Telco Cloud Services (Asia)

March 24, 2020

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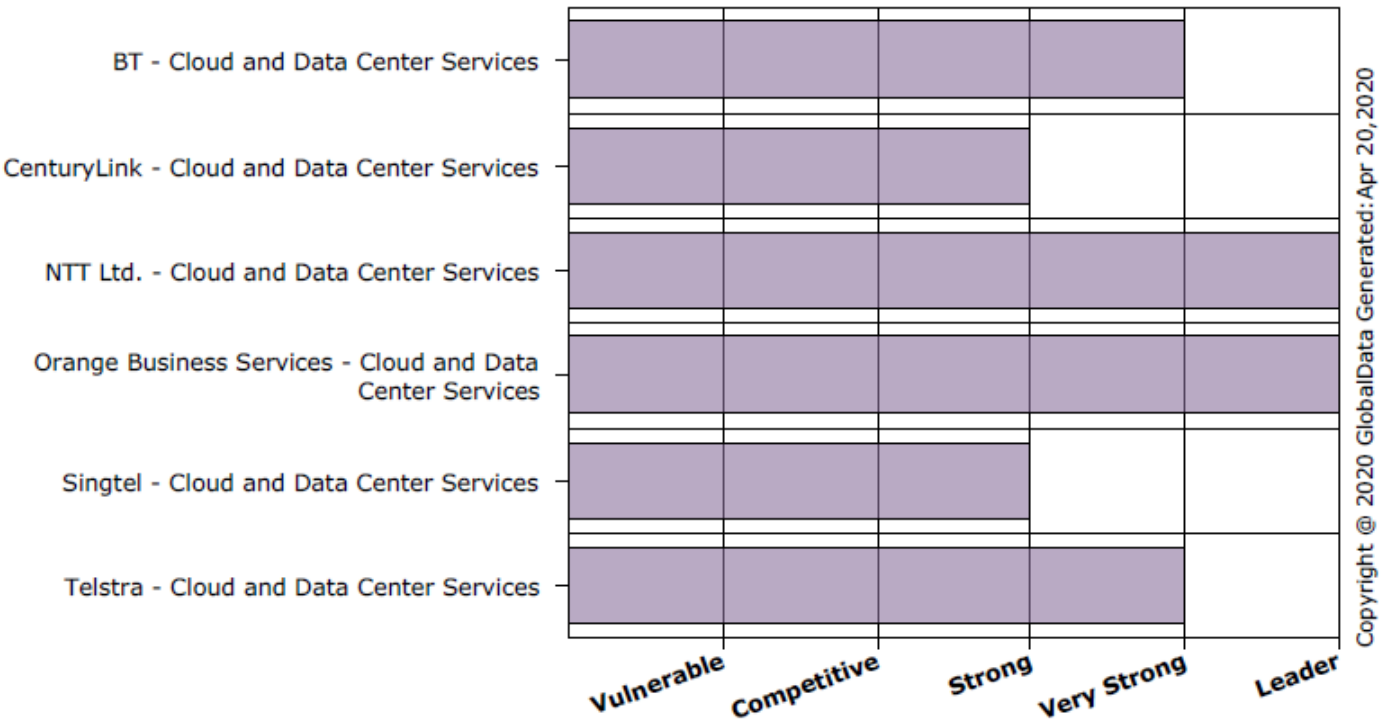
COMPETITIVE LANDSCAPE ASSESSMENT - TELCO CLOUD SERVICES (ASIA)

REPORT SUMMARY

Carriers continue to expand their ecosystem and service capabilities to address the shift in market demand from cloud infrastructure to value-added services. They are also building out edge computing capabilities as the 5G ecosystem is expanding.

