

Driving Cloud Innovation in Your Enterprise

Overcoming cloud pain points through partnerships

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Summary

In brief

Cloud is now mainstream and managing multiple clouds efficiently is the order of the day. In a hybrid cloud environment, enterprise IT decision-makers are grappling not just with how to support a complex cloud landscape but also with how to turn it to their advantage and support business growth. This report explores the forces driving businesses toward cloud, how businesses should implement it, and what to look for in a service provider to support all this.

Ovum view

Global economies are changing, and competition in many markets is rising. Digital transformation of the enterprise is an opportunity to stack the odds in favor of your company, but only if you move fast, imaginatively, and with purpose.

The enterprise cloud service market in Indonesia is growing at 28% a year by Ovum estimates, and will reach \$1.9bn by 2021. This rapid rate of growth reflects the demand for IT services to support productivity and growth in Indonesia's domestic market. Enterprises in competitive markets are trying to gain an advantage over their competitors.

Cloud is closely entwined with other productivity-enhancing technologies, such as applications deployment and the Internet of Things (IoT). Cloud infrastructure, cloud platforms, and the associated connectivity are therefore strategic assets that require a strategic approach.

Many early cloud deployments were "lift and shift" initiatives, which simply moved existing workloads into the cloud as a cost reduction measure. Increasingly, cloud investment must be justified strategically by remaking the enterprise as a data and applications-driven organization. Successful cloud deployment requires changes to business models and company organization that make the enterprise more agile and competitive.

Enterprises are now deploying cloud in private, internal settings in order to get the benefits of a cloud application approach, but they also want to integrate these services with public cloud offerings. This generates a raft of other issues related to security and technical integration. Successful execution of cloud strategy requires a C-suite commitment, and cannot be left to the IT department.

Key messages

- **Cloud is strategic, not just operational.** Cloud strategies are increasingly about remaking the business into an agile applications-oriented organization. Enterprises are seeking new business opportunities in cloud, rather than just cost savings.
- **Integration is becoming a key capability.** The need to maintain legacy IT alongside cloud services and the rise of hybrid cloud mean that integration capability is an essential resource.
- **Security and data protection are getting better, but remain important.** Draft data protection regulation will require enterprises to ensure data security and on-shore data storage.

- **Partners are key.** Only large enterprises will buy cloud infrastructure services that they orchestrate for themselves. Most enterprises will partner with cloud service providers and telcos to manage integration issues and get end-to-end SLAs for security and reliability.

Recommendations

- **Think strategically about cloud.** Cloud services are maturing and can now better support enterprise digitization. Begin by plotting a path to becoming a digital enterprise.
- **Recognize and manage pain points.** The main pain points for cloud service implementation are integration, security, and cost. Unless the enterprise has significant internal IT resources, cloud service partners are essential to addressing all of these.
- **Choosing the right partners is crucial.** Look for partners that can help address pain points with an end-to-end approach. The full integration of connectivity and cloud is crucial to overall effectiveness. Having a telco service partner that owns and can successfully and securely manage this connectivity is an important success factor.

Trends and pain points in enterprise cloud implementation and migration

Cloud is an integral part of the strategic approach needed for enterprise transformation. The key to successful cloud deployment is to embed cloud investment strategies in a wider strategy for an applications and data-driven enterprise. Given the speed of change, a cloud-based platform provides the optimum environment for agile financial, customer, and employee platforms. This may be a combination of SaaS and PaaS, and it may be owned by the vendor or run on a third-party IaaS platform provider. The ability to integrate with existing enterprise applications (i.e., back-office and logistic systems, CRM, commerce and content, digital asset management systems, or third-party data sources), typically via APIs, is also essential to enrich the customer profile data.

Key pain points in this journey include the growing complexity of the integration challenge, managing connectivity for security and reliability, and the protection of data and security in hybrid cloud environments. Cost remains another key pain point. Enterprises must be able to use cloud services to improve performance, but in a way that does not increase expense.

Each of these pain points can be addressed through a mixture of internal capability and external partnership, depending on the size and complexity of the enterprise.

Trends in cloud services and connectivity

Enterprises are turning to cloud and connectivity for a range of reasons. These reasons have developed as enterprise cloud strategies have matured:

- **Cost reduction.** This is often the initial foray into digitization and cloud – simple "lift and shift" operations where the enterprise legacy workflow is re-implemented more economically in a cloud context.

