

On the Radar: Netcracker BSS and 5G monetization

Netcracker digital BSS solution takes charge of 5G monetization capabilities

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Summary

Catalyst

As communications service providers (CSPs) start to roll out 5G networks, the reality is hitting about how to make money from new 5G services, and how to go to market with new industry partners and business models. Monetization is now a key focus with questions such as, what are the key use cases and services that will drive new revenue, and what kind of new capabilities are needed from billing support systems (BSS) to support new 5G services?

Existing legacy IT systems that support traditional products are not designed for dynamic, high-volume 5G services. A majority of CSPs are either in the process of upgrading or planning upgrades to agile and real-time IT systems deployed in the cloud that can flexibly support monetization of new advanced 5G services (e.g., on-demand cloud networks and network slices).

Key messages

- Netcracker's Digital Business Enablement and Digital Customer Enablement set of BSS products are based on a microservices cloud native architecture, which is core to Netcracker's product architecture and strategy. In addition to offering multiple on-premises and cloud deployment options, Netcracker also offers a unique managed "microservices-as-a-service" feature.
- Digital Business Enablement's focus on partner management is designed to support CSPs that are making a push into the IoT space, or planning to expand and monetize their partner ecosystems, to co-develop new 5G revenue streams and B2B2X services.
- Netcracker identifies enhanced slicing support (e.g., cross-slice charging, real-time rating and charging, partner revenue sharing, converged charging, and KPI monitoring and analytics) across a cloud native architecture as the must-have components of 5G monetization.
- Netcracker relies significantly on its consulting and professional services capabilities in order to help CSPs successfully transition to the microservices-architected Digital Business Enablement module in order to reap the business and operational benefits.

Ovum view

- Overall, monetization systems have to be flexible enough to meet the needs of new 5G business models and services, and support a variety of flexible, real-time billing models at scale.
- CSPs will require vendors to offer cloud native microservices-based billing software components that can be orchestrated on-demand, and fully support open RESTful APIs and agile business and delivery models.
- Converged OSS and BSS capabilities that manage the end-to-end customer experience and real-time analytics that provide operational intelligence will be essential to effectively deliver business-critical services.
- A key differentiating element within Netcracker's Digital Business Enablement is that, based on its microservices architecture, it is a true cloud BSS offering. Netcracker has the competitive advantage of having rebuilt its entire product portfolio based on microservices,

compared to other BSS competitors that are still in the very early stages of rebuilding their product portfolios following this architecture.

- From a 5G standpoint, Netcracker's strongest feature is the tools it provides to manage and monetize 5G partner ecosystems and investments in IoT. Netcracker takes a comprehensive end-to-end approach to partner management which helps to differentiate itself in a line of business piquing CSPs' interest as they start to deploy 5G.

Recommendations for CSPs

Why put Netcracker on your radar?

Netcracker is a leading provider of BSS solutions to more than 250 service providers that are making strategic investments in [digital transformation](#), cloud services, virtualization, [IoT ecosystems](#), and [5G monetization](#). Netcracker's BSS solutions are based on a single, cloud native, convergent architecture which leverages microservice and RESTful APIs, and can be deployed in private, public, or hybrid cloud environments. Netcracker's Digital Business Enablement solution is comprehensive, covering customers, partners, resellers, and wholesale channels and delivering convergent charging, billing, and multi-partner revenue sharing models. Netcracker has expertise in the SDN and NFV domains, as well as covering both the OSS and BSS domains and the full digital customer experience from onboarding to billing, backed by professional services capabilities, which is an advantage for operators looking to futureproof their BSS decisions, and migrate to a microservices-based architecture.