PRODUCT CLASS SCORECARD



MARKET OVERVIEW

Product Class	Telco Cloud Services (Asia)
Market Definition	Unlike the data center and cloud services CLA which covers a wider range of service providers including non-carriers and data center providers, this report is the subset and covers the cloud services offered by major global and/or regional carriers in the Asia-Pacific region. This assessment covers service portfolios, capabilities, delivery, and partner ecosystems.
Rated Competitors	• BT • CenturyLink • NTT Ltd. • Orange Business Services • Singtel • Telstra
Additional Competitors	• T-Systems • PCCW • Tata Communications • Vodafone Business
Changes Since Last Update	• **March 2020:** NTT Ltd. launched its Cloud Communications division (previously known as Arkadin), providing professional services and advisory to organizations looking to accelerate modern collaboration within their workplace. • **March 2020:** Orange, Singtel, Telstra, and several other leading carriers in Europe and APAC collaborate to develop GSMA-supported interoperable edge computing platforms. • **March 2020:** BT launched new Cloud Security as part of its new Security Advisory Services practice, available to all organizations from SMBs to MNCs and the public sector. • **March 2020:** CenturyLink added IBM Cloud to its Cloud Connect Dynamic Connections portfolio to offer secure and reliable connections to enterprises. • **February 2020:** NTT Ltd. announced the successful deployment of a private cloud stack with hybrid cloud capabilities to Indonesia's leading digital banking platform. • **February 2020:** CenturyLink joined the Networking Managed Service Provider Program for Microsoft Azure to help customers better connect, migrate, manage, and optimize their Microsoft Azure environments. • **January 2020:** Telstra enhanced its integration with Platform Equinix to provide enterprise customers on-demand multi-cloud network connectivity to more than 170 service providers in 38 markets globally.

- **January 2020:** Telstra entered a strategic partnership with Chayora, a developer and operator of data centers in China, to deliver colocation and network connectivity services in the Tianjin-Beijing corridor of China.
- **January 2020:** NTT Ltd. has earned the SAP on Microsoft Azure advanced specialization, a validation of a solution partner's capability to deliver high-quality services in a specific solution area.
- **January 2020:** NTT Ltd. launched its new office in Myanmar and secured a B2B wholesale license from the government to offer enterprise ICT services in the market.
- **January 2020:** NTT Ltd. streamlined its data center business incorporating e-shelter, Gyron, Netmagic, NTT Indonesia Nexcenter, RagingWire, and other data center companies under a single division.
- **January 2020:** CenturyLink launched CenturyLink Engage to simplify cloud communications for enterprises through a streamlined mobile and remote worker collaboration outside traditional workspaces.
- **December 2020:** NTT Ltd. announced its capabilities to support AWS Outposts, a fully managed, AWS-designed private cloud, to deliver a local, low-latency private service.
- **December 2019:** Orange Digital Ventures invested in InterCloud to support leadership in cloud interconnection.
- **November 2020:** NTT Ltd. launched its cloud service in Thailand and offers a hybrid-multi cloud platform with a variety of major global cloud service providers.
- **October 2019:** Orange Business Services has extended its SAP offer with SAP HANA applications now available on the Orange public cloud, Flexible Engine.
- **October 2019:** Trustwave, the cybersecurity arm of Singtel, launched the Trustwave Fusion platform, a new cloud-native platform that serves as the cornerstone for its products, managed security services, and other cybersecurity offerings, in Singapore.
- **October 2019:** Singtel, in partnership with Razer (gaming hardware manufacturer) and IMDA (Singaporean regulator), announced a 5G cloud gaming trial to investigate the network and device requirements.
- **October 2019:** Orange Business Services has developed solutions to enable maritime connectivity that offers secure, private cloud and IoT services to facilitate vessel management.
- **September 2019:** Midea selected Orange Business Services as its global cloud service provider covering Asia, Europe, North America, and South America.
- **September 2019:** Telstra launched Telstra Purple (consulting and professional service unit), bringing together a number of its recently acquired companies, including VMTech. Operating in Australia, Singapore, Hong Kong, and the UK and with 1,500 staff, it will deliver a range of technology managed services including network, data center, security, cloud, mobility, and analytic services.

MARKET OVERVIEW

The cloud market in Asia-Pacific is expected to grow solidly from USD 133 billion in 2019 to USD 288 billion in 2024 at a CAGR of 16.8% (source: GlobalData Cloud Computing Market Opportunity Forecast, 2019- 2024). Apart from an increasing need for IT efficiency and cost savings, there is also a growing need for cloud and network convergence which could offer greater agility across the two domains. This hits carriers' sweet spots, driving them to challenge the other cloud providers to grab the growing opportunities. Regional and global carriers have been offering comprehensive cloud services to MNCs and large enterprises. Their offerings range from cloud (public, private, and hybrid), management platforms, and network integration to professional services.

Having local facilities is crucial for service providers to address data residency and, in the future, edge computing needs. The webscale players are adding private stack solutions (e.g., AWS Outposts, Alibaba Apsara Stack, Google Anthos, Microsoft Azure Stack) in their portfolio to address this challenge. They are also extending existing interconnect partnerships with the carriers to co-develop edge computing solutions (e.g., AWS Wavelength, Google Mobile Edge Cloud [GMEC]). There is also a GSMA-supported initiative by several leading European and APAC telcos (e.g., Orange, Singtel and Telstra) to co-develop interoperable edge computing platforms. The edge computing ecosystem is still new and shaping up. There will be more collaboration between carriers and other players to co-develop the solutions to address the increasing demands for ultra-low latency applications (e.g., autonomous vehicles and factory automation).

