

# COUNTRY: CHINA

## SCORE: 43.71 | RANK: 22/24

The continued promotion of indigenous development policies that discriminate against foreign technology companies continue to hinder China’s cloud computing readiness progress.

China does not follow international models in key areas that are relevant to cloud computing. For example, the privacy and security provisions in the 2015 National Security Law and 2016 Cybersecurity Law are controversial and have been the subject of extensive international debate. Key concerns include data localization mandates, extensive and duplicative tests, audits, and certifications. These concerns are exacerbated by pending and/or unclear implementing guidelines.

China achieved the lowest results from all countries in the areas of international standards and it also scored very poorly in the section on free trade promotion. China imposes a range of onerous local certification and accreditation requirements that are in addition to (and often inconsistent with) international cybersecurity standards and general IT standards. China also imposes local testing requirements for cybersecurity products.

Extensive regulation of Internet content, including mandatory Internet filtering and censorship, remains a key issue in China.

China’s poor results in relation to laws and regulation were partly offset by strong progress in IT infrastructure, which explains the slight improving in its ranking — from 23rd place to 22nd place.

# CHINA	RESPONSE	EXPLANATORY TEXT
<b>DATA PRIVACY (SCORE: 3.8/12.5   RANK: 21/24)</b>		
1. Is a data protection law or regulation in place?	ⓘ	<p>China does not have a national data protection law, but limited privacy rights are contained in a range of specific sectoral laws.</p> <p>Some provisions in relation to the protection of personal information are dispersed in the Criminal Law (Article 7 of the 7th Amendment), Social Insurance Law (Article 92), and Tort Liability Law (Article 2).</p> <p>The Standing Committee of the National People’s Congress Decision on Strengthening the Protection of Information on the Internet (2012) applies to the collection and processing of electronic personal information via the Internet and introduces some basic privacy and security principles. The decision has led to the adoption of sectoral regulations, which have instituted a number of data protection requirements. These include the Telecom and Internet Users’ Personal Data Protection Regulations (2013), a revision of the Consumer Protection Act (2013), and the Internet Trading Administrative Measure (2014).</p> <p>In October 2014 the Supreme People’s Court issued the Provisions on Several Issues concerning the Application of Law to Trial of Civil Disputes Concerning Infringement of Personal Rights over Information Networks. The provisions state that in some circumstances Internet users or Internet service providers publishing personal information that causes harm can be liable in tort law. Potential sanctions include apologies and compensation.</p> <p>In November 2016, China’s National People’s Congress enacted the Cybersecurity Law. The Law came into force on June 1, 2017, and contains some basic data protection provisions (Articles 40, 41, and 42) that require network operators to protect personal information. The requirements remain relatively undefined and could impose unnecessary limitations on network providers. Regulations providing businesses and consumers with clarity and certainty are not yet implemented.</p>
2. What is the scope and coverage of the data protection law or regulation?	Sectoral	There is no comprehensive privacy law. The December 2012 resolution on Strengthening the Protection of Information on the Internet targets ISPs and organizations that process information online. The privacy provisions in the Cybersecurity Law 2016 cover network operators, a term that is defined very broadly.
3. Is a data protection authority in place?	✘	A regulator is not in place at this time.
4. What is the nature of the data protection authority?	Not applicable	A regulator is not in place at this time.

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5. Is the data protection authority enforcing the data protection law or regulation in an effective and transparent manner?	Not applicable	There is no centralized or coordinated regulation or enforcement of privacy. The Ministry of Industry and Information Technology (MIIT) <www.miit.gov.cn> deals with some of the technical regulations. The State Administration for Industry and Commerce (SAIC) <www.saic.gov.cn> plays a limited role in relation to privacy and consumer protection. The courts also play a limited role.
6. Is the data protection law or regulation compatible with globally recognized frameworks that facilitate international data transfers?	Not applicable	China's data protection provisions are not compatible with international frameworks, which require more developed principles.
7. Are data controllers free from registration requirements?	✘	There are no general registration requirements in Chinese law. However, the Cybersecurity Law of China (November 2016) requires many international data transfers to be subject to a security assessment by the relevant industry regulator. In April 2017 the Cyberspace Administration of China (CAC) <www.cac.gov.cn> proposed to expand this requirement to all network operators. In practice this will act as a registration requirement for most data transfers required by cloud service providers.
8. Are there cross-border data transfer requirements in place?	Detailed requirements	The Cybersecurity Law of China (November of 2016) includes a data localization requirement requiring some organizations to retain some personal information in China. If an entity has a genuine business need to transmit personal information to a destination outside China, it can do so provided it undergoes a "security assessment." This requirement acts as a de facto cross-border data transfer requirement.  In April 2017 the Cyberspace Administration of China (CAC) <www.cac.gov.cn> issued draft Measures for the Security Assessment of Outbound Transmission of Personal Information and Critical Data. The draft measures provide guidance on the security assessments and other requirements for cross-border data transfers. The draft measures are not yet official policy, but it is likely that they will form the basis of the future legal requirements.  The draft measures extend the data localization requirement from "operators of critical information infrastructure" to all "network operators." This is a significant expansion of the scope of the provisions and is likely to catch most (or all) cloud service providers.  The draft measures allow some smaller organizations (or smaller transfers) to be subject to a simple self-assessment regime, as long as the data they seek to transfer is not deemed relevant to national security, or social and public interest. However, larger organizations and larger transfers (e.g., over 500,000 records) must be assessed by the competent authority. The relevant competent authority depends on the industry sector, although the CAC <www.cac.gov.cn> will act as the competent authority where there is no clear industry regulator. There is an extensive list of transfers that would be captured by the requirement to have the transfer assessed by the competent authority, based on the nature of the data. Many cloud services are likely to be caught by this requirement.  The proposed security assessment would examine a comprehensive list of issues, including the necessity of the outbound transfer, the sensitivity of the personal information, the security measures and capabilities of the data recipient, and the "cybersecurity environment" of the receiving nation.  Organizations are also required to expressly explain to the data subject the purpose, scope, content, recipient, and receiving nation, and obtain the consent of the data subject. Outbound data transfers can also be blocked where the transfer brings risks to the security of the national political system, economy, science and technology, or national defense of China, or otherwise jeopardizes the public interest.
9. Are cross-border data transfers free from arbitrary, unjustifiable, or disproportionate restrictions, such as national or sector-specific data or server localization requirements?	✘	In April 2017 the Cyberspace Administration of China (CAC) <www.cac.gov.cn> issued draft Measures for the Security Assessment of Outbound Transmission of Personal Information and Critical Data. The draft measures propose some of the most detailed and prescriptive cross-border data transfer requirements in any jurisdiction. Most cloud service providers will be caught by a requirement to submit their data transfers to the competent authority for a security assessment. This is in addition to requirements relating to explicit notice and consent. Even if all of these requirements are met, the transfer could still be blocked on broad grounds related to the political and economic interests of China. In addition, the regulator for each transfer will depend on the relevant industry sector, rather than a single, consistent regulator.  The proposed measures in China are not aligned with international best practice and are likely to act as a significant barrier to development, innovation, and competition in cloud services.

