Becoming the top DE-CIX’s reseller

INSIGHTS INTO RETN REMOTE IX SERVICE
BECOMING THE TOP DE-CIX’S RESELLER

Who we are

RETN is an international network service provider that worked its way up from a local to a cross-regional player building an exceptional pan-European fibre network and offering a range of connectivity services to a large customer base worldwide.

RETN’s unprecedented story began in 2003. RETN (REal Time Network) was founded in St. Petersburg by two network-focused Russian entrepreneurs driven to improve IP connectivity services in the region.

They saw a market opportunity and set out to launch an independent IP network in Russia, and soon ventured out to build a trans-border fibre network spearheading the transformation of the international IP market in Russia.

The head office was established in London to reflect the cross-border success and constantly increasing demand for transboundary connectivity services across the whole European continent.

RETN keeps on expanding to new regions unifying expert technical knowledge, competitive prices and the high quality level of services in all the territories where it operates.
How we got there

2003
First operator to own trans-border fibre at the Russian border with Finland and provide truly international IP Transit service.

2006
First to own trans-border fibre at the Russian border with Ukraine

2009
First to complete a European DWDM ring from Moscow to Frankfurt via Scandinavia, and back to Moscow via Ukraine

2009–2011
Growth of the international customer base using RETN’s network to reach the regions’ markets

2011
New transit DWDM route from Russia to Western Europe via Ukraine, Poland and Germany

2013
Entry into Kazakhstan
Launch of RETN’s services in Poland and the Baltic countries

2014
Trans-Baltic DWDM route from Northern to Western Europe launched

2015
Switching to 100G technology

2015-2017
Further DWDM- and metro network development throughout Europe and Russia

2018 - … Growth into Asia continues with new PoPs in Seoul

Offices in Hong Kong and Almaty established
Our International Network

- Over 33,000 km of lit fibre on our own DWDM platform
- Unparalleled coverage in Eastern Europe and Russia
- 220+ on-net Points of Presence
- Scalable 1 Mbps to 100 G services
- Resilient architecture with multiple layers of redundancy
- Pure technology environment

Unique route combinations between West and East

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01/02/2018
Historical background of the RETN Remote IX service

Given:

- Own vast DWDM network
- A lot of installed and (potentially) free capacity at the “IX” PoPs
- Strong wish to connect everyone with everything

Result:

RETN Remote IX
A service which enables everyone to become a member of a leading international Internet Exchanges from any of RETN PoPs, neither “leaving home” nor impairing possibilities of managing the traffic at remote IXs
RETN ↔ DE-CIX Frankfurt NNI

- Route Server
- DE-CIX Members

Juniper MX960

100G
LAG
100G
RETN Remote IX service in a nutshell
RETN Remote IX service in a nutshell

BGP session

L2 VPN tunnel

other RETN services

End Customer
### Two main RETN L2 VPN techniques

<table>
<thead>
<tr>
<th><strong>L2 Circuit</strong></th>
<th><strong>Remote-Interface-Switch</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Virtual Private Wire Service (VPWS) with a targeted LDP signaling (Martini transport, RFC 4447)</td>
<td>MPLS LSP Tunnel Cross-Connects</td>
</tr>
<tr>
<td>• signaling</td>
<td>• signaling</td>
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<tr>
<td>• path mode</td>
<td>• path mode</td>
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<tr>
<td>• configuration difficulty</td>
<td>• configuration difficulty</td>
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<tr>
<td>- targeted LSP</td>
<td>- RSVP-TE LSPs</td>
</tr>
<tr>
<td>- always loose</td>
<td>- flexible</td>
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<tr>
<td>- low</td>
<td>- medium</td>
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**RETN L2 VPN classification**

**Thin VPNs**
- Bandwidth: ≤ 2 Gbps
- Backbone capacity threat level: **low**
- VPN type: L2 Circuit
- Path mode: loose
- CoS/QoS: assured-forwarding

**Fat VPNs**
- Bandwidth: ≥ 4 Gbps
- Backbone capacity threat level: **high**
- VPN type: Remote-Interface-Switch
- Path mode: strict
- CoS/QoS: best-effort
RETN backbone redundancy capabilities: part 1

Option #1

Strict VPN

single path

Fiber failure effect: critical
RETN backbone redundancy capabilities: part 2

Option #2

- Strict VPN with backup path
- Two diverse routes
- Fiber failure effect: moderate
Option #3 (current)

VPN with loose path

many diverse routes

Fiber failure effect: low
Benefits of RETN Remote IX service

• You can become a member of an IXP today in no time, reducing the route of your traffic to thousands autonomous systems at least by one AS-hope as well as reducing RTT;

• Minimisation of logistics costs: single Supplier Agreement, single payment scheme, one account in national currency;

• Optimisation of total expenses: the price consists only of the charge for the port (IXP’s rates) and the price of a L2 channel;

• Easy and fast adjustment of bandwidth depending on your needs & requirements;

• Cost savings on nonrecurring charge and equipment: the service can be offered together with other services over a single port;

• Transmission part with channel bandwidth up to 10 Gbps is protected by default

• Qualified 24x7 technical support
Interesting facts about RETN Remote IX service

- The longest RIX service within the RETN network
  - Zurich – New York
  - 6300 kilometers

- The longest RIX service within the Eurasian part of our network
  - London – Tyumen (RU)
  - 4200 kilometers

- “The fattest” RETN Remote IX service
  - 100 Gbps
Cumulative traffic volume of all RETN RIX services
Thank you for your attention
Get connected

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