



Industry Specific
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Cloud Adoption in ASEAN – Analysing the CRI 2018 Report from ACCA

Wong Ka Vin

Introductions

- Significant progress for Asia-Pacific's (APAC) cloud readiness.
- Cloud infrastructure and expertise at the heart of APAC governments' wider national digital transformation agendas.
- 'Cloud First' policies and frameworks are being planned and/or strengthened in Australia, Malaysia, New Zealand, and the Philippines.
- Customers in ASEAN has started to implement new business process on the Cloud
- The CRI 2018 scores and rankings corroborate these encouraging trends.

CRI 2018 Key Findings

	Overall Score (/100)	Overall Rank
Singapore (+1)	76.6	1
Hong Kong (-1)	74.1	2
New Zealand (-)	71.1	3
Japan (+1)	67.1	4
Taiwan (+1)	66.9	5
Australia (-2)	66.3	6
South Korea (-)	64.8	7
Malaysia (-)	61.0	8
Philippines (-)	53.6	9
Thailand (-)	50.6	10
Indonesia (-)	49.4	11
India (-)	47.4	12
China (-)	43.1	13
Vietnam (-)	41.0	14

- Combined with Hong Kong's tumble, Singapore's ascension allowed it to pull ahead of the pack and take the top regional spot.
- Japan, Singapore, and Taiwan ascended one rank each.
- Australia and Hong Kong respectively lost two and one positions.
- The rest of the economies experienced no changes in their rankings compared to 2016.

CRI 2018 - Segment Scores

CRI SEGMENTS

	CLOUD INFRASTRUCTURE (/30)	CLOUD SECURITY (/20)	CLOUD REGULATION (/30)	CLOUD GOVERNANCE (/20)
Australia	12.8	12.6	24.4	16.4
China	7.4	9.9	17.0	8.8
Hong Kong	21.3	13.3	24.1	15.4
India	7.3	10.2	18.1	11.8
Indonesia	10.2	8.1	18.5	12.7
Japan	15.3	12.3	25.0	14.6
Malaysia	11.9	13.0	22.9	13.2
New Zealand	16.8	12.0	25.1	17.3
Philippines	11.9	9.8	20.1	11.8
Singapore	22.5	13.9	26.9	13.4
South Korea	14.3	12.1	22.8	15.6
Taiwan	17.5	12.3	21.6	15.6
Thailand	11.8	10.7	14.9	13.3
Vietnam	11.0	6.3	14.4	9.4
<i>Brazil</i>	<i>12.3</i>	<i>9.8</i>	<i>15.1</i>	<i>12.3</i>
<i>Germany</i>	<i>17.1</i>	<i>11.2</i>	<i>24.5</i>	<i>16.4</i>
<i>South Africa</i>	<i>11.4</i>	<i>8.7</i>	<i>20.6</i>	<i>14.5</i>
<i>United Arab Emirates</i>	<i>15.0</i>	<i>10.0</i>	<i>22.0</i>	<i>13.9</i>
<i>United Kingdom</i>	<i>19.8</i>	<i>12.2</i>	<i>25.6</i>	<i>16.0</i>
<i>United States</i>	<i>16.5</i>	<i>13.6</i>	<i>23.0</i>	<i>15.9</i>

- Leading APAC economies outperform non-APAC markets in cloud infrastructure.
- This is thanks to higher scores for international connectivity, broadband quality, and access to sustainable energy.
- APAC economies also have a slight advantage in terms of cloud regulation.
- This is thanks to recent steps to strengthen privacy and intellectual property frameworks.



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Source : Asia Cloud Computing Association - CRI 2018 Results



CRI 2018 – Profile Singapore #1

	Score	Ranking
CRI #01 – International Connectivity	7.0	2
CRI #02 – Broadband Quality	9.5	1
CRI #03 – Power and Sustainability	6.0	2
CRI #04 – Data Centre Risk	4.6	3
CRI #05 – Cybersecurity	9.3	1
CRI #06 – Privacy	9.0	1
CRI #07 – Government Reg. Env.	9.0	1
CRI #08 – Intellectual Prop. Prot.	8.9	1
CRI #09 – Business Sophistication	8.5	2
CRI #10 – Freedom of Information	4.9	12
Cloud Infrastructure	22.5	1
Cloud Security	13.9	1
Cloud Regulation	26.9	1
Cloud Governance	13.4	7
Total	76.6	1

- Singapore’s remarkable performance in most segments and parameters allows it to overtake Hong Kong and rank first in this year’s CRI.
- Significant improvements in Data Centre Risk, Cybersecurity, Data Privacy, and Intellectual Property Protection have pushed it up in those parameter rankings.
- It has also held on to its past rankings in many other parameters, consistently ranking among the top three economies.
- Singapore’s key weakness can be found in the aggregated Governance segment. A top Business Sophistication scorer, it is brought down by a poor Freedom of Information score.
- If it wants to continue succeeding, Singapore will have to ensure its renowned no-nonsense efficiency does not become its own worst enemy.



