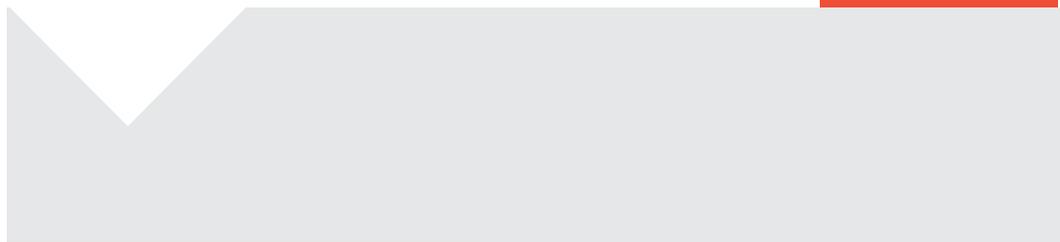
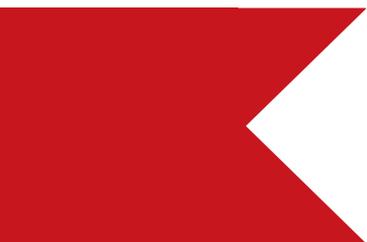
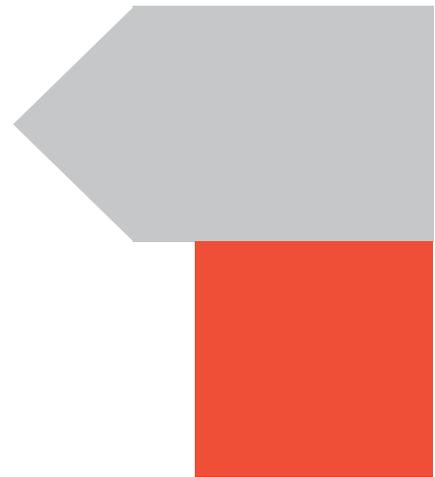


Modernising IT Infrastructure

Telin Singapore 2nd Advisory Council Roundtable 1H2017



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by Telkom Indonesia 

Introduction

The upgrading and modernising of IT infrastructure is part and parcel of a successful business, especially given the crucial role of maintaining one's digital capabilities today. As businesses rollout their infrastructure, what are some common challenges they face, and what are the services and support that are most important to them?

At the second Telin Singapore Advisory Council (TSAC) meeting, council members gathered once again to share their insights with executives from Telin Singapore. A wide range of topics were discussed, including common colocation mistakes, migration of businesses, future of the cloud and considerations for an ideal colocation provider for various deployments.

The valuable input from the industry veterans and customers will be used by Telin Singapore to learn about the common pain points often encountered with an infrastructure migration or upgrade. The feedback will also be used to identify areas for improvement and new opportunities, as well as validate existing and future initiatives on Telin Singapore's development roadmap.

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Council Members

Victor John Carey is the director and owner of AT Advanced Technologies in Singapore. With 30 years of experience of which the majority are in Southeast Asia, Victor is an Uptime Institute (UTI) accredited tier designer with expertise in data centres, microelectronics facilities and buildings with stringent noise control requirements. His company offers design, integrated systems testing and UTI accreditation support for high tech buildings including data centres, and was also engaged in the commissioning management and support for the UTI accreditation of Telin-3 in 2016.

Akito Kurokawa is the APAC network strategy manager at Netflix, a global, leading Internet television company, specialising in partner engagement, quality of experience, interconnections and network architecture. He has extensive experience in the Asia Pacific working on various network roles for almost two decades including stints at global OTT providers, a global data centre provider, and a global internet service provider.

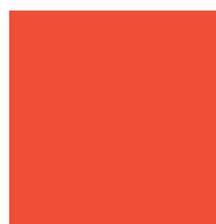
John Lee is the co-founder and COO of Vodien Internet Solutions, and is responsible for all aspects of operations, sales and customer care. He works closely with the product and technical divisions of Vodien, and helps to guide the company's sales strategies, focusing on promotional campaigns that drive the company's growth. As part of the overall drive to increase customer satisfaction, John

ensures only the highest levels of service and support to all customers.

Lim Boon Chuan is the managing director of Webzilla Singapore, an enterprise hosting company with a presence in North America, Europe and Southeast Asia. Boon Chuan was the founder of 8 to Infinity prior to its acquisition by XBT Holding, which owns Webzilla. Boon Chuan is just as passionate about web hosting services today, and he delights in providing customers with what they need to succeed.

