Technology Analysis – Partner ecosystem management solutions

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Catalyst

Communications service providers (CSPs) around the world are marching forward with the deployment of the 5G network. Yet, even as CSPs take the new network live, much of the telecoms industry is still unsure what the key revenue drivers will be for 5G or what monetization strategies they will employ.

The Informa Tech *5G World Series Market Survey* found that 42% of CSPs plan to turn to B2B2X business models to monetize 5G-related services. While such model will enable CSPs to branch out into new industry verticals and support initiatives like IoT, smart cities, and Industry 4.0, successfully implementing a B2B2X strategy requires the coordination of multiple partners and suppliers across industries. Furthermore, many CSPs currently lack the IT capabilities needed to orchestrate the delivery of complex services involving multiple partners across industries.

New service offerings, such as IoT, smart cities, Industry 4.0, and several other new use cases, will require CSPs to coordinate across several partners and suppliers to deliver these use cases. As the number of B2B2X-enabled services that CSPs offer grows and likewise, as the number of partners in the CSP's ecosystem grows, having a partner management solution in place to manage the ecosystem and the delivery of partner-enabled services will be key to the success, scalability, and sustainability of B2B2X services. This report assesses the technology landscape for partner management solutions in the telecoms industry—highlighting some of the vendor partner management solutions currently available to CSPs.

Omdia view

To preserve its place within the telecoms industry, CSPs will need to take a new approach to monetization with 5G. Rather than focusing on being connectivity providers, CSPs need to become service enablers and partner with businesses, developers, and other players across domains and industries in order to create unique 5G service offerings to differentiate themselves in the market. To find success in the 5G era, CSPs will need to maintain an ecosystem of partners that allows the CSP to innovate and expand its reach across industry verticals. Doing this successfully will require CSPs to implement a partner ecosystem management strategy and solution. Partner ecosystem management solutions available on the market today are either horizontal, end-to-end solutions that have been verticalized for the telecoms industry or are vertical solutions that include basic partner management features.

Key messages

- CSPs must become service enablers and leverage the network as a platform, on which partners can develop and create 5G-enabled services. This will allow CSPs to differentiate themselves in the market and protect its quickly eroding market share that is being lost to internet content providers (ICPs).

- Partners that provide technology, domain, and other types of expertise will be critical to a CSP's success in the 5G era.

- CSPs must implement a partner ecosystem management strategy and solution that enables them to recruit, onboard, manage, sell, and market to partners in their ecosystem while also meeting the unique requirements of the telecoms industry.

- Billing, settlement, onboarding, and reporting are the most common features across partner ecosystem management solutions available in the telecoms industry. Additional features vary depending on whether solution vendors take on a horizontal or vertical approach to development.

Recommendations for service providers

- **Identify a partner ecosystem strategy before investing in solutions.** Before investing in a partner ecosystem management solution, CSPs must have a clear partner ecosystem strategy in place. There are many components and different approaches to partner ecosystem management solutions; to understand which types of solutions best meet the needs of the organization, clear vision of the partnership strategy is needed. CSPs will need to consider the types of partnership models, initial target industries, partner recruitment strategy, go-to-market strategy, and other business objectives, and how these impact the organization's IT requirements for a partner ecosystem management solution.

- **Remember that attracting and retaining individual partners is important to ecosystem management.** As CSPs invest in partner ecosystem management solutions, they should remember that finding and recruiting the appropriate partner and ensuring that these partners have a mutual beneficial relationship with the CSP is important to the success of a partner-led monetization strategy. When considering the organizational needs in a partner management solution, CSPs should consider how they plan to attract and retain partners within the ecosystem and consider what tools they will need to do so. Having these capabilities in mind will help CSPs create a shortlist of vendor solutions.

- **Consider solutions that can evolve with your partner strategy.** For most of the industry, complex partner ecosystems and partner management strategies are nascent. However, over time as a CSP's partner ecosystem grows and supports various use cases and business models, the CSP's needs in a partner ecosystem management solution will likely evolve. CSPs should keep this in mind when investing in a partner ecosystem management solution and consider those solutions with robust partner management capabilities that can be added on or made available from a vendor solution partner.

