

Q&A for Cloud Readiness Index

Background

Introduction

The Asia Cloud Computing Association (Asia Cloud) is launching a “Cloud Readiness Index” designed to track the region’s progress towards a complete spectrum of cloud computing-based infrastructures and services. By mapping the conditions and criteria required for successful implementation and uptake, the association aims to identify potential bottlenecks that could slow adoption and threaten Asia’s digital future.

To further support the discussion the association is also launching a Cloud Map on its web site that will graphically illustrate the current state of the cloud debate – charting and analyzing the issues, the stakeholders and influencers and how the debate is developing.

What are the “bottlenecks”?

Cloud computing is sparking a lot of discussion and debate in both the public and private sector about how to deal with issues such as reliability of access, security and cybercrime, government access, privacy and data governance, even the protection of intellectual property and free expression. At a more commercial layer, we are also seeing concerns raised about data portability, vendor lock-in and interoperability in the cloud. In many ways, none of these issues are particularly novel as they have been a feature of the technology dialogue for decades. What’s new is that the cloud is fostering a new conversation around ‘trust’ – trust in my service provider, trust in government, trust in the network, trust in the security of my data, trust in my service level agreement. We are at a pivotal stage of building that ‘trust’ and the Asia Cloud Computing Association wants to be a platform for these important issues to be addressed. We believe that the Index is a good starting point to foster a conversation about the role of industry and governments in building ‘trust’ to help drive even greater adoption of the cloud but in an informed and predictable environment for clients and customers.

Why should countries and governments be interested in cloud computing?

Technology, in general, has always been a great leveler of opportunity for business, communities and citizens. Just think about how access to the PC and the Internet has helped bridge the divide for millions across Asia in term access to information and the opportunities to tap into new economic opportunities. The cloud is the next stage in creating an even more level playing field in this digital economy. For

governments in particular, the cloud not only provides a chance to lower their costs of infrastructure and help drive savings across their ICT ecosystem, but through this consolidation they can now use the cloud to liberate a vast array of data and information to help inform and provide value to citizens in terms education, healthcare, public safety to name a few.

The potential socio-economic impact in different parts of the world is still being studied. There are no exhaustive studies for Asia at this point in time but the benefits are potentially huge. The Centre for Economics and Business Research states in a recent study that cloud computing will create 2.3 million new jobs across Europe's top five economies between 2010-2015. The World Economic Forum (WEF) says in its' 2011 report that many believe the impact of cloud to become equal to or exceed that of mobile technologies.

To realize this potential also in Asia, the region needs to harmonize the policy and regulatory frameworks to facilitate effective trade in digital information and services. It is therefore necessary to have an active debate with an Asia focus. This is what Asia Cloud is aiming for in terms of its overall mission and with the Cloud Readiness Index,"

The Cloud Readiness Index

What is the Cloud Readiness Index?

The Index is a summary that pulls together existing data to look at the state of readiness for cloud computing in markets across the region - especially how we see regulation and policy work by governments to help advance the cloud in Asia. It measures key criteria that will help companies and individuals determine which markets are best placed for wide adoption of cloud computing services. The Index analyses 10 key attributes critical to the deployment and use of cloud computing technology across 14 different countries. Countries included are China, Australia, Hong Kong, India, Indonesia, Japan, Korea, Malaysia, New Zealand, the Philippines, Singapore, Taiwan, Thailand and Vietnam.

Why these 14 countries?

This is the first version of the Index and we made the decision to look at the key markets from where our membership is strong. We hope to include all countries in the region in future versions of the index.

What is the purpose of the Index?

Cloud computing is still in its' early phases and, in the absence of well defined standards and processes, it is important to invite stakeholders to create a set of industry best practices. The "Cloud Readiness Index" is designed to track the

region's progress towards a complete spectrum of cloud computing-based infrastructures and services. By mapping the conditions and criteria required for successful implementation and uptake, we aim to identify potential bottlenecks that could slow adoption and threaten Asia's digital future.

Also, in surveying our members, there was a distinct gap in the market for this level of mapping of the policy, legal and commercial drivers of the cloud. While we have certainly drawn on the great work done by other trade associations, NGOs and other publicly available sources, what was lacking was a blending of this information to help our members, their customers and even policy makers to look at the cloud in a more holistic manner, with Asia in focus.

What are you hoping to achieve with the Index?

A debate among key stakeholders in Asia that will ultimately lead to the removal of bottlenecks that slow cloud adoption.

What conditions are you covering in the Index?

