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ECOSYSTM PREDICTS

The Top 5 Cloud Trends For 2020

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This report presents Ecosystm's outlook for the Cloud market in 2020 and the associated implications for tech buyers and tech vendors. The predictions are drawn from the findings of the global Ecosystm Cloud, Cybersecurity and IoT studies and is also based on qualitative research by the analysts.

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PUBLISHED
November 2019

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Executive Summary

The move to Cloud continues apace. As organisations look to leverage better operational and business insights, adopting Cloud has become imperative for them, especially for those that intend to make use of other technologies like analytics and IoT. All the imperatives for moving to Cloud continue to grow stronger, while at least some of the reasons for resisting the trend are becoming indefensible. The key inhibitors continue to be security and data privacy concerns, and back-up/connectivity issues. While traditional security concerns will remain a factor, they will decline in importance as an increasing number of users realise that levels of basic security offered by Cloud service providers are actually better than those available for in-house applications - especially for smaller organisations that currently outsource their IT functions anyway.

It's not all good news, however. A by-product of the hybrid environments that almost all larger organisations end up with, is increased complexity. Also, as the Cloud ecosystem has matured, an important inhibitor has become cost considerations as many organisations are now evaluating whether the Cloud is indeed more cost-effective than on-premises options.

This report presents the top 5 Ecosystm predictions for the Cloud market in 2020. It is based on the latest data from the global Ecosystm Cloud, IoT and Cybersecurity studies, that are live and ongoing on the Ecosystm platform.

The Top 5 Cloud Trends for 2020

MAJOR CLOUD PROVIDERS WILL PUSH FOR OPEN SOURCE

Open Source has always played a big role in Cloud and as we move into 2020, its role will only grow bigger. Infrastructure and Platform Clouds may not have been dominated by Open Source in the past, as they have been dominated by AWS and Microsoft but even that is changing - by now, it is estimated that more than half the workload on Azure is Linux virtual machines. IBM is also banking on Open Source Cloud - especially for the hybrid Cloud environment as shown by the company's USD 34 billion acquisition of Red Hat in 2018.

But all major Cloud players have been focusing on Open Source recently. While many see this as an "attack" on the Open Source idea, we believe that it is more a result of a fundamental change: Open Source is transforming Cloud and Cloud is changing Open Source. Traditionally, the business model of Open Source vendors has relied on customers paying them for support, but as customers move to the Cloud, this business model is becoming increasingly outdated. At the same time, Cloud vendors are faced with increasingly complex developments when it comes to key areas such as security, serverless computing (see below) and more. For them, Open Source offers a development environment that can achieve more than they would be able to develop fully in-house.

Implications

The push towards Open Source should mean faster development of new Cloud tools and services going forward. It also shows us that the nature of Open Source is changing. While the support revenue stream for Open Source will not die away completely in the foreseeable future, the onus in the years to come will be on the development side, and smaller Open Source vendors will need to develop their business models so that they fit into this new setup.

OPEN SOURCE WILL DRIVE THE ADOPTION OF SERVERLESS COMPUTING

Serverless computing is a Cloud model where the Cloud provider runs and manages the server and the allocation of machine resources. This allows pricing to be based on the actual amount of resources consumed by an application, rather than on pre-purchased units of capacity.

Beyond just the individual servers, many vendors are now offering to totally replace the data centre with a virtual version that runs in the Cloud. It has the potential to become a widely used solution for mid-range businesses. A dynamically scaled and priced data centre could offer them a much more flexible IT environment where they do not have to worry about capacity planning and scaling - even when compared to a more traditional Cloud environment.

Big players such as AWS and Microsoft have been touting serverless computing for years, but adoption has been slow due to the proprietary nature of these services (e.g. AWS Lambda). AWS recently announced its Open Source initiative - Firecracker - in this space.

In the applications space, the emerging leading application is serverless databases with offerings from AWS and Google in particular. Oracle offers its “Oracle Autonomous Data Warehouse”, which arguably could be described as serverless.

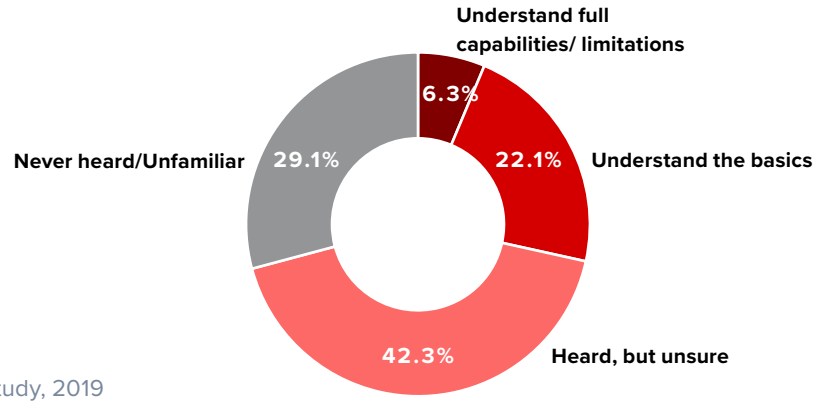
Implications

Serverless computing is potentially a very suitable environment for organisations, especially medium-sized businesses and we expect to see a noticeable push from vendors in this space in 2020 - especially in the serverless applications space. As for full serverless data centre offerings, however, we do not expect to see any major customer adoption until 2021 or 2022.