# CHINA	RESPONSE	EXPLANATORY TEXT
10. Is there a personal data breach notification law or regulation?	📌	Article 42 of the Cybersecurity Law 2016 (which came into force in June 2017) includes data breach notification requirements for network operators: <p>“When the leak, destruction or loss of personal information occur, or might occur, remedial measures shall be immediately taken, and provisions followed to promptly inform users and to make report to the competent departments in accordance with regulations.”</p> <p>In addition, in December 2016 China released a new, comprehensive draft ecommerce law. The draft law contains some detailed data breach notification requirements that are likely to have broad application. The draft law is currently the subject of public consultation.</p>
11. Are personal data breach notification requirements transparent, risk-based, and not overly prescriptive?	📌	China’s data breach notification requirements (which came into force in June 2017) apply to network operators. Many large corporations that have been the subject of an attack may not be obliged to notify customers or regulators of a breach.
12. Is an independent private right of action available for breaches of data privacy?	✅	A constitutional right to privacy is theoretically available. However, it is not used in practice. <p>Plaintiffs may also have a limited right of action based in tort law, following the introduction of the Supreme People’s Court’s Provisions on Several Issues Concerning the Application of Law to Trial of Civil Disputes Concerning Infringement of Personal Rights over Information Networks in October 2014.</p>
<b>SECURITY (SCORE: 6.3/12.5   RANK: 17/24)</b>		
1. Is there a national cybersecurity strategy in place?	✅	On December 27, 2016, the Cyberspace Administration of China (CAC) <www.cac.gov.cn> released the first National Cybersecurity Strategy, which illustrates and reaffirms China’s main positions and propositions on cyberspace development and security and serves as the guide for China’s cybersecurity work. The Strategy aims to build China into a cyber power while promoting an orderly, secure, and open cyberspace and safeguarding national sovereignty.
2. Is the national cybersecurity strategy current, comprehensive, and inclusive?	✅	The National Cybersecurity Strategy was released on December 27, 2016, and is considered to be very up to date. It is comprehensive, detailed and ambitious. It includes implementation steps, although many of the details are delegated to future regulations that have not yet been developed. <p>The strategy includes provisions on:</p> <ol style="list-style-type: none"> <li>(1) Defending cyberspace sovereignty;</li> <li>(2) Protecting critical information infrastructure (CII);</li> <li>(3) Building a healthy online culture;</li> <li>(4) Cybercrime, espionage, and terrorism;</li> <li>(5) Cyber governance;</li> <li>(6) Cyberspace defense capabilities; and</li> <li>(7) International cooperation.</li> </ol>
3. Are there laws or appropriate guidance containing general security requirements for cloud service providers?	✅	China has several security laws that may have an effect on cloud service providers. The National Security Law 2015 includes some provisions on information technology service providers and the Internet. The law includes controversial provisions on vetting any foreign investment that poses a risk to national security. Article 59 of the National Security Law appears to mandate national security reviews for “Internet or information technology products and services.” <p>The Cybersecurity Law 2016 contains detailed network security requirements that apply to network operators. The definition of network operators includes “owners and administrators of computer information networks as well as network service providers.” The Cybersecurity Law 2016 also includes additional security provisions (including controversial data localization provisions).</p>
4. Are laws or guidance on security requirements transparent, risk-based, and not overly prescriptive?	❌	The security provisions in the National Security Law 2015 and the Cybersecurity Law 2016 are controversial and have been the subject of extensive international debate. The key concerns are that the laws rely heavily on data localization; extensive and duplicative tests, audits, and certifications; and the development of national standards and assessment bodies, rather than promoting the use of international best practice security measures.
5. Are there laws or appropriate guidance containing specific security audit requirements for cloud service providers that take account of international practice?	📌	The Cybersecurity Law 2016 established security audit requirements. These include a specific annual audit requirement (Article 38) and additional requirements for regular assessments (Articles 51 and 52). The “Interim Security Review Measures for Network Products and Services” further elaborate these requirements, but specific requirements have yet to be published.