The attributes that comprise the first release of the index include:

1. Regulatory conditions
2. International connectivity
3. Data protection policy
4. Broadband quality
5. Government prioritization
6. Power grid quality
7. Internet filtering
8. Business efficiency index
9. Global risk
10. ICT development

Why were the specific parameters chosen for the index calculation?

The Index analyses 10 key attributes critical to successful deployment and the use of cloud computing technology. The decision to include these 10 to represent the readiness of cloud was made through extensive discussion by various experts from the Asia Cloud Computing Association over the course of the last 12 months.

How have you calculated the scores?

Each attribute has equal weight and we have used published metrics to evaluate the countries score for each metric. Each attribute needed to be handled differently. In some cases it was one metric from the source listed that was normalized to be on a scale of ten. In other cases the metric is an average of a few parameters that are combined from one source. The only special attribute is government prioritization;

it is a combination of a number of sources and information gathered from members of the Association.

What are the Index attributes based on?

The Index is a 14 market study that brings together current and public data from sources such as World Economic Forum (WEF), International Telecommunications Union (ITU), Business Software Alliance (BSA), Oxford University, International Institute Management Development, Maplecroft Global Risk Atlas and Fault Lines, Telegeography and members of Asia Cloud Computing Association. For more details see below.

1. Regulatory conditions

License requirement of cloud services and DC, Intellectual Property protection, lawful intercept for cloud content

Source: BSA

2. International connectivity

Bandwidth available for International connectivity; combined with the reciprocal of price per Gbps

Source: TeleGeography 2010

3. Data protection policy

Survey. Are cloud providers free from laws that penalize based on Nationality? Are there laws that protect user data disclosure?

Source: BSA

4. Broadband quality

Combining the Broadband Quality Score(up/down/latency) with broadband penetration figures for each country.

Source: Oxford University Broadband Survey

5. Government prioritization

Combination of Government ICT prioritization, Cloud RFI/RFP

Source: WEF-GITR, Asia Cloud Computing Association members

6. Power grid quality

Electricity supplies that are free of interruptions and shortages so that cloud services are delivered unimpeded

Source: WEF GlobalCompetitiveness Report 2010

7. Internet filtering

Incoming filtering of content, freedom of content flow without tarruf and net neutrality policy in place

Source: BSA

8. Business efficiency index

Based on five factors: productivity, labor market, finance, management practices, and attitudes and values.

Source: International Institute Management Development

9. Global risk

7 key risk areas: macroeconomic; security; governance; resource security; climate; pandemics; societal resilience

Source: Maplecroft Global Risk Atlas and Fault lines

10. ICT development

11 ICT indicators are included in the IDI (grouped by the three sub-indices: access, use, and skills).

Source: ITU 2010 - ICT Development Index (IDI)

How reliable is the data?

By using published data from very well established organizations that regularly researches and update their findings we consider the data reliable.

How do Asian countries score compared to the U.S. and Europe?

Our aim has not been to compare Asian countries to the U.S. and Europe but to assess the state of readiness in Asia itself. The categories and factors we have looked at however are relevant not only in Asia but also the U.S. and Europe and we do believe that the higher ranking countries in the CRI would compare well to the U.S. and Europe.

What do countries need to do to get a higher score?

This has been partly answered in the white paper under the Country Highlights and could be explored further by researching the published source that we used for the specific attribute.

How does the CRI relate to actual use of cloud based services in these countries?

The CRI does not take into account or make any claims on the actual usage of cloud based services in the countries across Asia today. It does, nonetheless, show which countries are well placed to take full advantage of the benefits of cloud computing, and could therefore serve as a forecast in regards to usage. Actual uptake of cloud services would, however, also depend on other competitive factors not assessed in this index, such as actual pricing and the number of vendors who establish services in particular countries.

Why is not actual usage a part of the CRI?

We reached the conclusion that, at this point in time, usage data is potentially misleading to today's debate as;

- a) a consistent picture of usage is difficult to determine across all of Asia due to it not all being publicly accessible or verifiable data
- b) the industry is still in its early days of evolution and experiencing rapid growth from a small base which therefore could show misleading results

As the industry develops and matures in Asia and historical data and track records become more meaningful and valuable, we may look to include actual usage in future editions of the index.

What is the roadmap of the Index?