CLOUD AND IOT WILL DRIVE EDGE COMPUTING

Edge computing refers to data being processed close to where it is created, versus a centrally located data centre. It has been widely touted as a necessary component of a viable 5G setup, as it offers a more cost-effective and lower-latency setup than a more traditional infrastructure. Also, with IoT being a major part of the business case behind 5G, the number of connected devices and endpoints is set to explode in the coming years, potentially overloading an infrastructure based fully on data centres for processing the data. The Ecosystm IoT Study reveals that IoT adopters are working to gain more knowledge on the Edge (Figure 1), with nearly a third having some understanding.

Figure 1: IoT Adopters’ Knowledge of the Edge



Source: Ecosystm IoT Study, 2019

N=1,266

Although some are touting Edge computing as the ultimate replacement of Cloud, we believe it will be complimentary rather than a competing technology - at least in the foreseeable future and certainly as far as 2020 is concerned. A Cloud-based setup can benefit from pushing computing-heavy workloads to the Edge in much the same way as IoT and provides a great platform for managing the Edge computing endpoints.

Edge computing will allow Cloud providers to better cater to companies that need low latency, quick access to data and data processing. On the mobile side, it will allow them to push workloads to the handset, reducing the backend workload and potentially enhancing data privacy. A good example of the latter is Google's Federated Learning initiative that allows Google to train AI models on mobile devices and then transfer those learnings back to a central AI data centre. Only the learnings are transferred back - the underlying data does not need to leave the device.

Implications

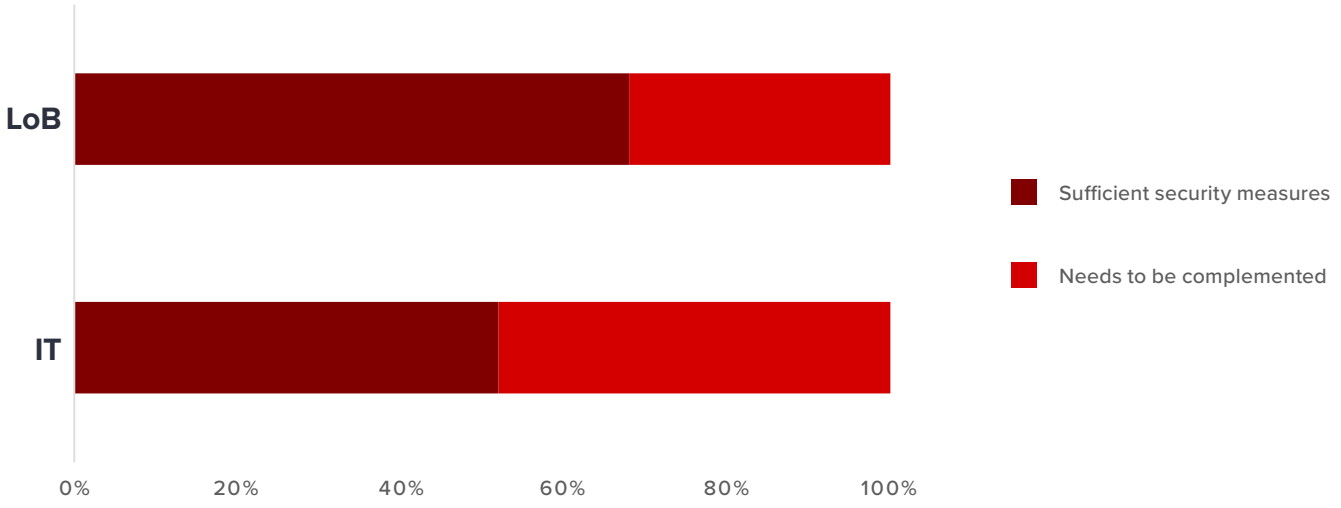
While the necessary infrastructure for Edge computing is still being built and developed, 5G roll-outs are set to begin in 2020. At the same time, we are starting to see a rising number of mobile handsets containing dedicated AI processors. Both will drive the uptake of Edge computing services and we may even see a small number of enterprise offerings that make use of Edge computing entering the market towards the end of the year.

'CLOUD CREEP' WILL GET WORSE BEFORE IT GETS BETTER

What we have previously referred to as "shadow IT" is rapidly spreading - and worsening - as organisations move to the Cloud and many organisations are now suffering from what is referred to as "cloud creep" whereby, the different lines of business (LoBs) implement their own one-off solutions without the involvement of the IT department. Cloud creep is thus replacing applications and server creep.

There are several implications of cloud creep - the most significant ones being security issue and cost. For example, the Ecosystm Cybersecurity study shows that in organisations that use the Public Cloud, LoBs are more confident about the security measured of Public Cloud providers (Figure 2).

