

Appendix 1 - Survey methodology reference tables and acknowledgements

1 Survey methods

Telephone survey

Survey population

Residents of China aged six and above with access to a residential fixed-line telephone, including household and dormitory telephones, or a mobile phone.

Sample coverage

The survey population covered all 31 provinces, autonomous regions and municipalities in mainland China, excluding Hong Kong, Macao and Taiwan.

Population subdivisions

Subpopulation A comprised people covered by residential fixed-line telephones, including household telephone users, student dormitory telephone users and users of other dormitory telephones.

Subpopulation B comprised people covered by mobile phones.

Subpopulation C comprised people covered by both mobile phones and residential fixed-line telephones. The overlap between A and B was C, so $C = A \cap B$.

Sampling method

CNNIC surveyed subpopulations A, B and C using a dual-frame sampling approach to maximise coverage of internet users. The first sampling frame was a list of residential fixed-line telephone numbers, used to survey subpopulation A. The second was a list of mobile telephone numbers, used to survey subpopulation B.

For the fixed-line population, stratified two-stage sampling was used. To ensure sufficient representativeness, mainland China was divided into 31 strata corresponding to its provinces, autonomous regions and municipalities. Samples were drawn independently within each stratum.

Self-weighting sampling was used within provinces. The sample allocated to each city or prefecture, including its districts and counties, was proportional to its population aged six and above covered by residential fixed-line telephones as a share of the corresponding provincial population.

The mobile-phone population was sampled in a similar way, using the same 31 independently sampled strata. Within each province, samples were allocated in proportion to each city's resident population to achieve a self-weighting allocation.

Telephone numbers were selected using the following procedure to give each number within a city or prefecture an approximately equal chance of selection, give prefixes covering more numbers a greater selection probability, and keep fieldwork practicable.

For mobile-phone interviews, all mobile-number prefixes in each city or prefecture were included. A quantity of four-digit random numbers was generated according to the required valid sample size and combined with the local mobile prefixes to form a number database. The database was randomly ordered, and interviews were attempted by dialling numbers in that order. Fixed-line sampling similarly combined random digits with telephone prefixes. Only residential fixed lines were interviewed in that part of the survey to avoid duplicate sampling.

Internet-user totals were estimated using multivariate joint weighting based on the latest population characteristics published by provincial statistical bureaux. These population figures were estimates derived from annual census data or annual population sample surveys. The report used them to adjust weights for the half-yearly survey, disregarding differences between survey periods.

Sampling error

Calculations based on the sampling design indicate that, for proportion estimates such as internet penetration in the individual internet-user survey, the maximum permissible absolute error at a 95% confidence level was 0.66 percentage points. Error ranges for other estimates, such as internet-user totals, can be derived from this.

Survey mode

The survey used a computer-assisted telephone interviewing system, or CATI.

Differences between the survey population and target population

CNNIC studied people without telephone coverage at the end of 2005 and found very few internet users in that group. As China's telecommunications industry developed, the size of the group gradually declined. The survey therefore assumes that internet users outside both fixed-line and mobile-phone coverage can be disregarded for the purposes of these statistics.

Statistical reporting

The principal statistics submitted were counts of IP addresses and domain names.

IP address totals

Provincial IP address statistics came from the IP address databases of the Asia Pacific Network Information Centre (APNIC) and CNNIC. Registered addresses whose province could be identified were added together by province. Because address allocation and use change over time, these statistics are for reference.

The Ministry of Industry and Information Technology, the national authority responsible for IP addresses, also requires China's IP address allocation organisations to report their holdings every six months. To ensure accuracy, CNNIC compares and verifies APNIC statistics against these submissions to determine the final totals.

Domain name totals

Counts for .CN and .中国 are worldwide registrations drawn from CNNIC's database. Domestic domain registrars assist in providing counts for traditional generic top-level domains, new generic top-level domains, and .CO, .TV, .CC, .ME, .HK and .PW.