The competition in the cloud market is shifting from basic IaaS, PaaS, SaaS, and private cloud to value-added services. Increasingly, carriers are offering a single managed services wrap for cloud and network services to gain an edge in the market and expanding their interconnect partners to offer wider options to enterprises and managed multi-cloud services. This integrated offering provides customers with greater visibility across both environments, cost management, and alignment to ITIL processes. This includes incident, availability, and service level management. Examples include:

- BT's SD-Fabric provides the managed data center environment with software-defined benefits, such as increased automation, visibility, analytics, and control.
- CenturyLink extended its ecosystem with IBM and joined the Networking Managed Service Provider Program for Microsoft Azure to provide IT consulting services for customers migrating to and running workloads in multi-cloud environments.
- Vodafone Business is partnering with IBM to strengthen its cloud portfolio, focusing on professional services, multi-cloud, and network convergence.
- Orange is investing heavily in professional and managed services using 'managed multi-cloud' and 'Best of Cloud' messages in the market and recently launching Visibility-as-a-Service, offering end-to-end application performance measurement for SD-WAN and cloud migrations.
- Telstra Purple combines the capabilities from previously acquired companies, strengthening the carrier's professional services and solution delivery capabilities. Telstra also enhanced its integration with Platform Equinix to provide enterprise customers on-demand multi-cloud network connectivity to more than 170 service providers in 38 markets globally.
- NTT Ltd. launched its Cloud Communications division to provide professional services and advisory to organizations to accelerate modern collaboration within their workplace.
- Singtel offers its DC.DX platform that combines colocation, connectivity, multi-cloud, security, and managed services. The Singaporean incumbent also offers 'Network Intelligence-as-a-Service,' which supports cloud-network convergence by providing workload orchestration and automation across the two domains.

MARKET DRIVERS

- **Agile Infrastructure:** Cloud is no longer an option; it has become a necessity for enterprises to have agile infrastructure and save costs in addressing the changing business needs driven by digital transformation. There are also cases where cloud is the only available delivery option.
- **Existing Relationships:** Enterprises already have years of relationships with carriers for connectivity and managed services. These long engagements and continuous initiatives to enhance service management are an advantage for carriers when dealing with enterprises which are looking for new cloud services.
- **Integrated Offerings:** While cloud services by webscale players may be more price-competitive, the integrated solutions offered by carriers often provide higher values such as better control and management, higher reliability, and security. Network services can also be integrated with other cloud-based solutions such as UC, security, and IoT. Some carriers also offer consultancy services (e.g., around the AWS environment) to overcome complexity in implementation.
- **Hybrid Capabilities:** There is a next wave of hybrid cloud adoption driven by the enterprises in emerging countries migrating their workloads to the public cloud and businesses in the mature APAC region moving their long-term workloads back to private environments, realizing that it would be more cost-efficient to host the data on-premises.
- **Multi-Cloud:** Workload orchestration and automation are getting more complicated due to the multiple cloud services by different providers across mixed environments (private/public). The advancements of cloud management platforms (e.g., with software-defined analytics and automation capabilities) enable enterprises to implement new cloud services or migrate existing workloads from on-premises seamlessly while minimizing the business impact.
- **Edge Computing:** There will be demand for cloud computing at the edge driven by the ultra-low latency applications such as autonomous vehicles. 5G will be one of the key enablers in edge computing through the multi-access edge computing (MEC), network slicing, and private network. The ecosystem is still fragmented but is shaping up driven by the collaboration among the industry leaders and major carriers.

BUYING CRITERIA

- **Cloud Portfolio:** Enterprises are looking for cloud providers with extensive cloud portfolios- not just the infrastructure and application (e.g., private cloud, IaaS, PaaS, and SaaS), but also the platform to manage multiple clouds and automate workload across private and public environments. Cloud-based IT services such as IoT platform, UCaaS, security, and marketplace are also crucial for providers to offer horizontal and vertical applications.
- **Data Center Services:** Data center footprints are important, especially in private or hybrid cloud deployments. While the global cloud providers have presence mainly in developed markets (e.g., Australia, Japan, Hong Kong, and Singapore), the Asian-based carriers differentiate themselves by having wider footprints in the region, including in emerging markets such as the Southeast Asian countries to address the data residency and edge computing requirements.
- **Software-Defined Infrastructure:** Carriers are expanding their network coverage and adding new technologies such as SDN and NFV into their network services (e.g. SD-WAN, SD-interconnect, SD-platform). This enables the carriers to provide integrated cloud and network services and offer higher reliability through their interconnected data centers and greater efficiency with workload orchestration across multiple clouds. This gives an edge to the carriers over other cloud providers in the market, especially in the private/hybrid cloud.