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Source : Asia Cloud Computing Association – CRI 2018 Results



CRI 2018 – Profile Malaysia #8

	Score	Ranking
CRI #01 – International Connectivity	2.5	10
CRI #02 – Broadband Quality	5.5	8
CRI #03 – Power and Sustainability	4.0	9
CRI #04 – Data Centre Risk	4.1	8
CRI #05 – Cybersecurity	8.9	2
CRI #06 – Privacy	7.5	8
CRI #07 – Government Reg. Env.	7.9	3
CRI #08 – Intellectual Prop. Prot.	7.6	6
CRI #09 – Business Sophistication	7.8	7
CRI #10 – Freedom of Information	5.3	11
Cloud Infrastructure	11.9	8
Cloud Security	13.0	3
Cloud Regulation	22.9	6
Cloud Governance	13.2	9
Total	61.0	8

- Malaysia retained its 2016 ranking of 8th due to micro fluctuations in many of its parameter scores.
- It performed exceptionally well in the Cybersecurity parameter, and made moderate progress in Government Regulatory Environment.
- It has declined or stagnated in most other parameters.
- It has lost five spots in business sophistication, suggesting that Malaysia could be doing more to facilitate business operations..
- Lower scores in the aggregated infrastructure and Governance



CRI 2018 – Profile Philippines #9

	Score	Ranking
CRI #01 – International Connectivity	2.5	10
CRI #02 – Broadband Quality	4.8	13
CRI #03 – Power and Sustainability	4.5	4
CRI #04 – Data Centre Risk	3.9	9
CRI #05 – Cybersecurity	5.9	12
CRI #06 – Privacy	8.5	5
CRI #07 – Government Reg. Env.	5.7	11
CRI #08 – Intellectual Prop. Prot.	5.9	12
CRI #09 – Business Sophistication	5.9	14
CRI #10 – Freedom of Information	5.9	8
Cloud Infrastructure	11.9	8
Cloud Security	9.8	12
Cloud Regulation	20.1	9
Cloud Governance	11.8	11
Total	53.6	9

- The Philippines remains in 2016's 9th position.
- It has reached the 4th position for the Power Grid, Green Policy, and Sustainability parameter, and has made small improvements in Cybersecurity and Broadband Quality.
- The aggregated Regulation segment has become its strongest suit, mainly thanks to two technology-related initiatives: the establishment of the DICT to better coordinate the government's ICT policies, and the development of a 'Cloud First' policy for government services.
- The impact of both these initiatives will take time to be reflected in CRI scores.
- At the moment, the Philippines has either stagnated or regressed in most CRI rankings, especially in the Cybersecurity and Data Centre Risk parameters.



CRI 2018 – Profile Thailand #10

	Score	Ranking
CRI #01 – International Connectivity	2.7	9
CRI #02 – Broadband Quality	6.9	4
CRI #03 – Power and Sustainability	2.2	11
CRI #04 – Data Centre Risk	3.8	11
CRI #05 – Cybersecurity	6.8	9
CRI #06 – Privacy	4.5	12
CRI #07 – Government Reg. Env.	5.4	14
CRI #08 – Intellectual Prop. Prot.	5.0	14
CRI #09 – Business Sophistication	7.7	8
CRI #10 – Freedom of Information	5.5	10
Cloud Infrastructure	11.8	10
Cloud Security	10.7	9
Cloud Regulation	14.9	13
Cloud Governance	13.3	8
Total	50.6	10

- CRI 2018 has mixed results for Thailand. On the one hand, it has held its 2016 rank and seen considerable improvements in Cybersecurity, Business Sophistication, and Broadband Quality
- The Freedom of Information parameter has also improved albeit much more moderately.
- Governance was Thailand’s strongest segment, while Regulation and Infrastructure were its weakest.
- Thailand has fallen several ranks in key parameters: Data Centre Risk, International Connectivity, and Power Grid, Green Policy, and Sustainable Energy.
- Data Privacy and Government Regulation rankings, meanwhile, stagnated at the 2016 levels.



CRI 2018 – Profile Indonesia #11

	Score	Ranking
CRI #01 – International Connectivity	1.7	12
CRI #02 – Broadband Quality	5.5	8
CRI #03 – Power and Sustainability	2.9	10
CRI #04 – Data Centre Risk	3.8	11
CRI #05 – Cybersecurity	4.2	13
CRI #06 – Privacy	6.5	10
CRI #07 – Government Reg. Env.	5.6	13
CRI #08 – Intellectual Prop. Prot.	6.4	8
CRI #09 – Business Sophistication	6.7	11
CRI #10 – Freedom of Information	6.0	7
Cloud Infrastructure	10.2	12
Cloud Security	8.1	13
Cloud Regulation	18.5	10
Cloud Governance	12.7	10
Total	49.4	11

- Indonesia has seen some improvements since CRI 2016, but it has not budged from its 11th position.
- Progress has been more visible in the Cloud Infrastructure segment, mostly thanks to improvements in the Broadband Quality parameter.
- Regulation and Governance are its strong points; the government has indeed taken the issue of citizen data privacy seriously.
- Data Centre Risk remains constant at 11th, while Government Regulatory Environment and Cybersecurity both worsened to 13th.
- Business Sophistication and Freedom of Information have also fallen in response to new regulations.