Recommendations for vendors

- **Find the right balance between horizontal and vertical capabilities.** Vendors hoping to differentiate their partner ecosystem management solutions in the market should aim to strike the right balance between horizontal and vertical capabilities in the solution. While the telecoms industry has unique requirements in partner ecosystem management (e.g., requirements around service fulfillment), CSPs will also need more traditional partner management capabilities such as onboarding and sales management. Vendors should develop partner ecosystem management solutions that offer the best of both worlds—traditional partner management capabilities with telecoms industry expertise.

- **Form strategic partnerships to enhance solution capabilities.** Those vendors that either are unable to deliver end-to-end partner management or telecoms vertical expertise in a single solution will need to look to strategic partnerships to help supplement solution capabilities.

Those vendors with robust partner ecosystem management solutions for the telecoms industry can also use strategic partnerships to extend the capabilities of their solutions to differentiate their offerings in the market and meet the evolving needs of CSPs.

Technology overview

Market context

More than 130 CSPs worldwide have already launched 5G. Yet, the telecoms industry remains largely unsure how it will monetize the next-generation network. Omdia and Informa Tech's *5G World: 2020 Global Insights* survey found that nearly 60% of CSPs who have already launched 5G said, "finding profitable business cases" was the biggest challenge they faced.

This is concerning for several reasons. For years, CSPs struggled to monetize 3G and 4G even though the value proposition was clear—mobile applications. In recent years, the telecoms industry has been disrupted by ICPs, like Facebook, Apple, and Amazon, that have created a paradigm shift among consumers and across the telecoms industry by delivering more relevant and personalized digital services to consumers. These digital players have carved out a niche within the telecoms industry and have eroded the market share of CSPs to the point that CSPs are now in grave danger of becoming the minority player in their own industry.

Outdated monetization strategies in which network connectivity is seen as a utility and wherein consumers are charged based on the amount of data consumed, is no longer a profitable business strategy in a data-heavy economy. In 4G, this monetization strategy lay the groundwork for ICPs to develop solutions on top of the network and reap the profits of offering digital services that meet the needs of specific customer segments, while CSPs saw customers churn away from traditional services like voice and SMS, in favor of digital alternatives.

Despite the lack of a "killer use case" for 5G, many CSPs are unwilling to accept a similar fate for 5G as they did in 3G and 4G. Instead, hoping to return to revenue growth, many CSPs are keen to diversify revenue streams, expand into new industry verticals, implement new business models, and embrace new monetization strategies for 5G. Becoming a service provider or enabler, rather than a connectivity provider, and leveraging the network as a "platform" is one way that the industry is preparing to monetize 5G.

Partners will play a key role in CSPs shift from connectivity provider to service enabler. Playing the role of channel partner or service cocreator, partners will provide the telecoms industry with many of the missing pieces needed to expand into new industry verticals, implement new business models (e.g., B2B2X, digital marketplaces, etc.), and diversify revenue streams. Incorporating partners into the 5G monetization strategy, however, requires CSPs to implement a partner ecosystem management strategy and tools.

The concept of partner management is evolving in telecoms

Partner management is not a new term within the telecoms industry, but the concept of partner management, as it pertains to its role in monetization, is changing. CSPs have always had partners—whether roaming or interconnect partners, MVNOs, direct carrier billing partners, or authorized dealers. However, these partnerships require only minimal management, and contract management is typically the extent of what is done.

In recent years, the types and nature of the partnerships formed has evolved significantly. A recent trend has been for CSPs to form partnerships with ICPs to differentiate themselves in the market. T-Mobile's Un-

Carrier program is perhaps the most famous of this partnership model. A lineup of rotating partners, like Spotify, Pandora, and Netflix, have helped CSPs capture the attention of consumers and snatch market share. Many of these partnerships, however, are simply strategic partnerships. They serve to entice consumers to become subscribers of the CSP so that they can take advantage of a partnership deal, or they create relevancy among the existing customer base. It is also important to note that CSPs today typically only have partnerships with a handful of companies at a given time and these partnerships often do not result in the creation of new services or products.

By contrast, in the 5G era, partnerships will play a critical role in the creation and cocreation of 5G services. As **Figure 1** illustrates, Omdia's recently published *OSS/BSS Evolution Survey – 2021* survey found that 53% of CSPs were implementing a partner ecosystem management strategy to deliver a wide range of 5G services and 47% to support new business models.