2 Definitions used in the report

Internet users: residents of China aged six and above who used the internet during the preceding six months.

Mobile internet users: internet users who accessed and used the internet through a mobile phone during the preceding six months.

Computer internet users: internet users who accessed and used the internet through a computer during the preceding six months.

Rural internet users: internet users who mainly lived in rural China during the preceding six months.

Urban internet users: internet users who mainly lived in urban China during the preceding six months.

IP addresses: addresses that identify internet-connected computers, servers or other network devices. They are a basic internet resource. An IP address, in whatever form, is required to connect to the internet.

Websites: web sites addressed by a domain name itself or by “WWW.” followed by that domain name, where the registrant is located in China. This includes sites under China's country-code top-level domains .CN and .中国 and traditional generic top-level domains. For example, CNNIC.CN represents one website, reached through CNNIC.CN or WWW.CNNIC.CN. Addresses such as WHOIS.CNNIC.CN and MAIL.CNNIC.CN are treated as different channels within that website.

Survey scope: unless explicitly stated otherwise, the report's data refer to mainland China and exclude Hong Kong, Macao and Taiwan.

Data cut-off: June 2025.

Data presentation: most figures in the report are approximate values rounded to the stated number of significant digits.

Appendix 2 Internet infrastructure resource tables

Appendix table 1 IPv4 addresses by allocation organisation

Organisation	Addresses	Equivalent blocks
China Telecommunications Corporation	125,763,328	7A + 126B + 255C
China Unicom (note 1)	69,866,752	4A + 42B + 21C
CNNIC IP Address Allocation Alliance (note 2)	63,073,280	3A + 194B + 108C
China Mobile Communications Group	35,294,208	2A + 26B + 140C
China Education and Research Network	16,649,984	254B + 16C
China Mobile Tietong (note 3)	15,796,224	241B + 8C

Other (note 4)	16,750,592	255B + 152C
Total	343,194,368	20A + 116B + 187C

Source: APNIC and CNNIC.

IPv4 note 1: China Unicom's addresses include those of the former China Unicom and former China Netcom. Of these, 6,316,032 IPv4 addresses held by the former China Unicom, equivalent to 96B + 96C, were allocated through CNNIC.

IPv4 note 2: As China's national internet registry recognised by APNIC and the relevant national authority, CNNIC brings together domestic internet service providers and enterprises and institutions of a certain scale in its IP Address Allocation Alliance. The alliance's total IPv4 holdings were 85.19 million addresses, equivalent to 5.1A. The alliance figure in the table excludes addresses allocated to the former China Unicom and to Tietong.

IPv4 note 3: China Mobile Tietong's IPv4 addresses were allocated through CNNIC.

IPv4 note 4: "Other" refers to enterprises and institutions that applied directly to APNIC for IPv4 addresses.

IPv4 note 5: Figures are as at June 2025.

Appendix table 2 IPv6 allocations by organisation

Organisation	/32 blocks
CNNIC IP Address Allocation Alliance (note 2)	30,871
China Telecommunications Corporation	16,387
China Education and Research Network	10,325
China Unicom	4,097
China Mobile Communications Group	4,097
China Mobile Tietong (note 3)	2,049
Other (note 4)	741
Total	68,567

Source: APNIC and CNNIC.

IPv6 note 1: The allocation unit /32 is an IPv6 prefix notation. Each /32 block contains 2^{96} individual IPv6 addresses, calculated as 2 raised to the power of 128 minus 32.

IPv6 note 2: The CNNIC IP Address Allocation Alliance's total IPv6 holdings were 32,920 /32 blocks. The alliance figure in the table excludes blocks allocated to China Mobile Tietong.

IPv6 note 3: China Mobile Tietong's IPv6 addresses were allocated through CNNIC.

IPv6 note 4: "Other" refers to enterprises and institutions that applied directly to APNIC for IPv6 addresses.

IPv6 note 5: Figures are as at June 2025.

