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DT's Transport Network Transformation Works on the Harder and Softer Sides of MANO

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ANALYST BLOG

REPORT SUMMARY

Deutsche Telekom is digitizing its transport network using Netcracker's microservice-based, automated orchestration. The project shows that agility is as important as architecture for true transformation.

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- Deutsche Telekom's recently announced network and service automation project using Netcracker's Domain Orchestrator demonstrates current best practices in management and orchestration.
- The project's early success, however, also shows how many things need to go right to execute a true network transformation.

Deutsche Telekom is unifying and automating its German transport network with a state-of-the-art technical architecture. The new approach is already reaping benefits in efficiency and speed, but DT places as much importance on the vendor's implementation approach as it does on the technology.

Since October 8, Deutsche Telekom and Netcracker have been touting the benefits of their transport digitization. The carrier is already live with IP trunk provisioning using Netcracker's Domain Orchestrator approach, and says that it sees unprecedented speed in the area. Soon to come are unified network discovery, visualization, and trunk provisioning across the IP and optical domains. Using a real-time active inventory, the solution provides full-lifecycle management of services. The Netcracker orchestrator interfaces directly with the IP core, and all of the IP and optical layers are combined in a common visualization domain. It is also containerized, allowing for quick configuration of services and features.

The carrier is already seeing the benefits in efficiency: before the two domains were unified, it had six separate management systems. This fragmentation meant that redundant teams would respond to many outages before the location of the fault was determined. It also produced a jumbled set of processes, some of which might only be executed a couple of hundred times a year. Reasoning that functional departments will automate use cases on their own, DT is therefore focusing on building an automation platform that supports the entire network.

In conversations at the recent SDN NFV World Congress in The Hague, DT reported satisfaction with both the technological capabilities and the support it gets from Netcracker on the consulting and integration sides. While Netcracker's mature multilayer view and containerized architecture were big factors in the vendor selection process, DT assigns equal importance to Netcracker's agile implementation methodology and services. From the beginning, the project was structured around minimum viable builds, and now deploys new functionality in four-week sprints. The carrier also believes that this development model has forced an improvement in communication between its IT development and operations teams. It also cited the vendor's vital but hard-to-quantify features like energy and collaboration.

Not that every aspect of the project is a best practice: DT admits that this promising project in the transport domain may not have much direct influence on the design or selection of cross-domain, end-to-end MANO solutions. This is because transport is a largely self-contained area, with a circumscribed number of services and provisioning actions. It has also said that it was able to change staff organization and responsibilities to match the new system's automation and agility thanks largely to a major staff reorganization that the company happened to be carrying out at the time. This made it much easier to change the culture than it would ordinarily be in a large telco. On the other hand, DT believes that standards organizations have so far given short shrift to transport networks, leading it and Netcracker to build some of the data models and workflows from scratch. Every transformation project proceeds from its own set of circumstances, but the main goals should be the same: full lifecycle management, automation, and agility.

Carriers that wish to learn from DT's example in network transformation should thus pay attention to at least two major factors:

- Vendor selection: Carriers should look for a vendor with not only state-of-the-art, automated, microservice-based technology but strong methodology and implementation support as well.
- Staff and process transformation: While not every network group will be able to tie its transformation to a company-wide reorganization, carriers should build retraining and reorganization into the project from the beginning.

The right vendor partner can help with the second bullet as well as the first; carriers should be sure to build "softer" factors into their vendor selection processes.