1. Figure 1: CSPs are driven to invest in partner management systems to deliver 5G services

What is driving your partner ecosystem management strategy?
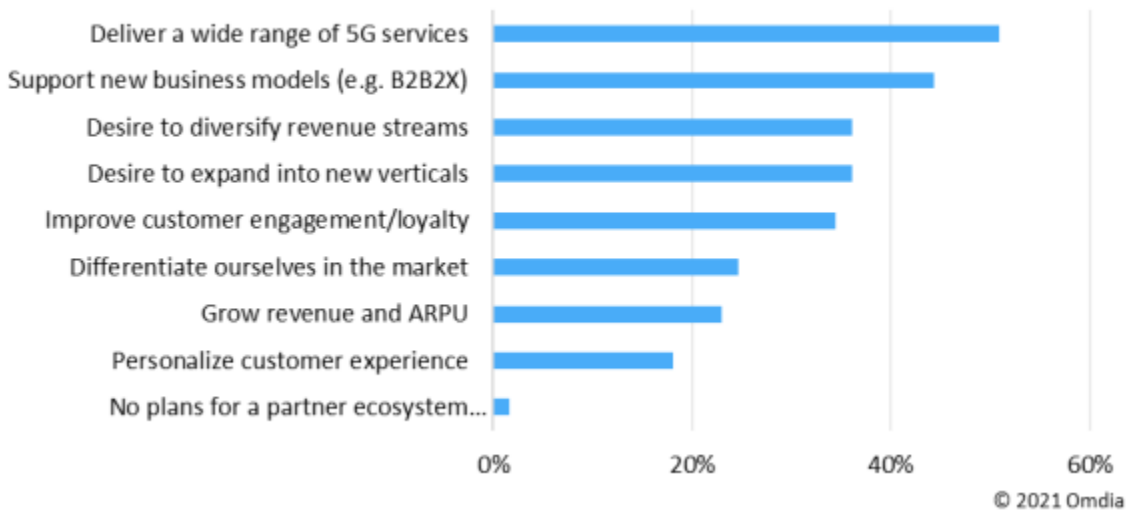
Source: OSS/BSS Evolution Survey – 2021, Omdia

Many complex 5G services and use cases such as autonomous driving, smart cities, and numerous Industry 4.0 use cases, will require the support of multiple partners. Deutsche Telekom (DT), for example, announced in late 2019 that it had formed a 5G partnership with Ericsson, E&K Automation GmbH, Konica Minolta, and Endress+Hauser to deliver several Industry 4.0 services, including automated guided vehicle systems, augmented reality glasses, and industrial measurement technology.

Omdia anticipates that as the 5G network matures alongside 5G use cases, CSPs will partner with hundreds of companies, including vendors, enterprises, equipment manufacturers, and vertical industry experts. Managing this growing and ever-changing ecosystem of partners will present a challenge for the industry unless CSPs invest in partner ecosystem management solution.

What does a partner ecosystem management solution include?

2. Figure 2: Core components of a partner ecosystem management solution

| Recruitment | Portal | Relationship management | Marketing | Sales management |

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Source: Omdia

Partner management solutions are an established technology area that has traditionally been served by horizontal (or industry agnostic) vendors. **Figure 2** shows that traditional partner ecosystem management solutions can be broken down into five core components, including recruitment, portal, relationship management, marketing, and sales management.

Recruitment

Finding and attracting the right partners into the partner ecosystem can often be a challenge for enterprises. As such, many partner ecosystem management solutions include tools to aid the recruitment process. Recruitment tools can include channel marketing capabilities that enable the enterprise to create marketing campaigns aimed at attracting new partners. Additionally, some solutions include tools like lead forms and the ability to tag partner lead to various recruitment campaigns such as campaigns targeted toward prospective partners in a specific region or industry.

Portal

The partner portal serves as a hub where partners are onboarded and provided access to vital information about the enterprise and the partnership. Within the portal, an enterprise may provide partners with access to a resource library, information related to governance and compliance, training and certification, access to partner communities and other support tools, access to partner surveys, and a dashboard with reporting and insights.

Relationship management

The relationship management component, as the name suggests, provides enterprises with the tools that they need to manage the relationship with each of their partners. Relationship management capabilities

vary depending on the solution and targeted industry. Some standard components include enterprise controls to manage the onboarding process, including the approval or denial of partners during the onboarding process. Access to the enterprise's product catalog, pricing and offer schemas, contract management, dispute management, and customer and partner care capabilities can also be provided by the relationship management tools.