Appendix table 3 Regional distribution of IPv4 addresses

Province or region	Share
Beijing	25.19%
Guangdong	9.43%
Zhejiang	6.39%
Shandong	4.83%
Jiangsu	4.70%
Shanghai	4.47%
Liaoning	3.29%
Hebei	2.81%
Sichuan	2.74%
Henan	2.60%
Hubei	2.37%
Hunan	2.33%
Fujian	1.92%

Jiangxi	1.71%
Chongqing	1.66%
Anhui	1.63%
Shaanxi	1.61%
Guangxi	1.36%
Shanxi	1.26%
Jilin	1.20%
Heilongjiang	1.19%
Tianjin	1.04%
Yunnan	0.96%
Inner Mongolia	0.77%
Xinjiang	0.60%
Gansu	0.47%
Hainan	0.47%
Guizhou	0.44%
Ningxia	0.27%
Qinghai	0.17%
Tibet	0.13%
Other	10.00%
Total	100.00%

Source: APNIC and CNNIC.

Regional IPv4 note 1: The statistics identify the province in which the IP address holder is located.

Regional IPv4 note 2: “Other” refers to countries or regions outside mainland China.

Regional IPv4 note 3: Figures are as at June 2025.

Appendix table 4 Domain names by region

Province or region	All domains	.CN domains	.中国 domains
Beijing	5,536,583	4,255,260	22,230
Guangdong	4,871,701	2,857,705	12,233
Jiangsu	2,512,784	1,685,537	7,363
Shandong	2,124,342	1,524,362	26,704
Guizhou	1,955,584	1,789,996	3,240
Shanghai	1,356,112	659,455	5,721
Sichuan	1,308,129	653,381	10,201
Henan	1,243,589	760,756	3,944
Zhejiang	1,243,304	475,394	6,144
Fujian	1,205,716	566,703	6,787
Hubei	1,018,818	632,433	2,691
Hunan	982,669	558,617	2,459
Hebei	763,302	440,101	4,791
Guangxi	755,845	474,428	1,381
Anhui	722,188	410,061	3,093
Jiangxi	700,239	414,189	1,317
Shanxi	552,385	413,263	1,868
Shaanxi	525,079	253,048	7,288
Chongqing	519,021	276,323	4,636
Liaoning	514,550	341,541	5,111
Yunnan	347,857	200,931	3,875
Heilongjiang	280,446	186,789	1,743
Gansu	228,448	171,996	1,491
Jilin	224,026	135,133	1,283

Hainan	203,666	126,772	754
Tianjin	196,904	64,972	1,237
Inner Mongolia	133,038	78,884	1,329
Ningxia	75,817	56,009	507
Xinjiang	71,077	37,578	877
Qinghai	27,259	19,756	464
Tibet	8,405	2,615	581
Other	414,902	330,967	10,958
Total	32,623,785	20,854,955	164,301

Source: CNNIC.

Domain note 1: “Other” includes countries or regions outside mainland China and domain names whose registrant's location could not be determined.

Domain note 2: Figures are as at June 2025.

Appendix table 5 Internet access

Indicator	December 2024 (%)	June 2025 (%)
Individuals using the internet (note 1)	92.0	91.6
Households with internet access	100	—
Individuals owning a mobile phone (note 2)	99.1	98.4

Internet access note 1: “Individuals Using the Internet” is one of the International Telecommunication Union's key indicators for measuring information-society development in countries and regions. Taking account of common international reporting practices and individual internet use in China, this figure is estimated from the proportion of individuals using the internet in China.

Internet access note 2: The December 2024 figure was estimated using coefficients inferred from operators' market shares and China Unicom's

deduplicated count of individual users. The June 2025 figure came from the Statistical Survey on Internet Development in China.

Appendix 3 Organisations supporting the survey

We sincerely thank the following organisations for their substantial support in providing data for this report. They are listed in no particular order.