# CHINA	RESPONSE	EXPLANATORY TEXT
6. Are international security standards, certification, and testing recognized as meeting local requirements?	✘	<p>China imposes a range of onerous local certification and accreditation requirements that are in addition to (and often inconsistent with) international cybersecurity standards and general ICT standards. The Chinese Government regularly publishes lists of approved products for cybersecurity, including encryption products, anti-virus software and even basic operating systems. These lists exclude some organizations and products that have met international standards. China also imposes local testing requirements for telecommunications and ICT products that include cybersecurity products.</p> <p>Article 23 of the Cybersecurity Law 2016 states that the State Council will “formulate and release a catalog of critical network equipment and specialized network security products, and promote reciprocal recognition of security certifications and security inspection results to avoid duplicative certifications and inspections.” However, this arrangement appears to be limited to domestic reciprocity, and the law is silent on international arrangements.</p> <p>China is not a member of the Common Criteria Recognition Agreement (CCRA) &lt;<a href="http://www.commoncriteriaportal.org">www.commoncriteriaportal.org</a>&gt;. However, the common criteria have been translated into Chinese, and some voluntary assessment does occur.</p>
<b>CYBERCRIME (SCORE: 7/12.5   RANK: 23/24)</b>		
1. Are cybercrime laws or regulations in place?	✔	<p>Three national regulations prohibit the unauthorized entry into computer systems:</p> <ul style="list-style-type: none"> <li>(a) The Measures for the Administration of Protecting the Security of International Connections to Computer Information Networks (Computer Measures);</li> <li>(b) The Criminal Law; and</li> <li>(c) The Decision of the Standing Committee of the National People’s Congress on the Protection of Internet Security (Decision on Internet Security).</li> </ul> <p>A good example is Article 6(1) of the Computer Measures, which prohibits the intrusion into, or use of, a computer information network without authorization.</p> <p>Article 285 of the Criminal Law imposes criminal liability for the unauthorized entry into computer systems in more limited circumstances, for example, where the system in question concern state affairs, national defense construction, or sophisticated science and technology.</p> <p>There are also some relevant criminal provisions in the Telecom Regulations. Article 58(2) prohibits the theft or destruction of another person’s information through a telecommunications network.</p>
2. Are cybercrime laws or regulations consistent with the Budapest Convention on Cybercrime?	✘	<p>The cybercrime provisions in Chinese law are limited and do not cover all systems. They would need to be expanded in order to be consistent with the offenses in the Convention on Cybercrime.</p>
3. Do local laws and policies on law enforcement access to data avoid technology-specific mandates or other barriers to the supply of security products and services?	ⓘ	<p>China’s Cybersecurity Law (November 2016) does not require companies operating in China to surrender their intellectual property or create back-door access to private communications for law enforcement purposes. These provisions were removed from earlier drafts of the law.</p> <p>However, the final law does include a provision (Article 28) that requires network operators to provide technical support to security authorities for the purposes of upholding national security and conducting criminal investigations. The exact scope and extent of this provision is uncertain, but it may have an effect on cloud service providers.</p>
4. Are arrangements in place for the cross-border exchange of data for law enforcement purposes that are transparent and fair?	✔	<p>China has formal Mutual Legal Assistance Treaties (MLATs) in place with numerous countries. These include trading partners such as Australia, Canada, Japan, New Zealand, the Philippines, the United Kingdom, and the United States. These agreements follow international practice for the exchange of data.</p>

# CHINA	RESPONSE	EXPLANATORY TEXT
<b>INTELLECTUAL PROPERTY RIGHTS (SCORE: 6.8/12.5   RANK: 13/24)</b>		
1. Are copyright laws or regulations in place that are consistent with international standards to protect cloud service providers?	✓	<p>China has implemented laws enacting the key international standards on intellectual property.</p> <p>Copyright “safe harbor” protection for intermediaries such as cloud service providers is contained in Articles 14 to 17 and Article 22 of the Regulations on the Protection of the Right to Network Dissemination of Information Networks 2006. Article 22 protects the intermediary from liability to compensate the rights holder in damages, if:</p> <p>It clearly indicates that the hosting services are provided to its subscriber and publicizes the service provider’s name, contact person and network address;</p> <p>It does not alter the materials made available by its subscriber;</p> <p>It has no knowledge of and has no justifiable reason to know that the materials are infringing;</p> <p>It does not obtain any direct economic benefit from the provision of the materials; and</p> <p>Upon receiving a take-down notice from the rights holder, it acts to delete the materials according to the Regulations.</p>
2. Are copyright laws or regulations effectively enforced and implemented?	①	<p>Although the enforcement environment in China has improved in recent years, China continues to face significant issues in relation to enforcement of copyright.</p> <p>Barriers to effective enforcement include:</p> <ul style="list-style-type: none"> <li>• The need to clarify that use of unlicensed software by enterprises is a violation of the reproduction right;</li> <li>• The need to clarify that unauthorized temporary reproductions, in whole or in part, may be violations of the reproduction right;</li> <li>• The lack of significant statutory damages; and</li> <li>• The lack of effective protections for technological protection measures (TPMs), including their extension to access controls.</li> </ul> <p>In addition, copyright enforcement in China is hampered by some inconsistency by the courts regarding orders to compel evidence preservation and the use of preliminary injunctions.</p> <p>China’s intellectual property “safe harbor” can be applied to most cloud computing activities.</p>
3. Is there clear legal protection against misappropriation of trade secrets?	✓	<p>Civil remedies are available for the misappropriation of trade secrets in the 1993 Law on Anti-Unfair Competition.</p> <p>The law defines a “trade secret” as technical or operational information:</p> <ol style="list-style-type: none"> <li>(1) Which is not known to the public;</li> <li>(2) Which is capable of bringing economic benefits to the rights holder and has practical applicability; and</li> <li>(3) Which the rights holder has taken protective measures to keep confidential.</li> </ol> <p>A criminal offense has also been available since the Criminal Law was revised in 1997.</p>
4. Is the law or regulation on trade secrets effectively enforced?	①	<p>Approximately 1,000 trade secret cases have been heard by the courts in China. Compared with other IP cases, however, the fail rate for plaintiffs is high &lt;lexology.com/library/detail.aspx?g=c1e48585-073e-4ebb-87f0-b0195c60b117&gt;.</p> <p>In addition, China is regularly cited as a leading nation for the theft of trade secrets&lt;www.ncsc.gov/publications/reports/fecie_all/Foreign_Economic_Collection_2011.pdf&gt;.</p> <p>China is making some efforts to improve trade secrets enforcement. For example, the Civil Procedure Law 2013 extended the application of preliminary injunctions in trade secret cases and specialized IP courts have been established in Beijing, Nanjing, Shanghai, Suzhou, Wuhan, Chengdu, and Guangzhou.</p>
5. Is there clear legal protection against the circumvention of Technological Protection Measures?	①	<p>Copyright law reform and related criminal law reform in China has been stalled for several years. As a result, provisions related to technological protection measures remain limited.</p> <p>There are no criminal offenses available for the use of circumvention of technological protection measures, or trafficking in circumvention technologies, software, devices, components, and services (as required by the WIPO Copyright Treaty).</p>