Marketing

Many horizontal partner ecosystem management solutions also include marketing components to help facilitate the promotion of partner cocreated services and offerings. The features and capabilities within the solution itself, however, typically vary from solution to solution. The most common marketing capabilities include allowing partners to create direct mail and email marketing campaigns, tools for the cobranding of services and other assets. Marketing campaign management, allocation of marketing budget to partners, tools to create microsites, and the ability to integrate with the enterprise's mobile app and website.

Sales management

The sales management component enables the enterprise to provide tools to its partners to help facilitate the sale of its services and products. Sales management tools can include out-of-the box configure-price-quote (CPQ) or salesforce management systems. Within the sales management component, enterprises are often provided with tools to help incentivize partners to sell more. Commission scheme setting, gamification, and partner rewards are some examples of tools that allow enterprises to motivate partners to sell.

Key feature requirements and vendor selection criteria for the telecoms industry
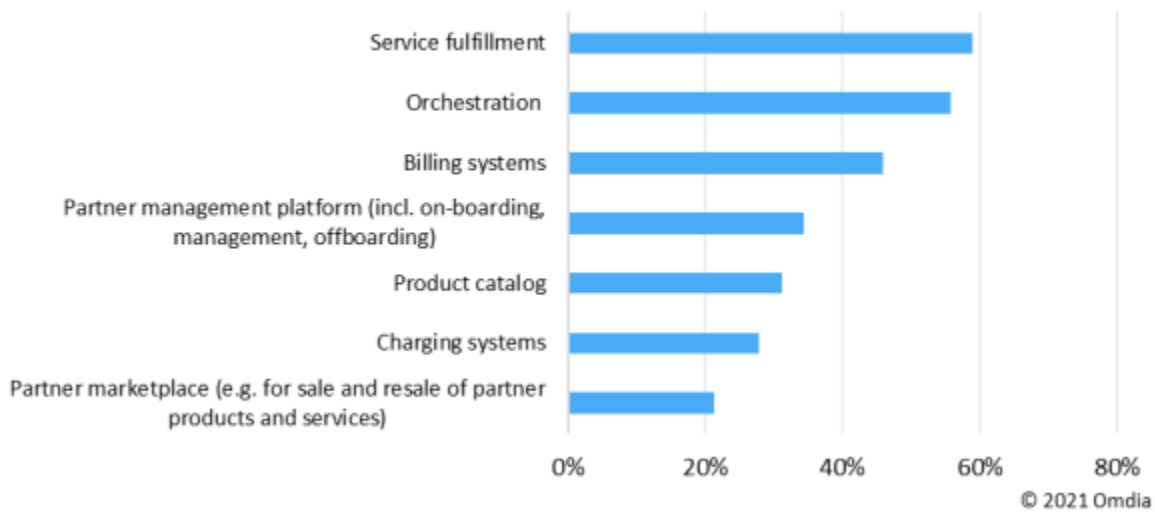
Although partner ecosystem management is an established solution area, its presence within the telecoms industry, as a tool to support the coordination of a dynamic partner ecosystem and the cocreation of services developed on the CSP network, is still nascent. The telecoms industry also has unique operational requirements that vendors must consider when presenting a partner ecosystem management solution to CSPs.

Omdia's *Telecoms – ICT Enterprise Insights 2021* survey found that implementing a platform approach to partner management is a growing priority for CSPs, with more than 35% of CSPs listing it as a very important IT project for 2021. To understand what features and capabilities that are most important to CSPs as they invest in partner ecosystem management solutions, Omdia conducted further primary research.

Of those CSPs who plan to invest in partner ecosystem management capabilities in 2021, 57% will invest in service fulfillment capabilities, according to Omdia's *OSS/BSS Evolution Survey – 2021* and as illustrated in **Figure 3**. Additionally, having orchestration capabilities to ensure the coordination and prompt delivery of partner and cocreated services is also of importance to CSPs. Nearly 40% of respondents also indicated that they plan to invest in a platform to facilitate the onboarding and management of partners in 2021.