The purpose of the Index is to facilitate an ongoing discussion and to track the progress of a series of critical conditions required for cloud based services and solutions in the region. The first release does not cover all necessary conditions but it is a good platform for the initial debate and for gathering input for the next release, scheduled in the next six months. Attributes we are planning for the next release include:

- Government cloud incentives
- Environmental risks
- Green regulations for Data Centers
- Ecosystem development
- Local vs global provider level playing field

Beyond publishing a numerical index we want to plot cloud readiness vs cloud adoption for each country and analyze the different clusters.

Why are not U.S. and European countries included in the Index?

While the cloud is universal, much of the debate and discussion on the cloud is taking place in Europe and the US. This is not surprising given that many of the key vendors are from both those regions. But, what is clear is that Asia will continue to grow both as a cloud customer as well as a cloud provider. Given the economic growth in this region it is important for Asian economies to begin to look not only at the opportunities for the cloud for their individual economies, but how the cloud can also help drive greater economic value in the broader region. The Index is our way to help prompt that conversation within industry, within governments, and hopefully between countries in Asia, to help drive economic and social outcomes through the harmonization of policies and laws that allows the cloud to meet its full potential.

Why is the index important to the association and your members?

The Index fills a gap in the market for insights and information about how the momentum for the cloud in key markets. For members, it is vital to see how the legal, policy and commercial environments co-exist. Having this information

provides a snapshot of the key drivers and concerns of customers and policy makers and where they can help inform better decisions.

I don't agree with the index results.

As cloud computing technology has a wide variety of uses and different users have different requirements we don't expect everyone to agree with the index results. We do however believe the index successfully highlights countries that are laying the foundations for a successful cloud computing industry and also highlights potential bottlenecks that threaten Asia's digital future. We welcome and encourage debate around the ranking and the issues highlighted in this index. We also welcome any direct feedback or suggestions for future editions of the index via index@asiacloud.org

Who can I talk to to learn more about the index?

Please contact index@asiacloud.org

Who should we contact to publish the story behind the index?

Please contact index@asiacloud.org

May we use the index in our marketing/publications?

Please contact index@asiacloud.org

May we use the index in our product?

Please contact index@asiacloud.org

About Asia Cloud Computing Association

What is the Asia Cloud Computing Association?

Asia Cloud Computing Association is a forum for hardware and software developers, carriers, enterprise users, policy makers and researchers. We drive the adoption of cloud computing by addressing regional issues of regulation and policy, security infrastructure and awareness. As the only Asian forum on cloud computing issues, Asia Cloud is the place for collaboration and innovation. As a collaborative forum, Asia Cloud will accelerate the growth of the cloud market regionally by helping remove obstacles and leveraging opportunities.

Why "Asia"?

The knowledge economy will fuel Asia's future and we think that cloud computing is the next great 'leveler' for the region, poised to help accelerate the momentum around trade and economic integration in Asia. But to realize this potential, the region needs to harmonize the policy and regulatory frameworks that will facilitate

effective trade in digital information and services. There are also other regional challenges that need to be studied and addressed by stakeholders in the region.

Who founded the association and when?

The association was founded by Per Dahlberg and Mark Ross and launched in November 2010. Founding member companies were Alcatel-Lucent, Cisco Systems, EMC Corporation, Microsoft, NetApp, Nokia Siemens Networks, PLDT/Smart, Rackspace, Telstra International, Telenor, and Verizon. Members who have joined since then include AT&T, CPC CITIC, CloudGarage, Genetic Finace and Huawei,.

What are you trying to achieve (what is your mission)?

The mission of the association is to establish collaboration among cloud stakeholders in Asia to accelerate the growth of the cloud market.

How are you planning to achieve this?

This is done through working groups where best practice recommendations and other thought leading outputs are produced. The working groups draw on subject matter expertise and experience from the member companies. Current working groups include:

- **Public Policy and Regulatory Working Group:** will work to ensure that the interests of the cloud computing industry are represented and to contribute to public policy.
- **Security Working Group:** will develop and promote cloud-friendly security governance and best practices to enterprises and policymakers.
- **Taxonomy Working Group:** will support standardization and to develop a cloud computing framework.
- **Carrier-Grade Cloud Group:** will identify and promote requirements for cloud computing solutions for carrier-grade applications.

In its role as the primary resource for Asian cloud computing, the association will establish and maintain collaboration with other industry associations serving the cloud computing market through an Alliances Committee. A Marketing Committee will create educational and outreach programs to support members and adoption of cloud computing.

How do I (an individual) become a member?

Application forms can be found on our home page: www.asiacloud.org

How do we (a company) become a member?

Application forms can be found on our home page: www.asiacloud.org