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6. Are laws or regulations on the circumvention of Technological Protection Measures effectively enforced?	No	China is recognized as the leading global source of circumvention devices. Complex networks of organizations that facilitate access to unlicensed software, games, and audio-visual materials using illicit streaming devices and circumvention devices are based in China, with almost no effective enforcement against them.
7. Are there clear legal protections in place for software-implemented inventions?	1	China does not allow computer programs to be patented, but patent protection for some computer-related inventions is available.  In October 2016, the State Intellectual Property Office (SIPO) of China <www.sipo.gov.cn> announced revisions to Guidelines for Patent Examination to confirm the patent eligibility of computer-related inventions. The new guidelines came into force on April 1, 2017, and are expected to have a positive effect on the availability of patent protection for software-implemented inventions.
8. Are laws or regulations on the protection of software-implemented inventions effectively implemented?	1	The new State Intellectual Property Office (SIPO) of China <www.sipo.gov.cn> Guidelines for Patent Examination came into force on April 1, 2017, and it is too early to assess their implementation. However, the Guidelines now allow patent claims for "computer program products," "machine-readable mediums" and "an apparatus comprising a processor configured to execute instructions on a computer-readable medium to perform steps." These revisions should have a positive effect.
<b>STANDARDS AND INTERNATIONAL HARMONIZATION (SCORE: 4.5/12.5   RANK: 24/24)</b>		
1. Is there a regulatory body responsible for standards development for the country?	✓	The Standardization Administration of the People's Republic of China <www.sac.gov.cn/sacen> has a national regulatory and coordination role. However, industry standards are regulated by the relevant industry sector regulator, and some standards are also regulated at the local government level. These bodies report to the Standardization Administration.  Some specific industry standards are overseen by the Ministry of Industry and Information Technology (MIIT) <www.miit.gov.cn>.
2. Are international standards favored over domestic standards?	1	China had adopted a mix of international and local standards.  However, in recent years, China has increased the number of local standards that it applies to ICT goods and services. These act as significant barriers to interoperability and market access, and have been the subject of disputes with the EU, the US, and other trading partners. In particular, China has been imposing additional security standards and testing requirements on products that already meet international Common Criteria.
3. Does the government participate in international standards setting process?	✓	China participates in relevant International Standards Organization (ISO) and International Electrotechnical Commission (IEC) standard-setting processes and is a participant in the top-level ICT standards committee (JTC-1) <www.iso.org/isoiec-jtc-1.html>.
4. Are e-commerce laws or regulations in place?	Draft	E-commerce laws are currently restricted to the extremely limited Interim Measures for the Trading of Commodities and Services through the Internet 2010.  However, in December 2016 China released a new, comprehensive draft ecommerce law. The draft law is being managed by the Financial and Economic Committee of the National People's Congress (NPC) and was open for public consultation in January 2017 <www.npc.gov.cn/npc/flcazqj/node_8176.htm>.
5. What international instruments are the e-commerce laws or regulations based on?	UN Convention on E-Contracting	China is a signatory to the UN Convention on Electronic Contracting. The Convention came into force in March 2013.
6. Is there a law or regulation that gives electronic signatures clear legal weight?	✓	The Electronic Signature Law 2005 gives electronic signatures the same legal standing as handwritten signatures and seals. The law supplements Article 11 of the Contract Law of the People's Republic of China, which provides that contracts made via email or electronic data interchange are considered to be "in writing."

# CHINA	RESPONSE	EXPLANATORY TEXT
7. Are cloud service providers free from mandatory filtering or censoring?	✘	<p>China has a large and complex legal and technical regime in place to restrict access to certain online content. Cloud service providers are inevitably caught up in some of these restrictions.</p> <p>A wide variety of content is regulated or prohibited in some form. Citizens are prohibited from disseminating certain categories of content. These prohibitions appear consistently in a number of regulations and include:</p> <ul style="list-style-type: none"> <li>• Endangering national security;</li> <li>• Conducting activities in the name of an illegal civil organization; or</li> <li>• Inciting illegal assemblies or gatherings that disturb social order.</li> </ul> <p>Penalties include fines, content removal, and criminal liability.</p> <p>Organizations transmitting content electronically about current politics, economic issues, and other public affairs must abide by the 2005 Provisions on the Administration of Internet News Information Services (Internet News regulations). Content hosts and owners of user-generated content sites are held to be directly responsible for what is published on their service in China. Service providers must monitor all content on their websites and report violations.</p> <p>In 2015, China's Ministry of Public Security announced that it would send "network security officers" into organizations to monitor the work of key websites and Web firms for crimes such as fraud and the "spreading of rumors."</p>
<b>PROMOTING FREE TRADE (SCORE: 2.8/12.5   RANK: 21/24)</b>		
1. Is a national strategy or platform in place to promote the development of cloud services and products?	✔	In 2015 the State Council of China issued the strategy document Opinions on Promoting the Innovative Development of Cloud Computing and Cultivating New Normal of Information Industry. This committed the government to the support for key cloud computing enterprises, with a target date of 2020 for the development of a competitive cloud industry in China.
2. Are there any laws or policies in place that implement technology neutrality in government?	✘	The Chinese Government Procurement Act 2003 does not contain a specific commitment to technology neutrality. Further, an Opinion under the Act (Opinion 2009/35) stipulates that the procurement of imported "high tech or innovative equipment" will be possible only if no such products are available in China.
3. Are cloud computing services able to operate free from laws or policies that either mandate or give preference to the use of certain products, services, standards, or technologies?	✘	<p>Some Chinese regulations do require specific technologies to be considered in preference to international technologies.</p> <p>For example, the Chinese Government regularly publishes lists of approved products for ICT, including encryption products, anti-virus software, and even basic operating systems. These lists exclude organizations and products that have met international standards.</p>
4. Are cloud computing services able to operate free from laws, procurement policies, or licensing rules that discriminate based on the nationality of the vendor, developer, or service provider?	✘	<p>Some foreign cloud providers experience discrimination based on nationality due to the Value-Added Telecom Service (VATS) licensing regime administered by the Ministry of Industry and Information Technology (MIIT) &lt;www.miit.gov.cn&gt;. Companies wishing to provide various Internet services, including cloud computing services, require licenses (e.g., Internet Content Provider (ICP) and Internet Data Center (IDC) licenses), and because these licenses are only available (in theory) to foreign invested telecommunication entities (FITEs), they must (in theory) establish joint ventures to be eligible for such licenses. In practice, however, MIIT has not issued such licenses to any providers over the past number of years, forcing foreign firms to enter into licensing arrangements with existing (domestic) firms that hold the necessary licenses if they wish to provide such services.</p> <p>In addition, ICT security products in information systems classified at level three and above in the Multi-Level Protection of Information Security (MLPS) are required to undergo a national information assurance certification, and the product developers and manufacturers must be invested or owned by Chinese citizens or local companies.</p> <p>Requirements for local ownership are also onerous in the field of encryption, which is subject to the Regulation on Commercial Encryption Codes by the Office of State Commercial Cryptography Administration (OSCCA) &lt;www.oscca.gov.cn&gt;. In 2014 the European Union concluded:</p> <p>"In practice today, only Chinese or Chinese-owned companies are eligible for OSCCA certification to sell, produce and to carry out R&amp;D for encryption technology in China, as well as to gain product licensing, and foreign or foreign-owned companies, even if based in China, are excluded."</p> <p>[European Union Trade Directorate, IT Security — Chinese Licensing Practices and Approaches to Information Security Deviating from the International Standards And Global Practices, February 2014 &lt;madb.europa.eu/madb/barriers_details.htm?barrier_id=085196&amp;version=4&gt;]</p>