- **Serving customers better over new channels.** Selling to and serving customers in an "application economy" requires enterprises to launch, maintain, and deliver sales and service experiences via a series of customer-facing apps across multiple platforms.
- **Supporting business growth.** As enterprises expand into new markets, the need to support users in new locations or for specific campaigns requires quick scaling of business applications up and down to meet requirements, which may change hourly or daily.
- **Increasing business agility.** The volatility of business operations and development is steadily increasing. Product lifecycles are shortening and technologies are constantly changing. The flexibility and efficiency of cloud are key to addressing these trends.

Migrating from traditional or private cloud to hybrid or public cloud also requires a rethink of the connectivity strategy. Dedicated, secure, and reliable connectivity is needed to connect hybrid and public cloud resources to the enterprise. This highlights the role of telco service providers in the cloud market, which can provide a managed connectivity experience and provide dedicated connectivity from a company's premises to cloud resource locations.

Enterprises are steadily shifting away from a cost focus toward strategies focused on commercial agility. IT strategies are less about technical efficiency and more about the future of the enterprise, how it is organized, and how it will interact with customers and suppliers. Agility grows as workflows are implemented as cloud-native applications that please customers, are easy for employees to use, can be innovated and upgraded quickly, and generate financial benefits for the enterprise.

Enterprises need to develop a business-driven cloud migration strategy that marries the transformation of internal IT delivery with the business benefits of external cloud service adoption. The resulting strategy should involve a manageable number of strategic cloud and connectivity service providers (preferably only one for the mid-market), and it should define an evolutionary path for all workloads, whether that path is modernization, migration, or retirement. For many organizations, it will make sense to use partners to take on some of the migration work, but the onus is ultimately on the enterprise to transform itself. The tipping point for many mid-market customers will be when they begin to migrate ERP, CRM, and databases to the cloud.

Large companies with significant CIO resources can take on a larger integration challenge, and will often use different sources for their connectivity, security, and compute and storage. The way forward is typically to establish a separate agile team that is cross-functional, collaborative, and focused on the customer. The team (or teams) should be tasked to deliver business results quickly. Ovum case studies based on interviews with successful cloud users also show that there must be deep commitment from the CEO, and at least one other member of the executive team.

In the mid-market, the task is simpler because internal complexity is lower, product sets are smaller, and the organization can change more quickly. At the same time, mid-market enterprises have fewer CIO resources at their disposal. As a result, small and medium enterprises should look more to external providers, preferably one or, at most, two, to provide cloud scale and sophistication.

New pain points in cloud strategy

Integrating cloud and connectivity

The rise of hybrid cloud and the growing role of external cloud providers have created new challenges in the integration of different cloud and connectivity services. Enterprises will find their skills stretched

as they attempt to monitor, manage, protect, and secure an evolving hybrid IT system. Most enterprises on this road have trimodal or even multimodal IT if you count the hybrid variants and workloads in transition. The three basic modes are legacy IT (or traditional IT, as some systems integrators prefer to call it), private cloud, and public cloud. On top of this complexity, enterprises need fast, secure, reliable, and (of course) economical connectivity to integrate multiple clouds and provide access at their own premises. In Ovum's recent global *Cloud Services Survey 2018: Enterprise Priorities Shaping the Future of Cloud*, we found that even large enterprises put security management and connectivity sourcing at the top of their outsourcing wish lists.

Only the largest enterprises with significant resources and cloud/connectivity management experience can source and manage telco connectivity independently. Other enterprises still have complex needs but skeleton IT staff. These enterprises are well served by telecoms service providers that have established relations with those enterprises, and can provide managed connectivity and cloud resources in an end-to-end manner.

The shift to hybrid or public cloud makes external connectivity performance experience more important. First, the latency and bandwidth of data transfer must be managed. Second, bandwidth becomes a new cost center. Third, connectivity security becomes a new issue, bringing new challenges. All of these dimensions of connectivity performance can vary over time, and must therefore be managed to ensure consistent performance.

These new tasks are hard to manage internally, but can be addressed using telco service provider partners, which are well equipped to address connectivity and security issues. Telco cloud providers stand out in their ability to orchestrate in-house IT and external connectivity, compute and storage, and end-to-end security. They excel in application performance management and WAN optimization, and are attractive to large enterprises in industries that are dependent on connectivity, such as retail, healthcare, and industry verticals where IoT is growing.

