



**Emir Halilovic**  
Principal Analyst

# NEC and Netcracker Delve Deeper into 5G Xhaul

November 12, 2021

## ANALYST BLOG

### REPORT SUMMARY

NEC and Netcracker teamed up with Juniper and ADVA to create an end-to-end, automated 5G Xhaul solution. The cooperation raises all participants' profile in 5G transport but faces tremendous competition and diverse customer requirements.

### POSTED TO ANALYST BLOGS

#### Summary Bullets:

- NEC and Netcracker wrap their respective professional services and domain orchestration solution around Juniper's IP networking and ADVA's open line system for a multi-layer, multi-vendor, and automated 5G Xhaul.
- The cooperation has great potential to increase each of the vendors' credibility in 5G transport, but must show tangible advantages in functionality and cost savings to uproot entrenched competitors.

The 5G transport market continues to heat up, as operators are gradually waking up to the fact that transport renovation and automation will be one of the key ingredients of their future end-to-end 5G architecture. In that context, accelerated activity by NEC and Netcracker in 5G Xhaul illustrates well the importance of transport for 5G, and the size of the market opportunity awaiting. NEC, Netcracker, Juniper, and ADVA contributed their leading capabilities to their joint solution introduced in September.

#### The offering ticks several important boxes:

- IP/optical integration to simplify and streamline transport architectures;
- Support for 400ZR interfaces for cost-optimized, high-speed coherent transport;
- Open optical line system technology that can seamlessly support gear from multiple transport vendors;
- Multi-layer service and network lifecycle management to manage increasing complexity that accompany the migration to 5G architectures; and
- Closed loop automation to improve agility and respond more quickly to changing network traffic conditions.

NEC's 5G Xhaul transformation services will serve both as a key ingredient of the solution and as a differentiator, especially for operators keen on composing technology elements from different vendors but lacking in-house capabilities to do so. The multi-vendor nature of the solution should also resonate well with customers seeking more openness and choice in their transport networks.

Including Netcracker's Network Domain Orchestration into the offering is particularly significant and will appeal especially well with operators seeking flexibility and advanced capabilities like network slicing lifecycle management in their Xhaul networks. Network slicing functionality support is generally present in most transport networking elements today, both in IP and packet-optical domain. But deploying, maintaining, and decommissioning end-to-end network slices requires multi-layer and multi-domain orchestration, and is far from trivial. Even converged IP/optical networks need multi-layer and multi-domain coordination to successfully provision network slices and match them with services deployed on the network.

NEC's and Netcracker's solution enters a highly competitive Xhaul market, with already slanted playing field. Large radio vendors like Ericsson, Huawei, Nokia, and ZTE have wide and deep Xhaul offerings, and enjoy the opportunity to bundle their transport with radio access. Historically, this has meant that the attach rate between radio and Xhaul has been significant (50-60%); this significantly shrinks addressable market for any non-radio vendor. However, that could be changing as many vendors look to 5G to alter traditional infrastructure procurement paradigms. NEC's services offering and Netcracker's Network Domain Orchestration may provide important differentiators for operators seeking advanced Xhaul capabilities, but the key to success will be to demonstrate the integrated solution's capabilities in live networks- both in terms of advanced functionality, such as network slicing, and in delivering significant and measurable improvement in terms of underlying network operation economics.