

JGN2's R&D STRUCTURE

Seven Research Centers

The seven research centers collaborating with the JGN2 project are conducting "Research and Development on Advanced Networks and Application Technologies" (abbreviated to "JGN2 R&D Project").

Subjects of Research and Development on JGN2 R&D Project

- 1) Highly Reliable Core Network Technology
- 2) Access Network Technology

Research on advanced and fundamental core network technologies using the JGN2 network is also being carried out at NICT's Koganei Headquarters and Knowledge Creating Communication Research Center (NICT Keihanna Branch)

- 3) Grid Technology
- 4) Platform and Application Technology

Each research center



REGARDING UTILIZATION OF JGN2

Method of Utilization

In principle, anyone can utilize the JGN2 network if their purpose is research and development.

The procedure for utilizing the JGN2 network is as follows:
First, any user who wants to utilize the JGN2 network must submit the Application Form completed to NICT JGN2 Center.

Then a joint research contract must be signed between the user and NICT JGN2 Center. After signing the contract, the user may start to utilize the JGN2 network including the international circuits linking USA and Asia (Thailand and Singapore).

Please refer to the following URL as for the JGN2 network utilization method.

<http://www.jgn.nict.go.jp/english/03-utilization/outline/index.html>

The project duration has been planned from April 2004 to March 2008.

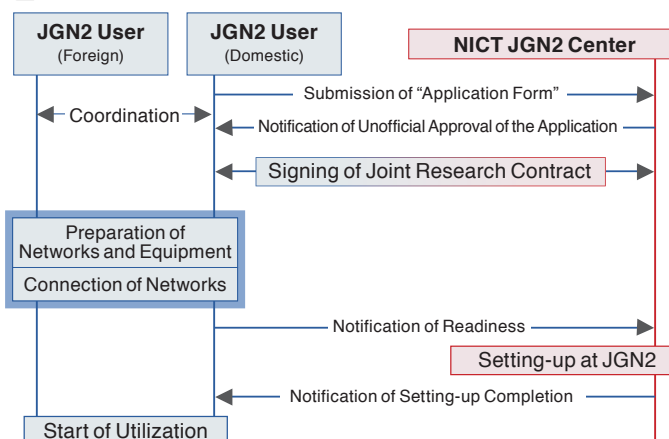
Remarks: NICT has been reviewing the JGN2 project for due services which will be provided after April, 2008. The further information is shown in the following JGN2 website.

<http://www.jgn.nict.go.jp/english/index.html>

*1 : Generally unnecessary if the user belongs to an organization which has already concluded a joint research contract for the other research.

*2 : Unnecessary when new research is to be conducted by using the existing JGN2 network.

JGN2 Utilization Procedure



NICT

CONTACTS

Homepage Address <http://www.jgn.nict.go.jp/e/>

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ORGANIZATIONS CONCERNED

Ministry of Internal Affairs and Communications

Technology Policy Division, Information and Communications Policy Bureau

Bureau of Telecommunications

Hokkaido Bureau of Telecommunications

Telecommunications Business Division, Information and Communications Department

Tohoku Bureau of Telecommunications

Information and Communications Collaboration Promotion Division,
Information and Communication Department

Kanto Bureau of Telecommunications

Information and Communications Collaboration Promotion Division,
Information and Communication Department

Shin-etsu Bureau of Telecommunications

Information and Communications Development Office, Information and Communications Department

Hokuriku Bureau of Telecommunications

Telecommunications Business Division, Information and Communications Department

Tokai Bureau of Telecommunications

Information and Communications Collaboration Promotion Division,
Information and Communication Department

Kinki Bureau of Telecommunications

Information and Communications Collaboration Promotion Division,
Information and Communication Department

Chugoku Bureau of Telecommunications

Information and Communications Collaboration Promotion Division,
Information and Communication Department

Shikoku Bureau of Telecommunications

Telecommunications Business Division, Information and Communications Department

Kyushu Bureau of Telecommunications

Information and Communications Collaboration Promotion Division,
Information and Communication Department

Okinawa Office of Telecommunications

Administration Division, Information and Communications Department

(As of August, 2007)

Advanced Testbed Network for R&D

JGN2



R&D Testbed Network

JGN2 ! Realizing the Future of ICT Society!!

The National Institute of Information and Communications Technology or NICT has launched the JGN2 project which provides advanced functions with super-high speed since April, 2004. The JGN2 network is an open testbed which aims to realize the research and development for Information Communication Technology. In collaboration with the industry, the academia, the government and regional organizations, the JGN2 network has been urging onward a broad spectrum of activities from the basic or fundamental research and development to the demonstrative testing towards practicalities, fostering the research of network-related technologies and the development of diverse ranged applications.

The JGN2 project will make an outlook of the ICT research and development in the future ICT society.

JGN2 ACTIVITIES

Aiming the Research and Development towards the Next Generation

- Urging onward the basic or fundamental demonstrative testing for the research and development of networking technologies and the development of applications, which lead to breakthroughs of the next generation in collaboration with the industry, the academia, the government and regional organizations.
- Urging onward the human resource development.
- Urging onward the regional activation through activities for a certain research and development and the like in the regions.

CHARACTERISTICS OF JGN2

An Open Testbed Network for Research and Development

- Nationwide access point (s) in each prefecture (Total: 64)
- Super-high speed backbone network up to 20Gbps (10Gbps × 2)
- Three kinds of services: Dark fiber (L1), Ethernet (L2), IP (L3)
- Network linking Japan with USA
- Network linking Japan with Asia (Thailand and Singapore)

All Access Points

Ethernet Connection Service (L2 Service)

1.Point to Point Connection Service

This service provides L2 point to point connection based on a VLAN.

2.Multi-points Connection Service

This service provides L2 multiple point connection based on the same VLAN.

IP Connection Service (L3 Service)

This service provides connections for JGN2 users with each other, or with other research networks and other users, at the IP level as a service with an IPv6/IPv4 dual stack.

Interface

10/100/1000Base-TX (RJ45)

Optical fiber connections with 1000Base-SX/LX, etc.

Remarks: Consultations are necessary whenever all experiments are concluded.

Certain Access Points

OXC Connection Service

(Tokyo<2 sites>; Osaka; Keihanna; Fukuoka; Kanazawa)

This service provides connections for places where the OXC* system is installed at the optical wavelength level. 1Gbps and 10Gbps will be used as connection interface.

*1 : Optical Cross Connect

10Gbps Connection Service

(Total: 18 Access Points)

This service provides connections for certain access points by a 10Gbps-Ethernet. It is also possible to connect access points which do not provide this service.

Optical Testbed Service

(Eastern Area < Otemachi, Tsukuba, Akihabara, NICT Koganei >, Western Area < Keihanna, Osaka Dojima >)

This service provides optical transmission with dark fiber to conduct experiments between certain access points.