Terence Lim the director and co-founder of RED Technologies, and has more than 20 years' experience in the IT and Telecom industry where he is involved in the design, build and maintenance of infrastructure. RED Technologies specialises in fibre network build and maintenance, data centre remote hands support, IT project management and its associated service support and has a presence in Singapore, Hong Kong and Malaysia.

Victor Yuk is the CEO of Wizlearn Technologies, a leading e-learning solutions company in Singapore. Victor started work at Wizlearn Technologies as a system administrator, and subsequently became the vice president of operations where he led a team of 25 solution architects, system and software engineers. Victor initiated several major e-learning projects which led to an increased adoption of such systems in schools, corporate companies and government agencies.



Common colocation mistakes

The cost of overprovisioning

There is a tendency to overestimate colocation requirements, says Victor John Carey, in response to common mistakes in colocation. “People inherently play safe with their projection,” he said.

This is probably not surprisingly considering how outgrowing one’s colocation environment ahead of time can be problematic. Unfortunately, he also noted that growth projections often do not materialize, leaving the oversized colocation space as an unnecessary cost burden on the business unit. Vic Carey cited an unnamed company that established a multi-storey data centre. Fast forward six years, and the organisation has yet to fully occupy the ground floor, underscoring just how “future proof” the initial estimate was.

Terence Lim noted that it can be “really difficult” to make a good call on infrastructure requirements three to five years into the future. However, he agreed that overprovisioning causes real problems, and often translates into greater challenges to maintenance and significant capital lock down. According to Terence, the fear of inadequate capacity drives decision makers to err on the side of caution and go with something that is bigger than their actual requirements.

A closer look at costs and reliability

Another common mistake is to evaluate reliability of a colocation provider solely from the perspective of their technical specifications, says Vic Carey. The reason? There are ways that providers may opt to cut costs behind the scene that dramatically impact reliability, either because they are cash-strapped, or to make up for underbidding competitors.

“It’s expensive to service a CRAC (computer room air conditioning) unit and UPS (Uninterruptible power supply) properly and do a proper lifecycle parts replacement,” he explained. Inevitably, there is a temptation to defer such maintenance as these are areas where an operator “can save a lot of money”.

Financial reliability is another factor that have a large impact on reliability, according to Vic Carey: “Everyone talks about [technical specifications] when it comes to the data centre. But in my experience, the biggest failures I’ve seen in data centres are due to business causes rather than the facility.”

“The financial stability of the entity that owns the data centre for me is quite important. The customer has spent a lot of money facilitating this tenancy in terms of migration costs. If this entity goes under, it is a serious problem,” he said.

Lim Boon Chuan agreed: “I have worked with data centres for over two decades, and have been forced to shift more than once when the data centre [we were in] closed down, far before the end-of-life of

their equipment. We are hence keen to know our data centre providers and know their mission as well as their profit and loss.”

A poorer fit over time

The desire to stay put and not move due to the hefty cost of a migration can culminate in problems too, according to council members. Victor Yuk shared the experiences of his firm, an application service provider that previously operated out of an old facility with ageing infrastructure and poor connectivity. This translated into higher costs as the team sought third-party providers to beef up the network for minor to negligible gains.

“If I need to scale up, I’m given a quote that is much higher than the competition,” said Yuk. “While we need to do all the planning and investment for a migration, the benefits outweighed [the cost] of staying. That was my reason for moving out.”

Another issue could be the introduction of modern server hardware, which typically have much higher power requirements. John Lee shared about his experiences on this front, noting that his requests for high-powered racks have been met with quotes that cost substantially more than ordering multiple racks of the same power.

According to other council members, this could be attributed to the inefficiencies of older data centres, which do not have the benefit of modular components, and are also likely more limited by their cooling ability. The latter would have to be

installed specifically to meet his request, with the higher fees earmarked to pay for this upgrade. Telin Singapore confirmed that this is not an issue with a new facility such as Telin-3.

Making the big move

Mind the difference

While some companies wait to fail before they move, others are more enlightened by the knowledge that their source of revenue relies on their infrastructure working seamlessly. When making the move, council members cautioned against some common mistakes they have seen happen.

“At the server level, I’ve seen power cords plugged into the wrong power bus. The technician may plug [the cords for both the primary and backup power supply unit] into the same power stripe. I’ve also seen it quite a few times where it’s wrongly configured at the data centre level,” said Vic Carey.

He explained that this issue could have arisen for customers migrating from an older facility equipped with a static transfer switch (STS) to a newer facility – which typically deliver power on separate A and B power tracks. The solution may be to implement a smaller STS at the rack level which would allow them to reliably operate older servers equipped to work only with single-sourced power.

