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Netcracker Analyst Summit 2019: Vendor Plots Course to Cloud-Native

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ADVISORY REPORT

REPORT SUMMARY

Netcracker's 2019 analyst conference reinforced key aspects of its Netcracker 12 platform and demonstrated its ability to deliver on key new functionality and time-to-market promises for new services, showcasing customer momentum and satisfaction.

SUMMARY

Issue

At Netcracker's May analyst conference in London, the company showcased significant progress over the past several years in leading network operators toward cloud-native architectures, virtualized networks, agile development frameworks, and robust partner ecosystems. Specifically, Netcracker called out its intense focus in the following areas:

- Cloud and virtualization, supporting both BSS and OSS;
- 5G and IoT infrastructure, including a 5G monetization solution that enables zero-touch orchestration of 5G services, including revenue management, domain orchestration, closed-loop automation, 'BSS as a service,' real-time 5G CPQ, standardized APIs, and other factors;
- Artificial intelligence, notably an Advanced Analytics platform with pre-defined applications in the domains of customer experience, sales and marketing, network and security, and IoT and crowd behavior;
- Agile/DevOps, in both its own development and in training customers to adopt these methodologies;
- Professional services and solution implementation, most notably its 'blueprint' approach and out-of-the-box libraries of processes and functions;
- Partners and ecosystems, namely its Netcracker Business Cloud/Ecosystem 2.0 approach to multiparty service creation for NFV and SDN; and
- Contribution to standards bodies, including ETSI, TMF, ONF, ONAP, MEF, OASIS/TOSCA, and the Broadband Forum.

Historically, Netcracker has used its pre-TM Forum conferences to introduce a new version of its core platform. However, since Netcracker 12 was introduced in 2017, the company has switched to continuous delivery/continuous deployment (CI/CD), choosing instead to release new feature sets as they are developed. The company reports that about 70% of its customers are using this latest version, while 30% are still on Netcracker 10.

Prominent recent customer engagements include Grupo Gtd., a Latin American service provider that selected Netcracker's full-stack OSS and BSS solution in May 2019, and Japanese web e-commerce brand Rakuten, which uses Netcracker BSS for its MVNO operation and has selected Netcracker's OSS for its launch as a network operator.

Key Takeaways

- **Load-and-Go Platform:** Netcracker provides a platform with extensive out-of-the-box, configurable features, enabling an operator to move rapidly from requirements to deployment.
- **Full Stack:** Netcracker's sweet spot in the digital transformation market is in what it terms 'full-stack' implementations, delivering end-to-end solutions and providing or integrating everything necessary for the service.
- **Flexible Delivery Models:** Netcracker provides operators the option to deploy services on their network of choice- private, public (AWS, Azure), or hybrid- including the Netcracker-sourced data center in the U.S.
- **CI/CD Becomes Reality:** Netcracker has transitioned its complete platform development to a CI/CD model, replacing its biennial numbered releases with incremental, 'as needed' features.
- **Cloud-Native in Progress:** Netcracker is transitioning its platform to a cloud-native architecture, supporting both VM- and container-based functions; this move should provide more granularity and flexibility to deliver and reuse microservices.
- **High Customer Accolades:** At the conference, several customers (notably Rakuten and Telefonica) called out time to market, professional services, and flexible deployment and commercial models as important Netcracker strengths.
- **AI from NEC:** AI and telemetry are now table stakes requirements for all services; Netcracker taps parent company NEC to support intelligent service automation and network performance.
- **Multivendor Chops:** Netcracker shared its experiences gained from interoperability PoCs across several SDN/network orchestration solutions. Although its solutions are market-ready, the industry still has work to do on improving SDN interoperability.

PERSPECTIVE

Current Perspective

Netcracker has invested heavily in becoming a full-stack BSS, OSS, and cloud infrastructure vendor. It also collaborates with parent company NEC on virtualized elements like virtual CPE, vertical IoT solutions, and AI use cases. The company's broad portfolio and fast development mean that it is active in a variety of areas, with an emphasis on cloud-native architecture, agile development methodologies, and quick service introduction.