Highlights

Company background

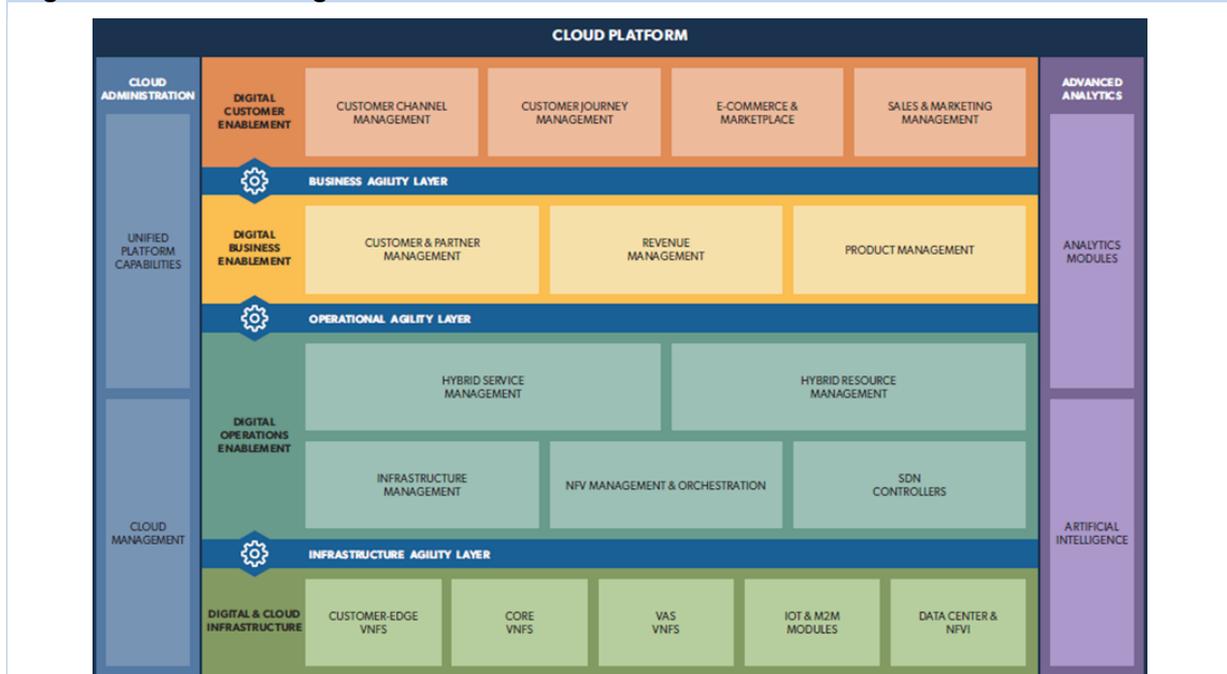
Netcracker is a software vendor specializing in BSS, OSS, software-defined networks (SDN), and network function virtualization (NFV). Netcracker was founded in 1993 and is headquartered in Waltham, Massachusetts, US, and has more than 160 offices across the globe. In 2008, Netcracker was acquired by NEC, and in 2015, NEC took control of all of Netcracker's software products.

Netcracker has more than 250 service provider customers across Asia-Pacific, EMEA, LATAM, and North America. Netcracker is publicly traded under the NEC brand. The vendor primarily serves the telecoms industry (accounting for approximately 80% of total revenue), and also serves the banking, energy & utilities, public sector, retail, logistics, entertainment, travel, and other vertical markets.

Netcracker delivers OSS and BSS capabilities via its microservices-based, cloud native platform. The Netcracker product suite includes Digital Customer Enablement, Digital Business Enablement, Digital Operations Enablement, Digital & Cloud Infrastructure, Cloud Administration, and Advanced Analytics (see Figure 1).

Netcracker offers a broad portfolio of professional services, including business and operational consulting, end-to-end turnkey delivery, agile development and DevOps, cloud enablement, support and maintenance, managed services, and outsourcing services.

Figure 1: Netcracker Digital Business Enablement and full-stack Netcracker architecture