Of course, it was pointed out that new servers are sometimes deployed by

equipment vendors as a value-added service. As administrators or systems engineers can install the requisite software remotely, such an elementary but fatal mistake may not be detected until it is too late.

Council members agreed that while colocation providers should attempt to warn tenants of such mistakes identified during routine checks, some may perceive this as a breach of privacy. The onus hence resides with tenants and should be clearly outlined in contractual agreements and service level agreement (SLA) documents.

Setting it up right

Another common occurrence would be the popularity of a “lift and shift” strategy when making a migrating. It was pointed out that such a strategy often negates the higher power density advantage that a modern facility typically offer.

Akito Kurokawa suggested that tenants should leverage the opportunity to upgrade and finetune their infrastructure towards greater flexibility and agility, as the old paradigm will only see them stuck with the same problems eventually.

“I think providing a holistic migration solution avoids the kind of problem that we’ve discussed, and prepares you for the future. It is not necessarily a cheaper solution, but in terms of the sheer cost to cost comparison, it saves money from either under-provisioning or overprovisioning,” Kurokawa said, alluding

to the use of cloud services to deliver greater elasticity. “The modernisation solves a lot of those problems that I think we’re discussing.”

However, Vic Carey says he does not see that happening at the moment: “What I see them doing is just replicating what they’ve got somewhere. I’ve got 20 racks, they will say, which means I will need 20 racks at the new place.”

“I’ll say they may not if they rationalize it. They may need only need eight or 10 racks if they increase the density of the racks, though that may involve changes to the actual services that they are using,” he said.

When not migrating is a problem

Terence Lim pointed out that not making a decision to move tends to be a more common state of affairs, given that few want to take ownership or lead a migration project. This can have an impact on growth however, and not just pertaining to the lack of flexibility offered by an ageing facility but in the loss of business opportunities.

“For example, if there’s a new business that comes to them, are they able to meet the needs of this new business? If they are limited by what the infrastructure can provide, then there are the opportunity costs to consider,” he said.

Vic Carey drew a comparison to failure models in general, which typically sees some failures in the first year before

things “settle down”. As a result of entropy, components will start failing at around the 10 to 12 years’ mark, he noted.

“An ageing facility is very likely to be less reliable than a new facility, particularly when it becomes 15 to 20 years old. I think that’s a risk; there’s more risk to the tenant, once it becomes older,” said Vic Carey.

The appeal of the cloud

The human preference

How does the cloud dovetail with the needs of modern IT infrastructure? Lee shared an anecdote of a customer that migrated to a cloud platform for two years before switching back to his firm, a managed service provider.

“The [IT managers] hired by the business change. Each have personal preferences such as Google Cloud, or Amazon Web Services, or they may prefer not to do anything – and sign up with a managed services provider like us. Then the next IT manager comes, and it changes again,” said Lee.

This also boils down to the propensity to adopt a hands-on approach, though having access to technical talent is another factor to consider: “Then we have the other batch of customers where they have this tech guy or team with incredible technical capabilities. This allows them to effectively leverage the cloud, and

implement complex deployments such as high availability there.”

“But when that guy leaves, then they’ll come back to us,” Lee said, suggesting that the room exists for a value-added service provider.

Beware the talent limitation

Kurokawa agreed with Lee’s assertion that it can be difficult to find professionals with cloud-centric expertise currently, which makes cloud infrastructure a less appealing proposition. However, he feels that the situation will eventually change as the market matures.

“I think that one of the goals of having infrastructure is to have it in the cloud so that you can derive maximum efficiency,” he said. “Sometimes it makes sense [not to go cloud] because the cost of hiring people that have that expertise, is higher than just having someone build a traditional system. I understand that part.”

“As the market and technology matures, and [more] people come into our industry with that kind of application background and capability, then it will be more common for enterprises or service providers to move into the cloud,” he said.

“It is a reliability issue if that employee who has this knowledge just disappears,” observed Vic Carey on the relative scarcity of cloud knowhow. Lee agreed, noting: “If you engage a company to do that, then

the company is going to charge you an arm and leg, because they have to keep a pool of these people.”

Getting the right fit

Gaining the right expertise is not the problem for Yuk. “I actively send them for courses. [The cloud] is something we cannot do without, and we need to have the knowledge of managing both cloud and on-premises infrastructure,” he said, noting that a lot of the courses for the former are free.

Even Yuk feels that hybrid deployments will always be necessary however, with the role of the cloud coming down to specific areas where it can achieve a good fit with the business.