In the mid-market, telcos also have much to offer. The integration task is simpler because internal complexity is lower, product sets are smaller, and the organization can change more quickly. At the same time, mid-market enterprises have fewer CIO resources at their disposal. As a result, small and medium enterprises should look more to external providers such as telcos to provide cloud scale and sophistication.

In particular, connectivity services offered by telcos can enhance the cloud customer's connectivity experience, such as VPN, MPLS, and even SD-WAN. Each has its own benefit, but they all offer

- dedicated connectivity from the enterprise premises to cloud resources
- faster connectivity through dedicated connections
- higher reliability of up to 99.9% service availability
- stronger security on isolated and protected links
- a less volume-dependent cost structure, which keeps down the cost of growth in enterprise data volumes.

New challenges in security

Cloud services mean that enterprises are now entrusting their data to third parties. In Ovum's latest Cloud Services Survey, just over 50% of respondents indicated that IT security and data privacy were the biggest challenges to using cloud services, down from 85% of respondents in 2011. Confidence in

public cloud security and data privacy seems to be growing. However, some new security concerns are arising. 43% of respondents found the complexity of managing security in multiple clouds and suppliers a significant or critical challenge to using cloud services. In addition, governments are demanding more accountability from enterprises in the way they manage data. It is easy to see the legal and reputational damage to a business that could arise from failure to secure data.

When an enterprise wants to use cloud solutions, guaranteeing security is a very important requirement. However, networked cloud is also an opportunity to improve security and data protection. Cloud architecture should be designed to embed security at the start (e.g., network-based domain isolation). The starting point is secure connectivity, which is essential to the overall security of any cloud solution that extends beyond the enterprise. Without this, the chain of security is broken, and the security of stored data cannot be guaranteed. IoT is making this issue more important, because cloud IoT solutions are distributed across hundreds, thousands, or ultimately millions of networked devices. All of these require secure connectivity.

While cloud brings security challenges, it may also provide the information to do something about it, such as information about who stores and shares data. Traditional on-premises file management technology does not provide this data. On the other hand, not every enterprise application will be transferred to the cloud, so enterprises must also have separate security solutions for the application separate from the network.

Telco cloud providers are well positioned to deliver the on-cloud embedded security because they have partnerships with big global cloud providers and the in-house expertise to deliver secure connectivity. And unlike global cloud providers, telcos also have on-shore internet security services that allow them to serve enterprises that still have non-cloud application, so they can support enterprises at different stages of their cloud strategies.

Furthermore, telcos have particular expertise and capabilities in internet security at the application layer and network layer. Secure connectivity is a core telco capability. A telco cloud partner is therefore a natural choice when security and availability are essential to an enterprise's business.

Developing your cloud strategy

Take a strategic, structured approach

Addressing the pain points of integration and connectivity, security, and cost are essential to achieving all of these kinds of value. Cloud must be implemented efficiently and cost-effectively if it is to be financially worthwhile. Customer and employee experience also rely on reliable and secure connectivity and IT. Finally, the confidence to be customer-adaptive and innovative requires a reliable end-to-end cloud system that can be counted on when implementing new products and business processes.

Ensure secure cloud connectivity

Migrating enterprise IT from traditional on-premises systems or private cloud to hybrid or public cloud also requires enterprises to start managing connectivity as a resource. Connecting the enterprise

premise to resources in the cloud requires dedicated, secure, and reliable connectivity. This imposes new tasks on the enterprise:

- Latency and bandwidth of data transfer must be managed.
- Bandwidth becomes a new cost center.
- Connectivity security becomes a new issue, bringing new challenges.

All of these dimensions of connectivity performance must be managed to ensure consistent performance. This highlights the role of telco service providers in the cloud market. Telcos can provide a managed connectivity experience and provide dedicated, secure links. Cost structures can be tailored to mitigate the financial risks of growing data volumes.

Find a trusted cloud connectivity partner

For many enterprises, finding a good partner will be the best way to acquire these skills. There are many dimensions to a good partner, and the importance of each will depend on the enterprise and its strategy. Solid credentials in connectivity, security, and compute and storage are essential. A checklist of cloud partner criteria would include cost, security, and connectivity and coverage.