Figure 2: Perception of Public Cloud Security - LoB vs IT



Source: Ecosystm Cybersecurity Study, 2019

N=1,832

One could read this data to suggest that LoBs are less conservative with regards to Cloud security than their IT departments. However, it could also suggest that LoBs are less aware of the security complexities that the use of Cloud entails and tend to think that whatever security offering the Cloud provider offers is "good enough". As the use of stand-alone Cloud services grows, the risk of sensitive data being used, stored and shared in non-compliant ways increases. It also makes it near-impossible to comply with regulations such as the GDPR: For example, the GDPR's "right to be forgotten" rules, whereby a consumer can demand that all data stored be deleted. If an organisation has no full overview of where an individual's data is stored and used within the organisation, it will be impossible to delete it all.

As for cost, while LoB sourcing of Cloud services may save the strain on the IT department's budget as the money may come from a different "bucket", it makes it very difficult to get a true picture of the organisation's total IT spend and it may mean that consolidation benefits from well-managed sourcing and usage cannot be achieved.

A third, and increasingly important, factor is energy footprint and savings. A fall-out from cloud creep is increased "server sprawl" whereby virtual machines (VMs) and applications remain under-utilised, leading to poor productivity and proficiency. It typically also means that a fairly large number of VMs remain completely unused. This is not only a waste of resources from a purchasing perspective, but it also has an impact on the carbon footprint of an organisation - something that is coming under increasing scrutiny.

Implications

While reining in cloud creep is becoming increasingly important, most organisations will find it very difficult to do. Organisations need a single view of their on-premises and Cloud applications, so they will need to find a way to have their data centre management cover their total IT ecosystem. We therefore expect - and encourage - that organisations show an increased focus on Cloud Management solutions in 2020 and onwards.

ALLIANCES AND PARTNERSHIPS WILL BE FORMED AS THE BATTLE FOR THE TOP HEATS UP

The global Cloud market has been consolidating around 5 players: AWS, Microsoft, Alibaba, Google and IBM. Nothing really suggests that this trend will change in 2020. In fact, Ecosystm expects AWS to further strengthen its leading position in 2020, but with Microsoft gaining momentum. As the Cloud market has consolidated over the last few years, one company in particular has been missing from the top: Oracle. Oracle has not been able to break into Cloud in the same way as their competitors and has so far not made the same "leap of faith" into this area as similar companies have. Oracle CEO, Mark Hurd, whose untimely death in October 2019, shocked the company and the industry as a whole, was pushing for change in Oracle's Cloud strategy, but many would argue that the company has not moved quickly enough. In fact, 2020 may very well determine the future for Oracle in Cloud. Unless the company makes a clear decision about their Cloud strategy and succeeds in communicating it to the market in 2020, Oracle may quickly find itself more of a niche Cloud player going forward.

But even for the current top 5 players, their ability to compete will increasingly come down to their ability to expand their service capabilities beyond their current offerings. Ecosystm expects these players to further enhance their focus on expanding their services, management and integration capabilities though global and in-country partnerships. One particular area might be partnerships - focusing on Cloud migration between Clouds and from Cloud to on-premises.

Back in 2018, Hurd had stated that Cloud was "big trouble" for the systems integration (SI) industry, which has

been designed around customisation, calling the current SI business model unsustainable. The broadening focus of the top 5 Cloud players may prove to be the lifeline that SIs need. SIs that can adapt their capabilities can also become the type of partner that the major Cloud providers may target, as they seek to broaden their partnerships and alliances.

Implications

As the Cloud market continues to mature, it is also becoming more complex. Apart from the implications for vendors and service providers, this is also affecting customers. When choosing Cloud providers, companies will increasingly need to look at the extended capabilities of the service provider - including their partner ecosystems. Partnerships not only enhance the capabilities of the vendor; they also provide a clue to their mentality and hence to how flexible they might be as the customer-vendor relationship moves forward.

This report is based on the analysts' subject matter expertise on the area of coverage in addition to specific research based on interactions with technology buyers from multiple industries and technology vendors, industry events, and secondary research.

The data findings mentioned in all Ecosystm reports are drawn from Ecosystm's live and ongoing studies on the Ecosystm research platform. This report refers to data from the global Ecosystm Cloud, IoT and Cybersecurity studies and based on participant inputs that include decision-makers from IT and other Lines of Business, from small, medium and large enterprises.

For more information about Ecosystm research, visit www.ecosystm360.com.

About Ecosystm

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Ecosystm is a private equity backed Digital Research and Advisory Platform with global headquarters in Singapore.

As a global first, Ecosystm brings together tech buyers, tech vendors and analysts into one integrated platform to enable the best decision making in the evolving digital economy. The firm moves away from the highly inefficient business models of traditional research firms and instead focuses on research democratisation, with an emphasis on accessibility, transparency and autonomy.

Ecosystm's research originates from its proprietary "Peer-2-Peer" platform allowing Tech Buyers to easily benchmark their organisation, while providing Tech Vendors with access to real-time Market Insights in an affordable "as-a-Service" subscription model.