Common Architecture and Ready-Made Components: Netcracker 12 has a common architecture across all components, whether customers are buying one component or 20 (see below).
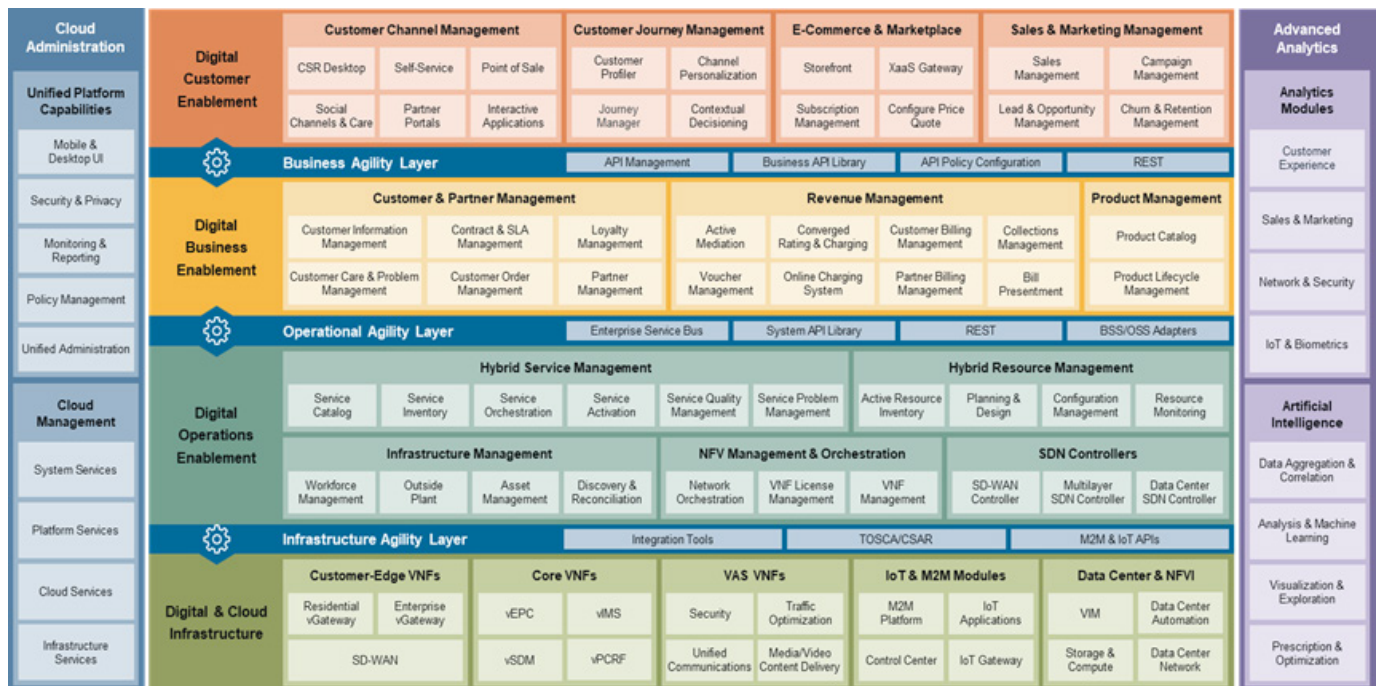
Source: Netcracker- Release 12

CI/CD and 'Cloud-Native' Are the Way Forward: Netcracker's move to CI/CD benefits customers by allowing it to push requested features to production much more dynamically. Under Netcracker's standard procedures, features developed to meet a specific customer request are then available to all its customers. To enable telcos to build new business cases without prohibitive costs, Netcracker is also moving its entire platform to cloud-native architecture and to general-purpose platforms. Some of its customers are pushing it to move from proprietary to open source databases and from local data center implementations to Amazon Web Services and Azure. Doing so allows for any combination of private and public cloud deployment. To further facilitate its full-stack model, Netcracker can host an operator service from its data center in the U.S, offering yet another option to facilitate rapid deployment and minimizing the cost to deploy at the same time. This is also the case with its highly publicized Business Cloud service.