- **Supplemental Services:** Cloud is not just a technical solution, but a key enabler in enterprise digital transformation that maps to various business outcomes. Professional services are becoming an imperative part of the ICT solution to ensure seamless service migration, system integration, delivery, and ongoing management. Enterprises look to the service provider as the 'trusted advisor' to support in areas such as technology transfer and/or supporting multi-vendor environments. A wide range of ecosystem partners (e.g., interchange to major cloud and data center providers) is also crucial for service providers to address the diverse demands in the market.

VENDOR RECOMMENDATIONS

- **Differentiate with Network:** The cloud market is quite saturated with a number of providers, including webscale players, IT vendors, and system integrators. Carriers could position their network advantage such as integrated cloud and network services or software-defined capabilities to differentiate in the market. This can be offered through an open/interoperable cloud management platform that supports advanced features such as automation, security, SDN, and cost management.
- **US and European Carriers:** The US and European carriers could highlight their strong presence in their home regions to address the outbound Asian MNCs. Besides cloud and network, the carriers could also offer professional services to help these enterprises to meet the regulations in the (US and/or Europe) regions.
- **Edge Computing:** While the technology is still new, carriers should start building out this capability in their portfolio to gain the first-mover advantage and capture the early opportunities. Some global carriers have started their journeys through collaboration with other players (e.g., IT vendor, hyperscalers), but with a focus on the domestic market. There is also an initiative by several carriers to develop an interoperable platform.

BUYER RECOMMENDATIONS

- **Professional Services:** As carriers are strengthening their professional service capabilities, enterprises could expect stronger consulting/advisory, migration, deployment, management, and support services to help them with digital transformation as well as expanding beyond the Asia-Pacific region.
- **Templates:** Enterprises should look for a combination of self-service tools that promote both application and infrastructure management, especially across the network and cloud domain, through a template-based approach from configuration to lifecycle management. Admin tools should also support a good balance of monitoring to governance.
- **Edge Computing for Low-Latency Applications:** Enterprises should expect wider availability of edge computing solutions offered by carriers to address their low-latency application requirements such as for voice/video conferencing, ERP applications, or connected vehicles.

RATED COMPETITORS

Product Name	BT- Cloud and Data Center Services
Buying Criteria Rating	• **Cloud Portfolio:** Very Strong • **Data Center Footprint:** Competitive • **Software-Defined Infrastructure:** Very Strong • **Supplemental Services:** Very Strong
Product Scores	**Very Strong**
Strengths	• BT offers end-to-end cloud and data center portfolios in the market. • 'Cloud of Clouds' focuses on service integration across solutions. • BT has strong system integration and professional services capability. It added Cloud Security as part of its recently launched Security Advisory Services. • It operates one of the largest global networks with strong presence in Asia-Pacific. • The provider offers Nuage Network and Cisco SD-WAN services to its global customers.
Limitations	• BT has limited SaaS capabilities outside the UK and the US. • It has a limited on-net data center footprint across Asia-Pacific.
Product Name	CenturyLink- Cloud and Data Center Services
Buying Criteria Rating	• **Cloud Portfolio:** Very Strong • **Data Center Footprint:** Competitive • **Software-Defined Infrastructure:** Strong • **Supplemental Services:** Strong
Product Scores	**Strong**
Strengths	• CenturyLink is strengthening its global operations (including Asia-Pacific). • The Level 3 acquisition enables the customer to leverage Cloud Application Managed and Cloud Connect Solutions. • The provider has an extensive interconnect footprint with more than 360 data centers globally and over 1,900 on-net third-party data centers. • The provider has a strong presence in the US and on-net coverage globally. • It is actively expanding its partner ecosystem, introducing its Channel Partner Program, joining the Networking Managed Service Provider Program for Microsoft Azure, and adding IBM, VMware, and Google to its partner list. • It also has its own IP and platform for hybrid cloud orchestration.