3. Figure 3: CSPs seek service fulfillment and orchestration when investing in partner management

What IT systems and capabilities will you invest in to support your partner strategy?
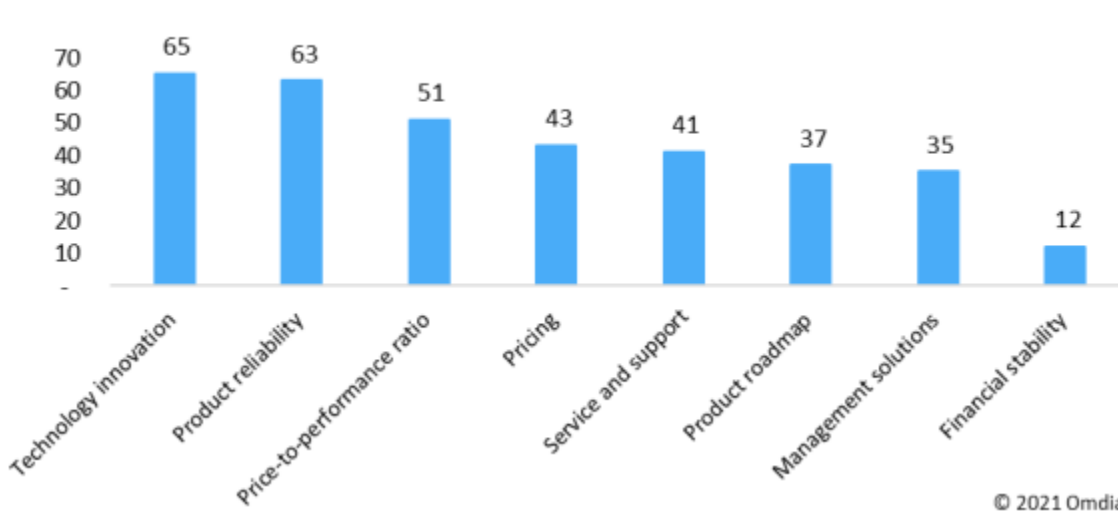

Source: OSS/BSS Evolution Survey – 2021, Omdia

In addition to investing in these capabilities to manage the partner ecosystem, CSPs also show a preference toward cloud-native partner ecosystem management solutions. Omdia's *Telecoms – ICT Enterprise Insights 2021* survey found that CSPs are more likely to invest in partner management systems that use a microservices architecture than almost any other IT system in their ecosystem, hinting toward the need for scalability of the partner ecosystem itself. Moreover, the same survey found that nearly 80% of CSPs plan to host their partner management systems in the cloud in 2021.

Finally, as **Figure 4** shows, Omdia's *OSS/BSS Evolution Survey – 2021* survey found that as CSPs seek out technology vendors to procure the partner ecosystem management solutions, technology innovation is the most important vendor selection criteria.

4. Figure 4: Technology innovation is the most important vendor selection criteria for CSPs

What are the top three most important criteria for choosing an OSS/BSS vendor?

Source: OSS/BSS Evolution Survey – 2021, Omdia

The emphasis on technology innovation is an important trend for vendors to note. The telecoms industry is still very much in the early stages of implementing partner ecosystem management strategies and solutions. There is a lot of market education that still needs to be conducted within the telecoms industry, and CSPs will look to vendors to take the lead on developing solutions that consider the unique needs of the industry. Vendors that can provide innovative solutions that bridge the gap between the industry's current partnership model (i.e., interconnect and dealer relationships) and incorporate features and tools that will allow them to evolve their partnership approach for the 5G era, will stand out in the market.

Partner ecosystem management solution trends

To better understand the partner ecosystem management market, current and emerging trends, and the solutions available for the telecoms industry, Omdia requested briefings and demo sessions with several vendors with partner ecosystem management solutions.

Omdia reached out to 18 vendors with partner management solutions and was subsequently briefed by nine vendors on their respective solutions for the telecoms industry. Based on the responses and briefing sessions, Omdia identified the following trends among partner ecosystem management solutions for the telecoms industry:

- **Onboarding, billing, settlement, and reporting are standard features** – All of the solutions Omdia reviewed included partner onboarding, billing, settlement, and reporting capabilities as standard, out-of-the-box features. CSPs seeking out partner ecosystem management solutions should consider these features to be the baseline, non-differentiating capabilities.