# CHINA	RESPONSE	EXPLANATORY TEXT
5. Has the country signed and implemented international agreements that ensure the procurement of cloud services is free from discrimination?	✘	In 2002, China became an observer of the World Trade Organization (WTO) plurilateral Agreement on Government Procurement. As of June 2017, China is in the process of negotiating full membership of the GPA < <a href="http://www.wto.org/english/tratop_e/gproc_e/gp_gpa_e.htm">www.wto.org/english/tratop_e/gproc_e/gp_gpa_e.htm</a> >.
6. Are services delivered by cloud providers free from tariffs and other trade barriers?	ⓘ	<p>There are some restrictions and complex rules in place on the import of technology from foreign sources, including the purchase or license of software. These rules are contained in:</p> <ul style="list-style-type: none"> <li>• Regulations on the Administration of the Import and Export of Technology;</li> <li>• Administrative Measures on the Registration of Contracts for the Import and Export of Technology;</li> <li>• Notice on Issuance of Operating Procedures for the Administration of Foreign Exchange of Sale and Payment in Non-Trading Activities and Foreign Exchange Income and Expenditure of Domestic Individual Residents (the SAFE Procedures Notice); and</li> <li>• The Ministry of Commerce's (MOFCOM) Supplementary Notice on Strengthening the Administration of the Technology Import Contract and Foreign Exchange Sale and Payment (the MOFCOM Supplementary Notice).</li> </ul> <p>These rules apply to the acquisition of technology, including the acquisition of technical services and software, by any entity within China from any entity outside China. These rules are likely to capture some cloud services.</p> <p>Some technology imports that fall into the "restricted" category require formal government approval. For technology imports that fall into the "free" category (this includes most cloud services), no government approval is required and the contract becomes legally effective upon signing. However, the contract needs to be formally registered.</p>
7. Are cloud computing services able to operate free from laws or policies that impose data localization requirements?	✘	<p>The Cybersecurity Law 2016 contains a data localization requirement. Article 37 states:</p> <p>"The operators of critical information infrastructure shall store, within the territory of the People's Republic of China, personal information and important business data collected and generated during their operations; when data has to be provided cross-border for business reasons, a security assessment shall be conducted per the measures developed by the State-level cyberspace administration authorities in consultation with relevant departments under the State Council. When other laws or administrative regulations otherwise prescribe, such provisions shall be followed."</p> <p>On April 11, 2017, the Cyberspace Administration of China issued draft Measures for the Security Assessment of Outbound Transmission of Personal Information and Critical Data. The draft measures provide detailed guidance on the security assessments and other requirements for cross-border data transfers. The draft measures are the subject of a public comment period and are not yet official policy, but it is likely that they will form the basis of the future legal requirements.</p> <p>The draft measures extend the data localization requirement from "operators of key information infrastructure" to all "network operators." This is a significant expansion of the scope of the provisions and is likely to catch all or most cloud service providers.</p> <p>In addition, a number of specific sectoral data localization requirements are in place. These include provisions relating to:</p> <ol style="list-style-type: none"> <li>(1) Personal credit information;</li> <li>(2) Personal financial information;</li> <li>(3) Population health information;</li> <li>(4) Map data;</li> <li>(5) Governmental information;</li> <li>(6) Some accounting information; and</li> <li>(7) Some genetic resource information.</li> </ol>



# CHINA	RESPONSE	EXPLANATORY TEXT
<b>IT READINESS, BROADBAND DEPLOYMENT (SCORE: 12.7/25   RANK: 15/24)</b>		
1. Is there a National Broadband Plan?	<p>By 2020:</p> <ul style="list-style-type: none"> <li>• Fixed broadband penetration rate of 70%</li> <li>• Mobile broadband penetration rate of 85%</li> <li>• 1 Gbps for households in developed cities</li> <li>• 50 Mbps in cities and</li> <li>• 12 Mbps for rural areas</li> </ul>	<p>In 2013, the State Council officially announced the Broadband China Plan that set numerical goals, created a technology roadmap and a development timetable, and listed key tasks and specific projects — with the goal of building a ubiquitous, fast, and advanced national broadband network before 2020.</p> <p>The plan identified five key tasks:</p> <ul style="list-style-type: none"> <li>• Balanced development across different regions;</li> <li>• Network optimization and upgrading;</li> <li>• The enrichment of broadband applications;</li> <li>• The overall development of the industrial chain; and</li> <li>• The enhancement of network security.</li> </ul> <p>Accordingly, the plan articulated seven projects including a:</p> <ul style="list-style-type: none"> <li>• Broadband rural project;</li> <li>• Network optimization project;</li> <li>• Small- to medium-enterprise (SME) informatization model project;</li> <li>• Model project to supply broadband for poor and special education institutions;</li> <li>• Digital culture model project;</li> <li>• Project to commercialize the key broadband technologies; and</li> <li>• Status-monitoring and mapping project for the overall plan.</li> </ul> <p>In terms of policy measures, the plan stated that an inter-ministry coordination mechanism would be established to make major strategic decisions and relevant laws and regulations would be revised to optimize the institutional environment for broadband development. Moreover, it stated that fiscal support, special universal service funding, and tax deductions would be available.</p> <p>Liu, Chun (2016) "Building the Next Information Superhighway: A Critical Analysis of China's Recent National Broadband Plan," Communications of the Association for Information Systems Vol. 39, Article 10 &lt;aisel.aisnet.org/cais/vol39/iss1/10&gt;.</p>
2. Is the National Broadband Plan being effectively implemented?		<p>China is making steady progress toward the key goals of its Broadband China Plan. The latest data (2015) shows that fixed broadband has reached 20% of the population (the target is 70% by 2020) and that mobile broadband has reached 58% (the target is 85% by 2020).</p>
3. Are there laws or policies that regulate "net neutrality"?	No regulation	<p>There are no specific laws or policies regarding net neutrality in China, and debate on this issue has been limited. The focus in China has been on legal requirements to block access to certain content, rather than any discussion of establishing different service levels or prices.</p>
<b>4. Base Indicators</b>		
4.1. Population (millions) (2015) • Total for all countries in this scorecard: 4,700 million	1,402	<p>In 2015, the population of China increased by 0.6%.</p> <p>[International Telecommunication Union (ITU), World Telecommunication/ ICT Indicators Database (Dec. 2016) &lt;www.itu.int/en/ITU-D/Statistics/Pages/publications/wtid.aspx&gt;]</p>
4.2. Urban Population (%) (2015) • Average for all countries in this scorecard: 73%	56%	<p>In 2015, the urban population of China increased by 2.2%.</p> <p>[World Bank, Data Catalog, Indicators, Urban Population (Jan. 2017) &lt;data.worldbank.org/indicator/SP.URB.TOTL.IN.ZS&gt;]</p>
4.3. Number of Households (millions) (2015) • Total for all countries in this scorecard: 1,249 million	393	<p>In 2015, the number of households in China increased by 0.6%.</p> <p>[International Telecommunication Union (ITU), World Telecommunication/ ICT Indicators Database (Dec. 2016) &lt;www.itu.int/en/ITU-D/Statistics/Pages/publications/wtid.aspx&gt;]</p>
4.4. Population Density (people per square km) (2015) • Average for all countries in this scorecard: 471	146	<p>In 2015, the population density of China increased by 0.5%.</p> <p>[World Bank, Data Catalog, Indicators, Population Density (Jan. 2017) &lt;data.worldbank.org/indicator/EN.POP.DNST&gt;]</p>
4.5. Per Capita GDP (US\$ 2015) • Average for all countries in this scorecard: US\$ 22,649	\$8,028	<p>In 2015, the per capita GDP for China increased by 6.9% to US\$ 8,028. This was below the five-year compound annual growth rate (CAGR) from 2010–2015 of 12%.</p> <p>This ranks China 19th for value of per capita GDP and 1st for growth (CAGR) for this indicator in this scorecard.</p> <p>[World Bank, Data Catalog, Indicators: GDP Per Capita, Current US\$ (Jan. 2017) &lt;data.worldbank.org/indicator/NY.GDP.PCAP.CD&gt; and GDP Growth, Annual % (Jan. 2017) &lt;data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG&gt;]</p>