Source: Netcracker

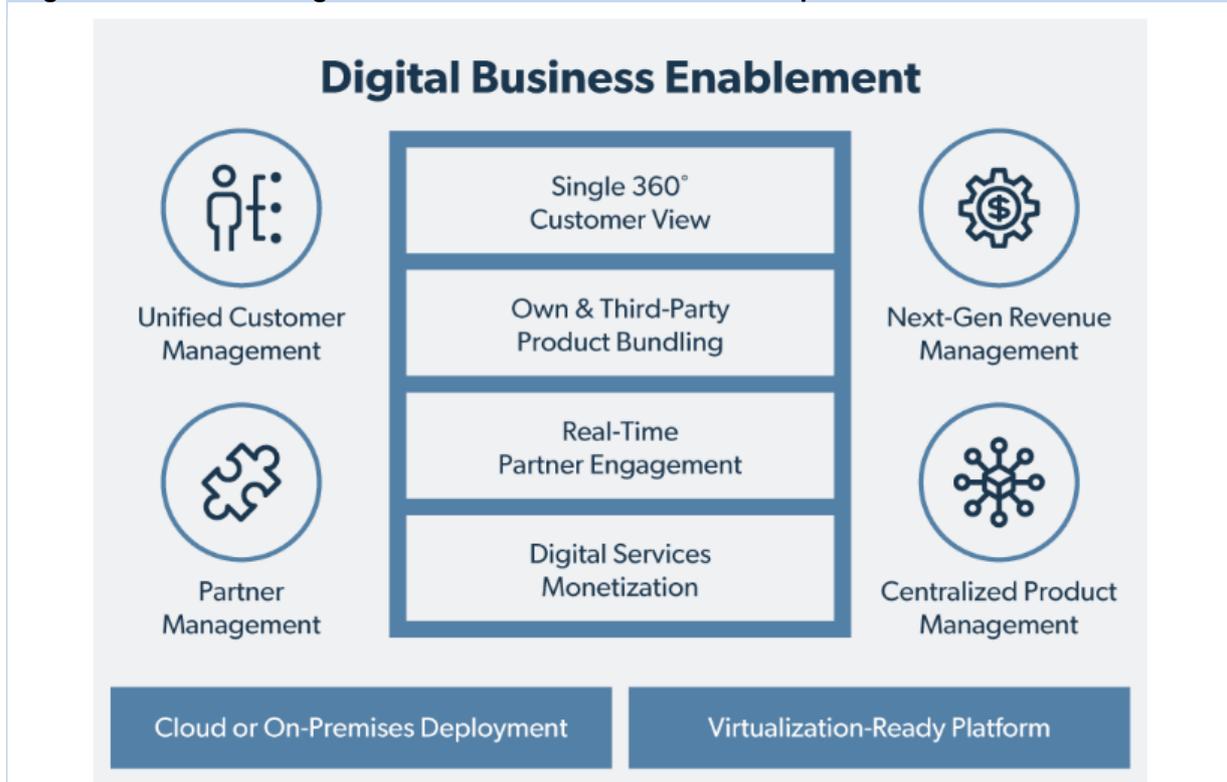
Netcracker Digital BSS portfolio

Netcracker's Digital BSS solution, Digital Business Enablement and Digital Customer Enablement, aim to address CSPs' challenges with making the transition to being digital service providers with monetization capabilities such as real-time and convergent charging, faster time-to-market with new services and partners, and end-to-end customer experience. Digital Business Enablement provides centralized customer and business management repositories, contextual customer information and real-time personalization using analytics, and can support flexible charging scenarios.

Netcracker's Digital BSS is built using microservices architecture. This can be deployed in as little as eight weeks for tier 3 CSPs, and up to 12 months for tier 1 CSPs. The solution can be deployed as an SaaS offering or managed service, or in a private, public, or hybrid cloud environment. Netcracker also offers a robust API library that enables the integration of Digital Business Enablement with solutions from more than 170 vendors.

Digital Business Enablement consists of three main areas: product management, revenue management, and customer and partner management (see Figure 2).

Figure 2: Netcracker Digital Business Enablement – BSS components



Source: Netcracker

Centralized Product Management

Netcracker offers a centralized product catalog feature across traditional and digital products that can be deployed either as a master catalog or a sub-catalog. It includes the capability to manage all telco products as well as third-party products in a single catalog. It offers a real-time product information view and a "single source of truth" which gives commercial teams and service designers the ability to create new bundles and service offers or discount pricing in order to improve speed to market. For example, service providers can enable location-based promotions and sponsored trials as well as try-before-you-buy and pay-as-you-go experiences.

Next-gen Revenue Management

Revenue Management is the monetization component of Digital Business Enablement. This includes capabilities such as billing, shared data bundles, a policy-based online charging system (OCS), and balance notifications to prevent bill shock. As virtualized networks allow for more agile service creation and limitless charging scenarios, having a charging and billing solution that can scale to meet demand will be important for these pieces to operate successfully.