Cost

Enterprises need their cloud service providers to keep their costs down. Automation of cloud provisioning, activation, and deactivation should be the norm. For example, service assurance can be made much more efficient by automating testing, probing, reporting, and alarm processes.

Enterprises need to look for a partner that can work to keep costs down. They should own and operate their own networks to provide maximum flexibility and minimum cost, and have a convincing strategy in place for automation and cost reduction that can sustain growing efficiencies.

Security

As noted above, a secure cloud infrastructure is essential. Enterprises need to make sure their partner has a good reputation for cloud security, and ensure that industry-recognized security standards for connectivity and data storage are being implemented.

Connectivity and coverage

Enterprises need to look for a partner with access to the best geographical coverage. The importance varies: for transport and agriculture applications, good-quality national cellular coverage is indispensable; for data storage, an extensive fixed network is needed to provide ubiquitous access.

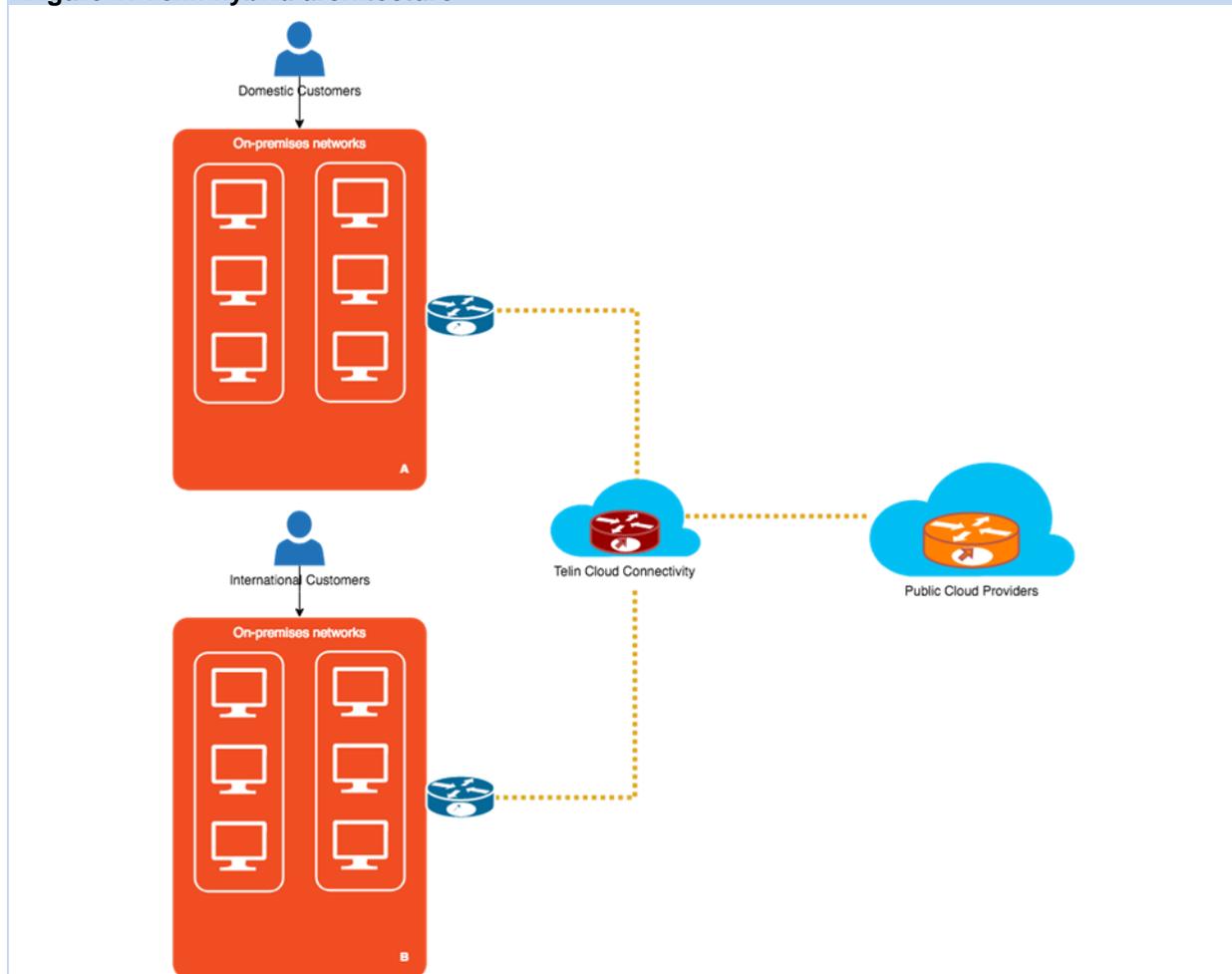
About Telin

As the most populous nation in Asia-Pacific, Indonesia plans to become the Association of Southeast Asian Nations' (ASEAN's) largest digital economy with cloud services playing a major role. McKinsey has estimated that if Indonesia embraces digitization, it can realize an estimated \$150bn in growth – 10% of GDP – by 2025.

Telin is Indonesia's leading provider of international telecommunications. Telin has extensive global coverage with dedicated points of presence (PoPs) worldwide that will connect customers' premises to any cloud provider as per customer needs. Its network reaches more than 27 countries, with global offices in 11 countries.