Ministry of Industry and Information Technology (工业和信息化部)

Cyberspace Administration of China (国家互联网信息办公室)

National Bureau of Statistics (国家统计局)

Central Committee of the Communist Youth League of China (共青团中央)

Government and Public Interest Organisation Domain Name Registration Service
Centre of the Office of the Central Commission for Institutional Organisation (中央
机构编制委员会办公室政务和公益机构域名注册服务中心)

China Academy of Information and Communications Technology (中国信息通信研
究院)

Computer Network Information Center of the Chinese Academy of Sciences (中国
科学院计算机网络信息中心)

China Education and Research Network Network Centre (中国教育和科研计算机网
网络中心)

China Economic Information Service Co Ltd (中国经济信息社有限公司)

China Mobile Communications Group Co Ltd (中国移动通信集团有限公司)

China Telecommunications Corporation (中国电信集团有限公司)

China United Network Communications Group Co Ltd (中国联合网络通信集团有限
公司)

Beijing Kaipuyun Information Technology Co Ltd (北京开普云信息科技有限公司)

Baidu Online Network Technology Beijing Co Ltd (百度在线网络技术（北京）有限
公司)

Tencent Cloud Computing Beijing Co Ltd (腾讯云计算（北京）有限责任公司)

Beijing Weimeng Chuangke Network Technology Co Ltd — Weibo (北京微梦创科网络技术有限公司 (微博))

Beijing Douyin Information Service Co Ltd (北京抖音信息服务有限公司)

Alibaba Cloud Computing Beijing Co Ltd (阿里巴巴云计算 (北京) 有限公司)

Alibaba Cloud Computing Co Ltd (阿里云计算有限公司)

Bangning Digital Technology Co Ltd (邦宁数字技术股份有限公司)

Beijing Baidu Netcom Science and Technology Co Ltd (北京百度网讯科技有限公司)

Beijing Oriental NetScape Information Technology Co Ltd (北京东方网景信息科技有限公司)

Beijing Guoke Cloud Computing Technology Co Ltd (北京国科云计算技术有限公司)

Beijing Guoxu Network Technology Co Ltd (北京国旭网络科技有限公司)

Beijing Huarui Wireless Technology Co Ltd (北京华瑞无线科技有限公司)

Beijing Shouxin Wangchuang Network Information Service Co Ltd (北京首信网创网络信息服务有限责任公司)

Beijing Wanwei Tonggang Technology Co Ltd (北京万维通港科技有限公司)

Beijing Wangzun Technology Co Ltd (北京网尊科技有限公司)

Beijing Xinnet Digital Information Technology Co Ltd (北京新网数码信息技术有限公司)

Beijing Zhongwan Network Technology Co Ltd (北京中万网络科技有限责任公司)

Beijing Zhongyu Zhike International Network Technology Co Ltd (北京中域智科国际网络技术有限公司)

Beijing Zhuoyue Shengming Technology Co Ltd (北京卓越盛名科技有限公司)

Beijing Zihai Technology Co Ltd (北京资海科技有限责任公司)

Chengdu Feishu Technology Co Ltd (成都飞数科技有限公司)

Chengdu Century Oriental Network Communications Co Ltd (成都世纪东方网络通信有限公司)

Chengdu West Dimension Digital Technology Co Ltd (成都西维数码科技有限公司)

Daqing Zhuochuang Multimedia Production Co Ltd (大庆市卓创多媒体制作有限公司)

Doumai Shanghai Network Technology Co Ltd (斗麦 (上海) 网络科技有限公司)

Fanxi Enterprise Management Consulting Shanghai Co Ltd (泛息企业管理咨询 (上海) 有限公司)

Foshan Yidong Network Co Ltd (佛山市亿动网络有限公司)

Fuzhou Zhongxu Network Technology Co Ltd (福州中旭网络技术有限公司)

Guangdong Huyi Network Intellectual Property Co Ltd (广东互易网络知识产权有限公司)

Guangdong Jinwanbang Technology Investment Co Ltd (广东金万邦科技投资有限公司)