CRI 2018 – Profile Vietnam #14

	Score	Ranking
CRI #01 – International Connectivity	3.6	5
CRI #02 – Broadband Quality	5.3	10
CRI #03 – Power and Sustainability	2.1	12
CRI #04 – Data Centre Risk	3.9	9
CRI #05 – Cybersecurity	2.5	14
CRI #06 – Privacy	3.5	14
CRI #07 – Government Reg. Env.	5.7	11
CRI #08 – Intellectual Prop. Prot.	5.1	13
CRI #09 – Business Sophistication	6.8	10
CRI #10 – Freedom of Information	2.6	13
Cloud Infrastructure	11.0	11
Cloud Security	6.3	14
Cloud Regulation	14.4	14
Cloud Governance	9.4	13
Total	41.0	14

- Vietnam ranks last or next-to-last in almost all segments and parameters.
- One bright spark was that it rose to 10th position in Business Sophistication as well as in Government Regulatory Environment.
- The Data Centre Risk parameter also improved with a jump to 9th. Its ranking in International Connectivity also jumped from 11th to 5th, constituting its greatest success in CRI 2018.
- It is plagued by poor scores in the Data Privacy, Intellectual Property Protection, and Freedom of Information parameters.
- By far its biggest weakness is its cybersecurity; the 2017 Global Security Index ranked Vietnam 101 out of 195 economies in Cybersecurity, making it the lowest-ranking economy in Southeast Asia.



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Conclusions

- The APAC region is ready to lead the world' digital transformation.
- APAC economies outperform non-APAC economies in all but two parameters, and most of them score rather high in the Regulation, Infrastructure, and Governance segments.
- This ability remains to be harnessed to its full potential, and the region will have to overcome some growing challenges to effectively build on its strong foundations.
- APAC is the stage for a rising digital divide between mature and emerging APAC economies, while energy sustainability, cybersecurity, data privacy, and freedom of information remain major weaknesses for many of them.
- If unaddressed, these issues may eventually outweigh – and even hinder – an otherwise promising preparedness.

Key Areas of Improvements

- **Improve Energy Sustainability:** APAC policymakers should coordinate efforts to improve energy security, rein in excessive energy consumption, and encourage the use of energy-saving goods and services.
- **Strengthen Cybersecurity Frameworks:** APAC policymakers are urged to strengthen cybersecurity regulations and laws, which will provide clarity and reassurance to businesses.
- **Ensure Global Data Privacy Interoperability:** APAC policymakers are urged to consider developing and/or updating their data privacy laws and regulations to ensure interoperability with regional and global frameworks, such as the APEC Cross-Border Privacy Rules (CBPR) framework, and the EU's General Data Privacy Regulations (GDPR).
- **Encourage Freedom of Information:** APAC policymakers are urged to facilitate the circulation of information to ensure consumers, businesses, and governments can fully benefit from and contribute to the global digital economy.

Looking Ahead

- Ranking high in the Cloud Readiness Index is a great advantage for future- proof, digitally-enabled economies.
- But to harness the full potential of cloud technologies, the region's economies must go beyond readiness. They must build their competitiveness by anticipating trends and opportunities and identifying emerging business models.
- To achieve this, policymakers must be able to measure the way economies **actually put their readiness to use**.
- We cannot improve what we do not measure, and thus globally-comparable metrics to assess cloud adoption and usage are needed to effectively succeed in today's data economy.
- Moving further into the Fourth Industrial Revolution, cloud-based technologies will continue to drive intelligent innovation that connects people, products, and platforms.
- In this context, APAC economies must seek methods and means to measure new aspects of their technology policies; not only their implementation, but also their actual impact on people's lives.
- Information gaps are due to the lack of publicly-available metrics on cloud adoption, application, and usage.
- More accurate insight can be gained if we can obtain additional dimensions around cloud impact, including adoption, usage, and business potential.

Cloud Readiness Index (CRI) – Methodology

- The Cloud Readiness Index measures the extent to which economies are prepared to adopt and roll out cloud computing technologies.
- As the region continues to improve its cloud readiness, the CRI measures where economies are in relation to each other (rather than comparing absolute scores).
- It is a composite index made up of 10 parameters grouped into four readiness segments; cloud infrastructure, cloud security, cloud regulation, and cloud governance.
- Scores are derived from secondary, publicly-sourced data and indexes. The data is normalised to a 10-point scale using different statistical methods

End



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