Telin's Cloud Connectivity, supported by Telkom Group (the largest network provider in Indonesia), provides performance with up to 99.9% end-to-end circuit availability. Telin also caters for special availability requests. With low latency connections all over the world, Telin provides secure, fast, reliable, and dedicated connectivity to multiple cloud providers.

Figure 1: Telin hybrid architecture

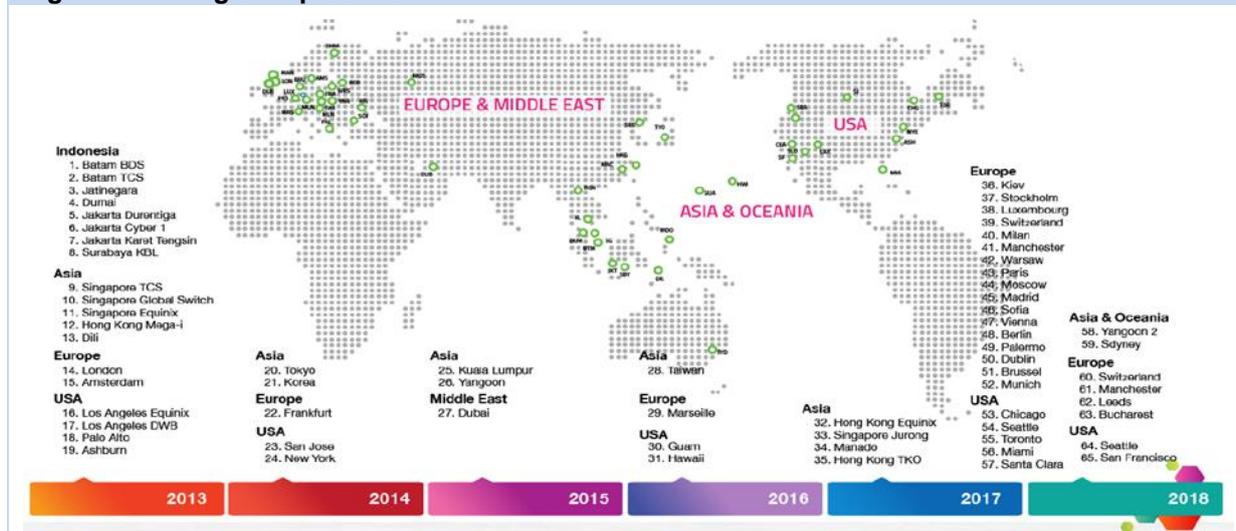


Source: Telin

Telin also offers secure international connectivity and data center services, as well as cloud compute capacity and co-location.

Telin has been recognized as the 2017 GCCM Regional Operator of the Year, received the 2015 Carriers World Award for Most Innovative Wholesaler, and the 2016 Global Carrier Award for Best IPX Provider.

Figure 2: Telin global presence



Source: Telin

Telin offers a wide range of international wholesale services, including VPN, MPLS, IPLC, metro international, IP transit, global IP VPN, international hubbing services, international direct dialing, MVNO, and IPX services. Telin's international solutions offering includes CDN, cloud, audio and web conferencing, and satellite services.

<https://www.telin.net>

Appendix

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Ovum Consulting

We hope that this analysis will help you make informed and imaginative business decisions. If you have further requirements, Ovum's consulting team may be able to help you. For more information about Ovum's consulting capabilities, please contact us directly at consulting@ovum.com.

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