

CERNET and CNGI-CERNET2

- Fostering China's Educational Informatization and Promoting the Global Collaborations

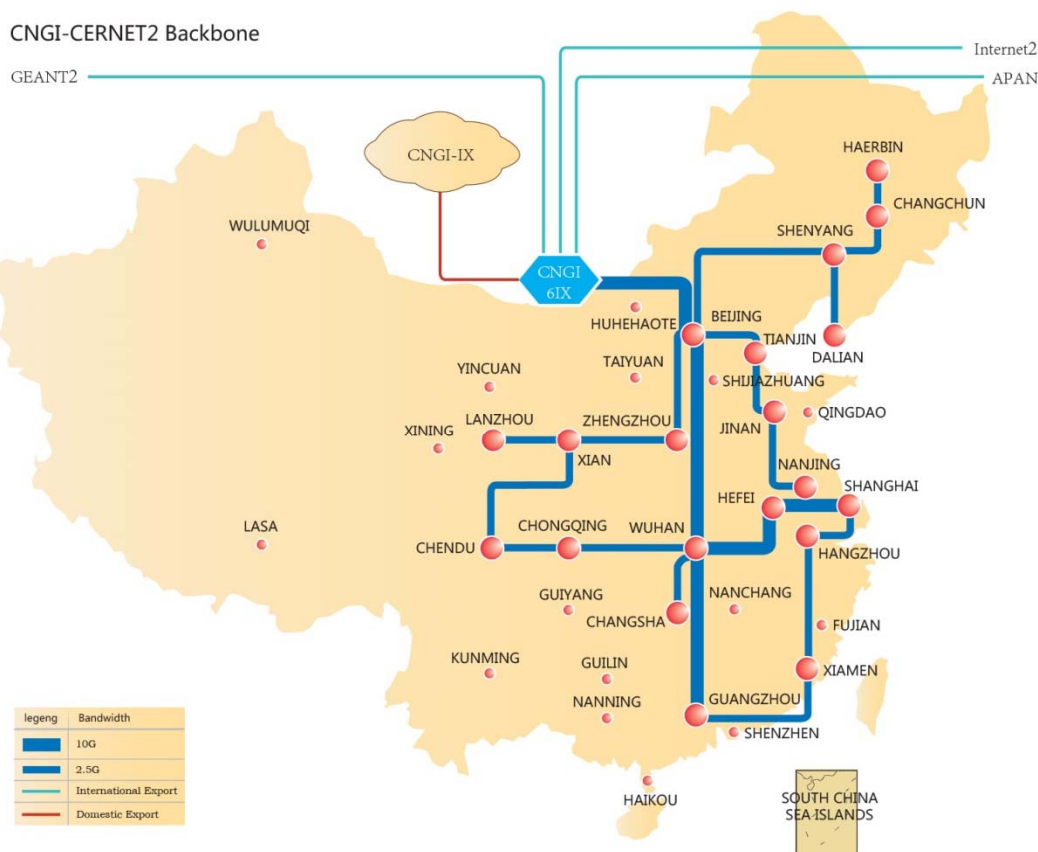
China Education and Research Network (CERNET) is the biggest national academic network in China, which is constructed and operated by 41 universities including Tsinghua University and Peking University and directly managed by the Ministry of Education.

In 1994, the National Planning Commission of China formally approved CERNET demonstration project, and while the network center of CERNET located at Tsinghua University. Since then, Tsinghua University collaborating with dozens of universities has finished a series of CERNET projects, and CERNET has become the largest national academic network in the world. As the first network using TCP/IP technology in China, CERNET has supported the Internet applications in early and promoted the development of Internet in China. With that, CERNET has been selected as one of Top 10 events in Chinese Internet 20 Years organized by China Internet Society. CERNET has supported several educational informationization programs, including the Online Admission of College Entrance Examination, Digital Library, China Grid, Modern Distance Education, etc. and has been the important infrastructure of educational informationization. Now, CERNET has build up more than 30,000 kilometers optical fiber trunk, and its DWDM high-speed transport network has been over 22,000 kilometers. Its backbone has been built up to 10~100Gbps covering 38 PoPs in 36 cities of China. CERNET connects more than 2000 universities and academic institutes covering over 200 cites, and serving more than 30 million users.

CERNET Backbone



In 2003, the State Council approved the large national project of China Next Generation Internet (CNGI) that is supported by eight ministries including NDRC. Tsinghua University collaborating with other 100 universities undertook the construction of CNGI-CERNET2/6IX which is the biggest project of CNGI core backbone networks, and supported a large number of projects and promoted the technology development of the CNGI. Nowadays, it is the important proving infrastructure for CNGI technological research and application development, connecting over 300 universities and serving about 3 million users.



CERNET and CNGI-CERNET2 are the integral part of the public service system of higher education in China, a crucial infrastructure of the informatization of education, and it is also an essential part of the national information infrastructure.

Via the CERNET Open Exchange Points in Beijing and Hong Kong, CERNET has the direct network connections with the other NRENs (National Research and Education Networks) among Asia Pacific Region, North America and Europe. CERNET worked with the other NRENs very closely in the development of the NREN CEO Executive Forum which has been an extraordinary catalyst in advancing the ability of research education networks around the world to be able to provide a whole array services to researchers and educators. CERNET has the long and close partnership with Internet2 and organized the Chinese American Symposium annually since 1999

to exchange the information and promote the co-operations. The relationship between Europe and CERNET has also a long history to be traced back to the late 1990's – the first link to Germany with DFN and to the UK with JANET. This relationship is strengthened in mid 2000's to Europe-wide with the TEIN2/3/4 and ORIENT/ORIENTplus projects. Since 1995, CERNET Center at Tsinghua University positively sent representatives to work in the Asia Pacific Internet organizations, and they have been contributing to Asia Pacific Advanced Network (APAN) since 1999 and set up the link to APAN backbone. CERNET also actively supported the activities in TEIN and Asi@Connect projects in Asia Pacific Region since 2005.