- **Software as a service (SaaS) licensing models** – Most of the partner ecosystem management solutions that Omdia reviewed were available via a SaaS licensing model. SaaS licensing means that the solutions can be deployed within the CSP's ecosystem faster than in a traditional license implementation. The cost for a SaaS license is also typically more economical than a traditional license, and CSPs are also afforded access to new features and capabilities automatically via software updates, as opposed to traditional licensing and delivery methods.

- **Partner experience management** – Nearly every reviewed vendor solution included some capabilities to enable CSPs to manage the partner experience. The tools include self-service portals, apps, knowledge centers, and partner loyalty and rewards programs. As partner-led models become the norm across the telecoms industry, there will be increased competition among CSPs to attract and retain the right types of partners so that they can differentiate themselves in the market. Partner experience management, as a result, will become a critical piece of the partner management strategy.

- **Digital marketplaces** – Several vendors offered digital marketplaces—a separate, complementary platform on which prospective partners were pre-integrated. The digital marketplace makes it easier for CSPs to quickly get started with creating services with partner services and assets.

- **Marketing support** – Horizontal solutions typically had robust marketing capabilities. The solutions provided CSPs with marketing capabilities to recruit partners into their ecosystem and provided CSP partners with tools to market cobranded or codeveloped solutions. The horizontal solutions also typically provided CSPs with the ability to set up a market development fund

(MDF) that allows CSPs to allocate market budget to partners that need help promoting co-branded or co-developed services.

Two distinct schools of thought in partner management solution development

The most significant trend identified among the vendor solutions was the differences in product development strategy. Among those vendor solutions Omdia was briefed on, two different schools of thought on product development were apparent. Vendors either started with a horizontal or vertical strategy for the development of their respective partner ecosystem management solutions.

The vendors with a horizontal approach to their partner ecosystem management solution tended to have more robust offerings. The solutions typically included capabilities such as onboarding, management, self-care, insights, and sales support. These solutions were also more likely to include tools to support partner recruitment and partner marketing capabilities (which enable the CSP partner to market its services to a target audience). Vendors with a horizontal approach to partner management also generally made add-on components available to verticalize the solution to meet the unique requirements of the telecoms industry.

Other vendors took a vertical approach to the development of partner management solutions. These vendors typically had a long history in the telecoms industry and in offering interconnect and roaming settlement capabilities. Partner management solutions from vertical-focused vendors tended to focus heavily on monetization and service delivery capabilities such as charging, policy, service activation, and provisioning, more so than those vendors that took a horizontal approach. Conversely, vertical-focused vendor solutions tended to include less partner management capabilities than the solutions from horizontal-focused vendors.

These differences are important for CSPs to note as they seek out a partner ecosystem management solution provider. When evaluating potential solution providers, CSPs should have a clear partner strategy in mind and a clear understanding of its IT needs to narrow down whether a more horizontal or vertical solution best meets their business needs.

Partner ecosystem management vendor profiles

Partner ecosystem management solution serving the telecoms industry is a relatively small market that is still growing. Omdia anticipates that vendor revenue for telecoms partner ecosystem management solutions will grow at a compound annual growth rate (CAGR) of 4.8% over the next four years and will generate $275mn in revenue for vendors by 2025.

To provide a glimpse into which vendors are currently serving this market, Omdia has provided vendor profiles of selected vendors that have launched a partner ecosystem management solution for the telecoms industry as of December 2020.

Netcracker – Netcracker Digital BSS

About Digital BSS

The Netcracker Partner Management portfolio, which consists of Partner Lifecycle Management, Partner Portal, Partner Billing Management, and Digital Partner Enablement products and has been deployed for more than 90 CSPs, takes two different but complementary approaches toward partner ecosystem management for the telecoms industry. Netcracker Digital Marketplace offers CSPs a turnkey solution with more than 300 pre-integrated partners for CSPs to leverage. Netcracker Digital BSS provides CSPs with the tools needed to build their own partner ecosystem (or extend capabilities of their digital marketplace) and manage it end-to-end across the partner lifecycle. Additional capabilities across Netcracker Digital BSS allows CSPs to extend the capabilities of the digital marketplace and create their own partner ecosystem wherein they can enable self-onboarding and management of partners in their ecosystem.