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<p>4.6. ICT Service Exports (billions of US\$) (2015)</p> <ul style="list-style-type: none"> <li>Total for all countries in this scorecard: US\$ 978 billion</li> </ul>	\$83	<p>In 2015, the value of ICT service exports for China decreased by 6.9% to US\$ 82.95 billion. This was below the five-year compound annual growth rate (CAGR) from 2010–2015 of 13.2%.</p> <p>This ranks China 6th for value of ICT service exports and 1st for growth (CAGR) for this indicator in this scorecard.</p> <p>Note: Due to inconsistent data for China, the five-year CAGR has been calculated by averaging the four- and six-year CAGRs.</p> <p>[World Bank, Data Catalog, Indicators: ICT Service Exports US\$ (Jan. 2017) &lt;data.worldbank.org/indicator/BX.GSR.CCIS.CD&gt;]</p>
<p>4.7. Personal Computers (% of households) (2015)</p> <ul style="list-style-type: none"> <li>Average for all countries in this scorecard: 63%</li> </ul>	50%	<p>In 2015, 49.6% of households in China had personal computers. This is an increase of 6.2% since 2014 and ranks China 89th out of 236 countries surveyed. The growth from 2014 is below the five-year compound annual growth rate (CAGR) from 2010 to 2015 of 7%.</p> <p>This ranks China 18th for the number of personal computers (as a % of households) and 6th for growth (CAGR) for this indicator in this scorecard.</p> <p>[International Telecommunication Union (ITU), World Telecommunication/ICT Indicators Database (Dec. 2016) &lt;www.itu.int/en/ITU-D/Statistics/Pages/publications/wtid.aspx&gt;]</p>
5. IT and Network Readiness Indicators		
<p>5.1. ITU ICT Development Index (IDI) (2016)</p> <p>(score is out of 10 and covers 175 countries)</p> <ul style="list-style-type: none"> <li>Average for all countries in this scorecard: 6.58</li> </ul>	5.19	<p>China's ITU ICT Development Index (IDI) for 2016 is 5.19 (out of 10), resulting in a rank of 81st (out of 175 economies). The 2016 IDI for China increased by 8.1%, and the IDI ranking improved by 3 from a rank of 84th since 2015.</p> <p>This ranks China 18th in the ITU ICT Development Index and 6th for growth (CAGR) for this indicator in this scorecard.</p> <p>[International Telecommunication Union (ITU), Measuring the Information Society (Dec. 2016) &lt;www.itu.int/net4/ITU-D/idi/2016&gt;]</p>
<p>5.2. World Economic Forum Networked Readiness Index (NRI) (2016)</p> <p>(score is out of 7 and covers 139 countries)</p> <ul style="list-style-type: none"> <li>Average for all countries in this scorecard: 4.77</li> </ul>	4.24	<p>China has a Networked Readiness Index (NRI) score of 4.24 (out of 7), resulting in a rank of 59th (out of 139 economies) and a rank of 11th (out of 34) in the Upper middle income grouping of economies. The 2016 NRI for China increased by 1.9% and improved by 3 places from a rank of 62nd since 2015.</p> <p>This ranks China 16th in the ITU ICT Development Index and 9th for growth (CAGR) for this indicator in this scorecard.</p> <p>[World Economic Forum, Global Information Technology Report (2016) &lt;reports.weforum.org/global-information-technology-report-2016&gt;]</p>
6. Internet Users and International Bandwidth		
<p>6.1. Internet Users (millions) (2015)</p> <ul style="list-style-type: none"> <li>Total for all countries in this scorecard: 2,330 million</li> </ul>	705	<p>[International Telecommunication Union (ITU), World Telecommunication/ICT Indicators Database (Dec. 2016) &lt;www.itu.int/en/ITU-D/Statistics/Pages/publications/wtid.aspx&gt;]</p>
<p>6.2. Internet Users (% of population) (2015)</p> <ul style="list-style-type: none"> <li>Average for all countries in this scorecard: 67%</li> </ul>	50%	<p>In 2015, 50% of the population in China used the Internet, resulting in a ranking of 105th out of 236 countries surveyed by the ITU. This is an increase of 5% since 2014 and is below the five-year compound annual growth rate (CAGR) from 2010–2015 of 8%.</p> <p>This ranks China 21st in the proportion of the population using the Internet and 9th for growth (CAGR) for this indicator in this scorecard.</p> <p>[International Telecommunication Union (ITU), World Telecommunication/ICT Indicators Database (Dec. 2016) &lt;www.itu.int/en/ITU-D/Statistics/Pages/publications/wtid.aspx&gt;]</p> <p>Note: There may be some variations as to how countries calculate this. Some countries base this upon all or part of the population — such as between 16 and 72 years of age.</p>
<p>6.3. International Internet Bandwidth (total gigabits per second (Gbps) per country) (2015)</p> <ul style="list-style-type: none"> <li>Total for all countries in this scorecard: 117,736 Gbps</li> </ul>	4,604	<p>China has increased its international Internet bandwidth by 34% since 2014 to 4,604 Gbps and is ranked 8 out of 236 countries surveyed by the ITU. The growth from 2014 is above the five-year compound annual growth rate (CAGR) from 2009–2014 of 33.2%.</p> <p>This ranks China 7th for total international Internet bandwidth and 10th for growth (CAGR) for this indicator in this scorecard.</p> <p>[International Telecommunication Union (ITU), World Telecommunication/ICT Indicators Database (Dec. 2016) &lt;www.itu.int/en/ITU-D/Statistics/Pages/publications/wtid.aspx&gt;]</p>