Out-of-the-Box Functionality: Prompted in part by its experience with Telefonica and other telcos, Netcracker emphasizes out-of-the-box functionality. It has libraries of functions and processes that can be put into production immediately and are largely vendor-agnostic. This has enabled some carrier customers to launch quad-play services on day one. This functionality is largely catalog- and configuration-driven. At the event, some of Netcracker's customers reported that they would change processes to accommodate Netcracker's ready-made functions rather than customize the functions to fit their processes. Overall, Netcracker boasts 80-90% 'approval rate' of its off-the-shelf components in recent projects and has a system for coordination with the client operator to get the final solution architecture flushed out and accepted by both sides.

Multivendor Support Challenges Remain: Netcracker also shared experiences from multivendor proofs of concept (PoCs) for transport SDN and noted that "not all domain controllers are created equal." Depending on the vendor, domain controllers offer an inconsistent set of support features and expose varying levels of control to orchestration or hierarchical controllers. Another vexing issue is telemetry, which is currently available on a relatively limited number of platforms. As a result, Netcracker needs to rely on probes to gather network intelligence until telemetry becomes more widespread and feasible.

Customers, Customers, Customers: Netcracker devoted a significant portion of the conference to hearing from key operator customers. The forum provided an opportunity for analysts to better understand how Netcracker engages with customers to address both technical and business model concerns, as well as how these customers engage Netcracker platforms to create new services. Some of the data in the presentations was provided under non-disclosure agreement, but overall, these operators provided a full-throated endorsement of the key Netcracker capabilities described above.

RECOMMENDED ACTIONS

Vendor Actions

- Clarify Orchestrator Models: Netcracker's domain orchestrator architecture is sophisticated but complex. This coordination is challenging, and will likely remain a future proposition for some time. While this model remains prevalent, Netcracker should clarify that it also supports conventional hierarchical orchestration, in which every logical domain has its own orchestrator, but all are coordinated by an overlay layer.
- Update Available Feature Catalog: Given the transition to incremental feature releases, Netcracker needs to telegraph to the market new features and capabilities that become part of the standard platform for general usage; the lack of a major release cadence needs to be replaced with a new mechanism.
- Clarify Cloud-Native Benefits: Netcracker needs to better define the value that its cloud-native containerization will bring to the market in terms of application performance per server, accelerated time to market, reuse of functions, or reduced deployment costs.
- Clarify NEC-Netcracker Collaboration: The two companies collaborate on network transformation solutions, especially in NEC's home market of Japan, as well as in other markets (e.g., Bell Canada, Etisalat, Bristol Smart City [UK]). NEC and Netcracker should highlight that their joint solutions are available to all markets without preset territorial boundaries and each contributes uniquely to the solutions (i.e., NEC AI and Netcracker OSS/BSS expertise, respectively).

User Actions

- **Sample Full-Stack Advantages:** Operators should evaluate Netcracker's ability to deliver a new service on an end-to-end basis leveraging its full-stack model. Implementing a single self-contained service as a model will provide practical insights into the overall process and Netcracker's time-to-market claims.
- **Consider a Netcracker Hosted Service:** Operators pursuing an opportunistic service, like support for a month-long sporting event, should consider building a specific service leveraging Netcracker's ability to host it in their data center; this would optimize time to deployment and avoid any long-term infrastructure commitments.
- **Develop Plan to Solve Multivendor Challenges:** Given the long-term goal of being able to support multivendor networking environments, operators should work with Netcracker to identify and address real-world challenges such as inconsistent domain control and telemetry capabilities. Given the modularity of the Netcracker solution, operators can leverage key components (e.g., OSS/BSS) that they can integrate into their overall network infrastructure.