Omdia view

Netcracker Digital BSS is a comprehensive and end-to-end partner ecosystem management solution that provides CSPs with the tools they need to create and scale their partner ecosystem. Most compelling, however, is the vendor's digital marketplace that provides CSPs with turnkey network monetization capabilities by turning the network into a service (i.e., network as a service [NaaS]). As the telecoms industry figures out how to turn the network into a platform that developers can create services on top of, Netcracker Digital Marketplace provides CSPs with the necessary foundation tools.

Technical components

Netcracker Digital BSS is a cloud-native solution developed using a microservices architecture. The solution is fully compliant with 3GPP and TM Forum Open Digital Architecture and Open API standards. Its core capabilities can be broken down into four core capabilities:

- **Partner onboarding and management –** enable partners to self-onboard into the CSP's ecosystem. During the onboarding phase, CSPs can indicate pricing and service attributes based on the partner, configure discounting schemas and promotional campaign support, and create individual pricing schemas for partners. Conversely, partners can manage the pricing of their services. Onboarding capabilities also provide partner contract management, including indicating which products and services are available for the partner to sell and setting the terms of compensation. Partners can also register employees under defined user profiles to give them access to the partner portal.

- **Monetization –** includes billing management features such as billing configurations based on partner account type, the generation and exchange of partner bills and data files needed for partner settlement, and automated capture, categorization, and processing of partner billing issues. CSPs are also able to configure various settlement, revenue share, and pricing schemas for partners. Features such as billing on behalf of, partner events processing (via Open APIs), and add to bill functions enable CSPs to offer flexible billing and payment methods for partner's end users. Policy control and charging functionality is also available to support different pricing and partner QoS needs.

- **Partner self-service –** provides partners with tools to monitor and manage their accounts and relationship with the CSP. Tools include dashboards, reports, and account information. Partners are also provided visibility into the status of settlements between the partner and the CSP, partner subscriber management, order management and sales enablement tools such as CPQ,

and pricing engine. Partners can also manage bulk orders and open and manage issue or service requests on behalf of end users.

- **Digital Marketplace –** is an end-to-end solution that can be deployed on its own or alongside other components of Digital BSS. Digital Marketplace includes pre-integrated tools and partner enabled services that can be bundled with CSP network assets (such as VNFs) and value-added capabilities to offer unique services to customers. Digital Marketplace is pre-integrated with more than 300 partner offerings. Digital Marketplace enables CSPs to support connectivity services, value-added network apps like firewalls, parental controls, IT apps and IoT services, and verticalized services.

Netcracker Digital BSS can be deployed within six months for most CSPs, depending on the configuration, with the average deployment time being four to eight months. Netcracker Digital BSS comes pre-integrated with support for partners across 14 industries, including agriculture, automotive, government, healthcare, and financial services. Partners onboarded into the CSPs ecosystem can bring new offerings to market within three to six weeks of being onboarded.

Strategy
Development strategy
Netcracker Digital BSS is developed by incorporating feedback from direct engagements with customers, user and customer feedback, and market insight and insight gained from competitive and strategic analyses. Netcracker follows an agile joint development method using DevOps to work with its customers to further develop the solution. Digital BSS has one major update release per year and three minor releases per year. Customers that deploy a cloud-native version of the product can receive releases on a more frequent basis, with Netcracker supporting customer sprint releases for customers one to two times per month.

Customers that choose a SaaS, a managed service, or cloud-native deployment of Digital BSS can receive updates to the product automatically. Alternatively, those CSPs that opt for a traditional license, non-cloud-native version of the product can receive updates via patch updates.

Commercial strategy
Netcracker Digital BSS is available direct to market and via its parent company NEC. The solution can be purchased as a SaaS, a traditional license, or a managed service. CSPs can also choose between a cloud-ready and a cloud-native (microservices architecture) deployment of the solution.

Appendix

Methodology

The information included in this report is based on primary research based on in-depth briefings and solution demos from nine software vendors and insights gained via surveys conducted with CSP executives. The report also includes insight from secondary research, including forecasts, publicly announced contracts, and previously published research.

Further reading

Beyond 2020: What's ahead for 5G? (August 2020)

Creating a Dynamic Partner Ecosystem (June 2020)

Informa Tech 5G survey results (August 2019)

OSS/BSS Evolution Survey – 2021 (November 2020)

Telecoms – ICT Enterprise Insights (September 2020)

Telecoms IT Vendor Revenue Forecast 2020-25 (September 2020)

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