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6.4. International Internet Bandwidth (bits per second (bps) per Internet user) (2015) <ul style="list-style-type: none"> <li>Average for all countries in this scorecard: 97,747 bps</li> </ul>	6,530	The international Internet bandwidth (per Internet user) of China has increased by 27% since 2014. The growth from 2014 is above the five-year compound annual growth rate (CAGR) from 2010–2015 of 22.6%.  This ranks China 23rd for international Internet bandwidth per user and 11th for growth (CAGR) for this indicator in this scorecard.  [International Telecommunication Union (ITU), World Telecommunication/ ICT Indicators Database (Dec. 2016) < <a href="http://www.itu.int/en/ITU-D/Statistics/Pages/publications/wtid.aspx">www.itu.int/en/ITU-D/Statistics/Pages/publications/wtid.aspx</a> >]
<b>7. Fixed Broadband</b>		
7.1. Fixed Broadband Subscriptions (millions) (2015) <ul style="list-style-type: none"> <li>Total for all countries in this scorecard: 697 million</li> </ul>	277	China has increased the number of fixed broadband subscribers by 38% since 2014 to 277.05 million, and is ranked 1st out of 236 countries surveyed by the ITU. The growth from 2014 is above the five-year compound annual growth rate (CAGR) from 2010–2015 of 17%.  This ranks China 1st for the number of fixed broadband subscriptions and 1st for growth (CAGR) for this indicator in this scorecard.  [International Telecommunication Union (ITU), World Telecommunication/ ICT Indicators Database (Dec. 2016) < <a href="http://www.itu.int/en/ITU-D/Statistics/Pages/publications/wtid.aspx">www.itu.int/en/ITU-D/Statistics/Pages/publications/wtid.aspx</a> >]
7.2. Fixed Broadband Subscriptions (% of households) (2015) <ul style="list-style-type: none"> <li>Average for all countries in this scorecard: 63%</li> </ul>	71%	[International Telecommunication Union (ITU), World Telecommunication/ ICT Indicators Database (Dec. 2016) < <a href="http://www.itu.int/en/ITU-D/Statistics/Pages/publications/wtid.aspx">www.itu.int/en/ITU-D/Statistics/Pages/publications/wtid.aspx</a> >]  Note: This may be skewed by business usage in some countries.
7.3. Fixed Broadband Subscriptions (% of population) (2015) <ul style="list-style-type: none"> <li>Average for all countries in this scorecard: 21%</li> </ul>	20%	China has increased its fixed broadband subscriptions (as a % of the population) by 37.4% since 2014, which is above the five-year compound annual growth rate (CAGR) from 2010–2015 of 16.3%. This ranks China 64th out of 236 countries surveyed by the ITU.  This ranks China 12th for the number of fixed broadband subscriptions (as a % of the population) and 1st for growth (CAGR) for this indicator in this scorecard.  [International Telecommunication Union (ITU), World Telecommunication/ ICT Indicators Database (Dec. 2016) < <a href="http://www.itu.int/en/ITU-D/Statistics/Pages/publications/wtid.aspx">www.itu.int/en/ITU-D/Statistics/Pages/publications/wtid.aspx</a> >]
7.4. Fixed Broadband Subscriptions (% of Internet users) (2015) <ul style="list-style-type: none"> <li>Average for all countries in this scorecard: 29%</li> </ul>	39%	[International Telecommunication Union (ITU), World Telecommunication/ ICT Indicators Database (Dec. 2016) < <a href="http://www.itu.int/en/ITU-D/Statistics/Pages/publications/wtid.aspx">www.itu.int/en/ITU-D/Statistics/Pages/publications/wtid.aspx</a> >]
7.5. Average Broadband Data Connection Speed (total megabits per second (Mbps) per country) (Q1 2017) <ul style="list-style-type: none"> <li>Average for all countries in this scorecard: 12 Mbps</li> <li>Average peak for all countries in this scorecard: 70 Mbps</li> </ul>	8	In China the Q1 2017 average broadband data connection speed was 7.58 Mbps and is ranked 85th out of 239 countries measured by Akamai.  This ranks China 17th for average broadband data connection speed in this scorecard.  Additional connection metrics for Q1 2017 in China include: <ul style="list-style-type: none"> <li>Average peak broadband connection speed: 45.92 Mbps (ranked 103rd globally and 20th in this scorecard)</li> <li>Above 4 Mbps: 81% (ranked 70th globally and 13th in this scorecard)</li> <li>Above 10 Mbps: 20% (ranked 84th globally and 17th in this scorecard)</li> <li>Above 15 Mbps: 5% (ranked 99th globally and 23rd in this scorecard)</li> <li>Above 25 Mbps: 1% (ranked 115th globally and 24th in this scorecard)</li> </ul> [Akamai, The State of the Internet (1st Quarter, 2017) < <a href="http://www.akamai.com/us/en/about/our-thinking/state-of-the-internet-report/">www.akamai.com/us/en/about/our-thinking/state-of-the-internet-report/</a> >]
<b>8. Fiber-to-the-home/building (FttX)</b>		
8.1. Fiber-to-the-home/building (FttX) Internet Subscriptions (millions) (2015) <ul style="list-style-type: none"> <li>Total for all countries in this scorecard: 258 million</li> </ul>	166.4	China has increased the number of FttX subscribers by 144% since 2014 to 166.418 million, and is ranked 1st out of 236 countries surveyed by the ITU.  This ranks China 1st for the number of FttX subscriptions and 4th for growth (from 2014) for this indicator in this scorecard.  [International Telecommunication Union (ITU), World Telecommunication/ ICT Indicators Database (Dec. 2016) < <a href="http://www.itu.int/en/ITU-D/Statistics/Pages/publications/wtid.aspx">www.itu.int/en/ITU-D/Statistics/Pages/publications/wtid.aspx</a> >]