Guangdong Times Internet Technology Co Ltd (广东时代互联科技有限公司)

Guangzhou Yunxun Information Technology Co Ltd (广州云讯信息科技有限公司)

Guizhou Zhongyu Zhike Network Technology Co Ltd (贵州中域智科网络技术有限公司)

Hangzhou Aiming Network Co Ltd (杭州爱名网络有限公司)

Hangzhou E-Commerce Internet Technology Co Ltd (杭州电商互联科技有限公司)

Hangzhou Haoming Network Technology Co Ltd (杭州好名网络科技有限公司)

Hefei Juming Network Technology Co Ltd (合肥聚名网络科技有限公司)

Hefei Xunyun Network Technology Co Ltd (合肥寻云网络科技有限公司)

Heilongjiang Yilin Network Co Ltd (黑龙江亿林网络股份有限公司)

Beijing Engineering Research Centre for the Internet Domain Name System Co Ltd (互联网域名系统北京市工程研究中心有限公司)

Huanqiu Shangyu Technology Co Ltd (环球商域科技有限公司)

Jiangsu Bangning Technology Co Ltd (江苏邦宁科技有限公司)

MarkMonitor Information Technology Shanghai Co Ltd (码恪御标信息科技 (上海) 有限公司)

Xiamen Nawang Technology Co Ltd (厦门纳网科技股份有限公司)

Xiamen 35 Internet Information Co Ltd (厦门三五互联信息有限公司)

Xiamen ChinaSource Internet Service Co Ltd (厦门市资源网络服务有限公司)

Xiamen Shushang Engine Technology Co Ltd (厦门数商引擎科技有限公司)

Xiamen eName Technology Co Ltd (厦门易名科技股份有限公司)

Shangzhong Online Technology Co Ltd (商中在线科技股份有限公司)

Shanghai Best Oray Information Technology Co Ltd (上海贝锐信息科技股份有限公司)

Shanghai Fuhu Information Technology Co Ltd (上海福虎信息科技有限公司)

Shanghai Meicheng Technology Information Development Co Ltd (上海美橙科技信息发展有限公司)

Shanghai Youfu Network Co Ltd (上海有孚网络股份有限公司)

Shenzhen Internet Pioneer Technology Co Ltd (深圳互联先锋科技有限公司)

Shenzhen Yingmaisi Information Technology Co Ltd (深圳英迈思信息技术有限公司)

Sichuan Yuqu Network Technology Co Ltd (四川域趣网络科技有限公司)

Tianjin Zhuiri Technology Development Co Ltd (天津追日科技发展股份有限公司)

Wanshang Yunji Chengdu Technology Co Ltd (万商云集（成都）科技股份有限公司)

Wangju Brand Management Co Ltd (网聚品牌管理有限公司)

Xi'an Qianxi Network Technology Co Ltd (西安千喜网络科技有限公司)

Yantai DNSPod Network Technology Co Ltd (烟台帝思普网络科技有限公司)

Yunnan Landui Cloud Computing Co Ltd (云南蓝队云计算有限公司)

Zhejiang Erer Network Co Ltd (浙江贰贰网络有限公司)

Zhengzhou Century Chuanglian Electronic Technology Development Co Ltd (郑州世纪创联电子科技开发有限公司)

China Enterprise Power Technology Co Ltd (中企动力科技股份有限公司)

Zhongwang Regis Tianjin Technology Co Ltd (中网瑞吉思（天津）科技有限公司)

Other organisations also provided substantial support during preparation and revision of the report. Although they are not listed individually here, we extend our thanks to them all.

Copyright and contact information

Copyright in this report belongs to the China Internet Network Information Center (CNNIC).

Please acknowledge the source when quoting or reproducing this report.

For cooperation enquiries, contact Ms Hao on 010-59116603, Ms Meng on 010-59116606, or service@cnnic.cn.

July 2025 -56th China Internet Network Information Centre (CNNIC) V1.0