Limitations	• It has low mind share in the region. • While the global portfolio is expanding, core capabilities are concentrated in the US market. • CenturyLink has a sales presence in only key Asia-Pacific countries (e.g., Australia, China, Hong Kong, India, Japan, and Singapore).
Product Name	NTT Ltd. - Cloud and Data Center Services
Buying Criteria Rating	• **Cloud Portfolio:** Strong • **Data Center Footprint:** Leader • **Software-Defined Infrastructure:** Very Strong • **Supplemental Services:** Very Strong
Product Scores	**Leader**
Strengths	• It has over 100 data centers in the region, including 29 outside of Japan. • It continuously expands its portfolio and partner ecosystem, as well as its presence in the region (e.g., Thailand, Myanmar). • Cloud services are delivered from over seven countries in the region, addressing the data residency requirements. • NTT Ltd. is one of the earliest providers in the market to offer an SD-based platform, with its SDx+M. • NTT Ltd. has a strong internal R&D team to develop its own solutions. • The integration of 28 NTT subsidiaries strengthens its product portfolios (e.g., security and service deliveries). • It has high-capacity and-redundancy network within the region and between Japan and the US.
Limitations	• The branding and GTM initiatives of NTT Ltd. remain fragmented across its footprints; Dimension Data is still used in some countries. • Domestic businesses (e.g., vendor support, solution availability) are not consistent in some countries.
Product Name	Orange Business Services- Cloud and Data Center Services
Buying Criteria Rating	• **Cloud Portfolio:** Leader • **Data Center Footprint:** Competitive • **Software-Defined Infrastructure:** Very Strong • **Supplemental Services:** Leader
Product Scores	**Leader**

Strengths	• Orange has strong professional and managed services capabilities through its heavy investment in the area. • Its Flexible IT and Flexible Computing provide a range of public, hybrid, and private IaaS/PaaS offers across multiple cloud management environments including AWS, Azure, Google, VMware, and OpenStack. • Within the past year, Orange has dramatically increased its partnerships across APAC and globally. • Orange has also created Flexible Engine, a program where it works with over 250 startups and tech vendors to bring innovation for six target verticals. It recently added SAP HANA supports on the platform. • It offers Visibility-as-a-Service for end-to-end application performance measurement for SD-WAN and cloud migrations.
Limitations	• The cloud service infrastructure is limited in the region and highly concentrated in Singapore. • Orange made a commitment to public cloud a few years ago with Huawei's OpenStack solution, but with its new focus on multi-cloud, it is unlikely to build further on that investment.
Product Name	Singtel- Cloud and Data Center Services
Buying Criteria Rating	• **Cloud Portfolio:** Strong • **Data Center Footprint:** Competitive • **Software-Defined Infrastructure:** Strong • **Supplemental Services:** Competitive
Product Scores	**Strong**
Strengths	• Singtel is an incumbent carrier in an Asia-Pacific hub, which offers the carrier an advantage with thousands of MNCs based in Singapore. • It offers Liquid Sky and Liquid Infrastructure (software-defined platforms) for agile management across networks, data centers, and clouds. • It actively drives the ecosystem by bringing vendors and enterprises to co-develop solutions through various initiatives. • Singtel owns ten data centers across Singapore, Hong Kong, and Australia and has facilities in seven other countries in the region through partners. • Singtel has one of the largest IP VPN networks in Asia-Pacific.
Limitations	• It has NCS as its IT services arm, but the capabilities are focused in Singapore and Australia. • There are gaps between its offering in Singapore and outside the country. • It has limited facilities outside Asia to cater for outbound MNCs.
Product Name	Telstra- Cloud and Data Center Services

Buying Criteria Rating	• **Cloud Portfolio:** Strong • **Data Center Footprint:** Strong • **Software-Defined Infrastructure:** Very Strong • **Supplemental Services:** Strong
Product Scores	**Very Strong**
Strengths	• Telstra programmable network offers agile network services and integration with various NFV capabilities. • Telstra Purple (consulting and professional service unit) has managed service capabilities in network, data center, security, cloud, mobility, and analytic services. • Its partnership with Equinix provides its customers direct API access to hundreds of data centers and clouds around the world. • The provider also offers RightScale and CloudSight, software-defined platforms for workload orchestration and automation across networks, data centers, and clouds. • Telstra has a strong incubation program. It has commercialized a number of solutions from the startups it has investment in.
Limitations	• While it has strong professional services in Australia, the capability is limited outside the country. • The partner ecosystem is smaller than competitors. Salesforce and Alibaba are among the missing partners. • The brand and mind share outside Asia is still limited.