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8.2. Proportion of Fiber-to-the-home/building (FttX) Internet Subscriptions (% of households) (2015) <ul style="list-style-type: none"> <li>Average for all countries in this scorecard: 18%</li> </ul>	42.4%	China has increased the proportion of FttX subscribers to households by 144% (since 2014) to 42.37%. This ranks China 4th for the proportion of FttX subscriptions to households and 4th for growth (from 2014) for this indicator in this scorecard. [International Telecommunication Union (ITU), World Telecommunication/ ICT Indicators Database (Dec. 2016) < <a href="http://www.itu.int/en/ITU-D/Statistics/Pages/publications/wtid.aspx">www.itu.int/en/ITU-D/Statistics/Pages/publications/wtid.aspx</a> >] Note: This may be skewed by business usage in some countries.
8.3. Proportion of Fiber-to-the-home/building (FttX) Internet Subscriptions (% of fixed broadband subscriptions) (2015) <ul style="list-style-type: none"> <li>Average for all countries in this scorecard: 23%</li> </ul>	60.1%	China has increased the proportion of FttX subscribers to fixed broadband subscribers by 144% (since 2014) to 60.07%. This ranks China 5th for the proportion of FttX subscriptions to fixed broadband subscriptions and 4th for growth (from 2014) for this indicator in this scorecard. [International Telecommunication Union (ITU), World Telecommunication/ ICT Indicators Database (Dec. 2016) < <a href="http://www.itu.int/en/ITU-D/Statistics/Pages/publications/wtid.aspx">www.itu.int/en/ITU-D/Statistics/Pages/publications/wtid.aspx</a> >]
<b>9. Mobile Broadband</b>		
9.1. Mobile Cellular Subscriptions (millions) (2015) <ul style="list-style-type: none"> <li>Total for all countries in this scorecard: 4,823 million</li> </ul>	1,292	In 2015, China increased the number of mobile cellular subscriptions by 0.5% since 2014, which is below the five-year compound annual growth rate (CAGR) from 2010–2015 of 8.5%. China is ranked 1st out of 236 countries surveyed by the ITU. The number of subscriptions account for 92% of the population. This ranks China 1st for the number of mobile cellular subscriptions and 3rd for growth (CAGR) for this indicator in this scorecard. [International Telecommunication Union (ITU), World Telecommunication/ ICT Indicators Database (Dec. 2016) < <a href="http://www.itu.int/en/ITU-D/Statistics/Pages/publications/wtid.aspx">www.itu.int/en/ITU-D/Statistics/Pages/publications/wtid.aspx</a> >] Note: This figure may be inflated due to multiple subscriptions per head of population, but excludes dedicated mobile broadband devices (such as 3G data cards, tablets, etc.).
9.2. Number of Active Mobile Broadband Subscriptions (millions) (2015) <ul style="list-style-type: none"> <li>Total for all countries in this scorecard: 2,506 million</li> </ul>	778	In 2015, China has increased the number of active mobile broadband subscriptions by 34%, which is below the five-year compound annual growth rate (CAGR) from 2010–2015 of 75.3%. China is ranked 1st out of 236 countries surveyed by the ITU. This ranks China 1st for the number of active mobile broadband subscriptions and 3rd for growth (CAGR) for this indicator in this scorecard. [International Telecommunication Union (ITU), World Telecommunication/ ICT Indicators Database (Dec. 2016) < <a href="http://www.itu.int/en/ITU-D/Statistics/Pages/publications/wtid.aspx">www.itu.int/en/ITU-D/Statistics/Pages/publications/wtid.aspx</a> >]
9.3. Active Mobile Broadband Subscriptions (% of population) (2015) <ul style="list-style-type: none"> <li>Average for all countries in this scorecard: 77%</li> </ul>	56%	China has increased the number of active mobile broadband subscriptions (as a % of the population) by 33% since 2014, which is below the five-year compound annual growth rate (CAGR) from 2010–2015 of 74.2%. China is ranked 73rd out of 236 countries surveyed by the ITU. This ranks China 19th for the number of active mobile broadband subscriptions (as a % of the population) and 3rd for growth (CAGR) for this indicator in this scorecard. [International Telecommunication Union (ITU), World Telecommunication/ ICT Indicators Database (Dec. 2016) < <a href="http://www.itu.int/en/ITU-D/Statistics/Pages/publications/wtid.aspx">www.itu.int/en/ITU-D/Statistics/Pages/publications/wtid.aspx</a> >] Note: This refers to the sum of standard mobile broadband and dedicated mobile broadband subscriptions to the public Internet. It covers actual subscribers, not potential subscribers, even though the latter may have broadband enabled-handsets.
9.4. Average Mobile Data Connection Speed (total megabits per second (Mbps) per country) (Q1 2017) <ul style="list-style-type: none"> <li>Average for all countries in this scorecard: 11 Mbps</li> </ul>	9	In China the Q1 2017 average mobile data connection speed was 9.3 Mbps and is ranked 42nd out of 70 countries measured by Akamai. This ranks China 15th for average mobile data connection speed in this scorecard. [Akamai, The State of the Internet (1st Quarter, 2017) < <a href="http://www.akamai.com/us/en/about/our-thinking/state-of-the-internet-report/">www.akamai.com/us/en/about/our-thinking/state-of-the-internet-report/</a> >]