verified by DE-CIX. The customer is requested to use assigned and private resources (RFC1930 and RFC6793) only, to avoid conflicts with any potential Internet/inter-domain routing in the future.

4. BGP

Protocol Specification

Cloud router supports BGP in version 4 (RFC 4271)

Category	Feature	Status
Internet Protocol	IPv4 addressing	yes
	IPv6 addressing	Not yet supported

Connections	BFD (interval = 100+ multiplier)	Optional (on/off), fix • interval = 100 • multiplier = 3
BGP	Password Authentication	Optional, configurable
	Route Filtering	Not supported
	Route Limits	4000
	Route limitation mechanism	*Deny* routes when the limit is reached
	Route Validation	Not supported
Connections	NAT	Not supported
	Protocol/Port	TCP/179, fix
	Dot1q	Optional, configurable
	QinQ	Optional, configurable
Restrictions	IPv4 restrictions	none
	ASN restrictions	none