“There is no such thing as all cloud, there will always be hybrid,” Yuk said, though he elaborated that the cloud services deployed at his firm are ultimately integrated with the rest of its infrastructure via single sign-on (SSO) and with a single point of entry.

He outlined some examples of where cloud makes the most sense: “Some of the services, we rather use it on cloud. It really depends on the services, especially for those that are bandwidth-heavy such as streaming or video conferencing, I’ll say go cloud. The cloud charges are so elastic, I think it makes sense to go cloud.”

Terence Lim summed it up: “From a business perspective, depending on the scale of the enterprise, small start-ups

would go to the cloud as it is faster to deploy, have more flexibility, and enjoy greater cost effectiveness. But for enterprise, I personally think they will always go with a hybrid deployment.”

An ideal colocation provider

Larger footprint through partnerships

One highlighted point was the possibility of Telin Singapore expanding its footprint to support customer expansions beyond Singapore. Lee said of a hypothetical customer looking for an ideal provider: “When we buy a service in Singapore, and we want to reach out to other countries. The ideal choice is a colocation provider who has presence in other countries.”

Lim agreed: “Telin Singapore is the bridge for us to Southeast Asia. If it can provide colocation in more countries, we will be very interested to go along.”

Terence Lim suggested a strategic partnership to realize this: “Partner with facility owners in other countries in key regions like Japan, China and Korea. You can arrange to co-share some of the facilities, and share the network and bandwidth sales. And when people get into your facilities to connect to different places, you can make it easier and seamless for them.”

Developing a strategic focus

Another way that Telin Singapore can attract businesses may be to position itself as a provider that can help them make headway into Southeast Asia or Indonesia, observed Terence Lim. This would entail focusing on a niche target market to make itself appealing to Indonesia businesses seeking to expand outside the country, or International businesses looking to enter the Indonesia market.

“From a global perspective, Indonesia is a huge market. I think businesses will be attracted to a provider that can say: here’s how we get into the market and this is how we should partner,” he explained.

“Create a haven for those businesses; and showing that it’s our core, that’s what our business is about, that’s how you can join us, and what we can bring to you. That could be a key selling point from the rest of the market,” he said.

Private networking options

When it comes to increasing the breadth of capabilities, Lee pointed out how a cloud provider offers fast private networking between virtual servers. A cross-connect offering between Telin Singapore’s data centres in Singapore would be very compelling for rolling out certain types of services, he noted.

“Take disaster recovery services, we typically have to set up a presence in two

different data centres and do backhaul between them. If we choose Telin Singapore to host all our data centres, then the availability of cross connectivity offered at a highly competitive rate will be very attractive,” said Lee.

Offering an OPEX model

To appeal to businesses looking to move from an old facility and to help them alleviate the costs of a migration, Vic Carey mooted the idea of a OPEX model. The idea is to monetize the significant capital required for an IT infrastructure move over the terms of the lease, removing the pressure for getting additional funding approved.

Citing an anecdote from one of his customers that is currently considering a migration, he said: “Historically, the rent was quite high, higher than they are now. What I do see, is they can get a better deal on rental, but the capital cost on their infrastructure is killing the [migration] deal.”

“Not just the infrastructure, but the shifting of the IT, mechanical and engineer, the build-up and all of that,” Vic Carey said. “[Charge] them a higher monthly rate over 10 years for the actual project, to take away the burden of the capital outlay straightaway; the deal is better if they don’t move.”

Conclusion

The second TSAC offered important insights into colocation customers and their needs, as well as common behaviours and mistakes that businesses make during an infrastructure migration. Council members made suggestions and observations that validated some of the upcoming initiatives that Telin Singapore has embarked on.

When it comes to the cloud, there is no question that it offers elasticity and flexibility that is highly compelling for start-ups and new businesses, though it may be some time yet before mindsets and technical skillsets line up to deliver on its envisaged future. Even then, many council members felt that colocation will always be a basic deployment block of IT infrastructure, with hybrid deployments being the norm rather than the exception.

For Telin Singapore, this means that the development of strategic cloud services that can complement colocation capabilities, coupled with the availability of an integrated network offering is the way forward.

About Telin Singapore

Telin Singapore, a subsidiary of PT Telkom Group, is the data centre provider of choice through best-in-class, integrated solutions. Telin Singapore currently manages flexible, modular and scalable data centre facilities in Singapore that are enhanced by proprietary-owned, seamless submarine cables connectivity from Indonesia and Singapore to the rest of the world. Telin Singapore's Tier III & Tier IV certified data centre facilities embrace the company's commitment to deliver world-class ICT solutions that are scalable and flexible to fit any customer's needs.

For more information, please visit www.telin.sg.