Multitenancy capabilities allow CSPs to support multiple business channels on a single solution, keeping the channels logically separated, rather than physically separated. Multitenancy allows CSPs to lease out their billing systems to other businesses such as an MVNO in the form of BSS-as-a-service.

Additionally, Revenue Management's ability to support complex B2B2X-scenario business models plays well for CSPs that are expanding their 5G partner ecosystems and venturing into the IoT

domain. Features such as billing-on-behalf-of and white label billing offer CSPs an opportunity to generate revenue through new partnerships and business models.

Unified Customer Management

The Customer Management portion of Digital Business Enablement offers CSPs the elements needed to manage the digital customer experience. Features such as a single 360-degree view of the customer are further enhanced when used together with the centralized product catalog, which creates consistency in product and customer information across channels. Additionally, this enables monetization in the form of next-best offers and personalized services and recommendations for customers, as customers move through different channels.

Partner Management

Netcracker enables contract and SLA management as well as partner relationship management and partner self-service capabilities. The partner relationship management and partner self-service capabilities enable partners to manage onboarding (including contract and SLA management), as well as access the CSP product catalog, pricing, and business model schemes (such as revenue share model setups), settlement, and additional features such as policy control. The Netcracker partner management tool uses the capabilities of the entire Digital Business Enablement offering, and opens them up to CSP partners. This provides some structure by using a templated approach in the way CSPs do business with their partners, and allows for partners to be self-sufficient, while freeing up the CSP to focus on larger, more strategic partnerships and revenue opportunities.

Looking ahead to 5G monetization

Netcracker has pulled together the key components of its 5G-ready monetization solution, including support for multitenancy across a cloud-native microservice architecture, online rating and charging, and cloud-based product and revenue management.

Netcracker considers the following BSS capabilities as necessary for service providers to properly monetize 5G:

- enhanced real-time charging and rating
- complex multi-partner revenue sharing models
- network slicing support (e.g., dedicated per-slice online charging)
- dynamic geo distribution deployment, (e.g., charging support for new mobile edge or low-latency services)
- new rating models (e.g., that support service-specific charging, cross-slice charging and slice differentiated charging and multi-dimensional real-time charging that supports any user, device, event, or service attribute)
- real-time offers, personalized, automated offer design and a dynamic product catalog.

Developing new industry partners and business models is a key driver for success even for short-term 5G services roll-outs, such as mobile data services for connected car, remote health monitoring, and ultra low latency for remote robotic operations. BSS systems need to be multi-tenanted to support multi-partner revenue sharing models, including offering BSS-as-a-service capabilities, and supporting complex B2B2X charging models, and slice-based scenarios for partners and large customers.

Netcracker also sees a requirement for cloud native architecture with microservices components that can be spun up on-demand and geographically distributed as needed, a policy and charging engine, and the ability to support real-time rating/charging and convergent charging capabilities (integrated online and offline) as well as subscription-based billing and management.

In addition, Netcracker will monitor KPIs and analytics across all those activities, particularly for mobile data services with quality of service (QoS). As 5G will be a transition, supporting multi-network charging from 3G, 4G, and 5G will also be required.

Data Sheet: Netcracker

Product name	Digital Business Enablement, Digital Customer Enablement	Product classification	Revenue Management, Partner Management & Customer Management
Version number	Netcracker Product Suite	Release date	Continuous Release Cycle
Industries covered	Communications Service Providers (CSPs)	Geographies covered	EMEA, Asia-Pacific, Americas
Relevant company sizes	Large enterprises	Licensing options	Perpetual, concurrent user license, site based license and subscription-based licenses
URL	https://www.netcracker.com/products/products/digital-business-enablement/ https://www.netcracker.com/products/products/digital-customer-enablement/	Routes to market	Direct and indirect channels
Company headquarters	Waltham, MA (US)	Number of employees	>10k

Source: Netcracker

Appendix

Methodology

On the Radar is a series of research notes about vendors bringing innovative ideas, products, or business models to their markets. This research note was supported by Ovum briefings with the Netcracker team.

Further reading

On the Radar: Oracle BSS and 5G monetization, SPT001-000062 (May 2019)

On the Radar: Ericsson advances BSS and 5G monetization plans, SPT001-000067 (June 2019)

2019 Trends to Watch: Telecoms Operations and IT, SPT001-000058 (March 2019)

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