JAIST Information Environment

For New Student, Oct. 2022

**Research Center for Advanced Computing Infrastructure,
Center for Innovative Distance Education and Research,
Japan Advanced Institute of Science and Technology**

JAIST -- Japan Advanced Institute of Science and Technology

Today's Agenda

JAIST Information Environment = I-Env.

1. Overview of I-Env.
2. Specific Topics in I-Env.
3. How to use, the first step to use.
4. Security Introduction Seminar

Today's contents

https://www.jaist.ac.jp/english/

➡ Areas/Organizations
➡ Research Center for Advanced Computing Infrastructure
➡ For Newcomer
➡ Tips.3 Document for orientation

School of Knowledge Science

Centers for Education and Research

Research Center for Advanced Computing Infrastructure

Center for Innovative Distance and Research

Global Communication Center

Library

Health Care Center

Network Maintenance (2022/09/30 4:00-8:00)

Pick Up

For Newcomer

About IT Help Desk

Please be sure to change your initial password

InfoSec Hotlines   FAQ/Support

Web-Mail   J-Storage   SSL-VPN

Service

# Research Center for Advanced Computing Infrastructure (RCACI)

- **Information Environment (I-Env.)**
  - http://www.jaist.ac.jp/iscenter/en/ (Web site)
  - isc-query@ml.jaist.ac.jp (Contact e-mail)

- To support research and educational activities
  - High-speed networks
  - Several cloud services (JAIST Cloud)
  - High-performance and robust data storage
  - Massively parallel computers

- All services are centralized by RCACI

What is JAIST I-Env.

- Consisting of network and information equipment.
- Supporting for research and education.

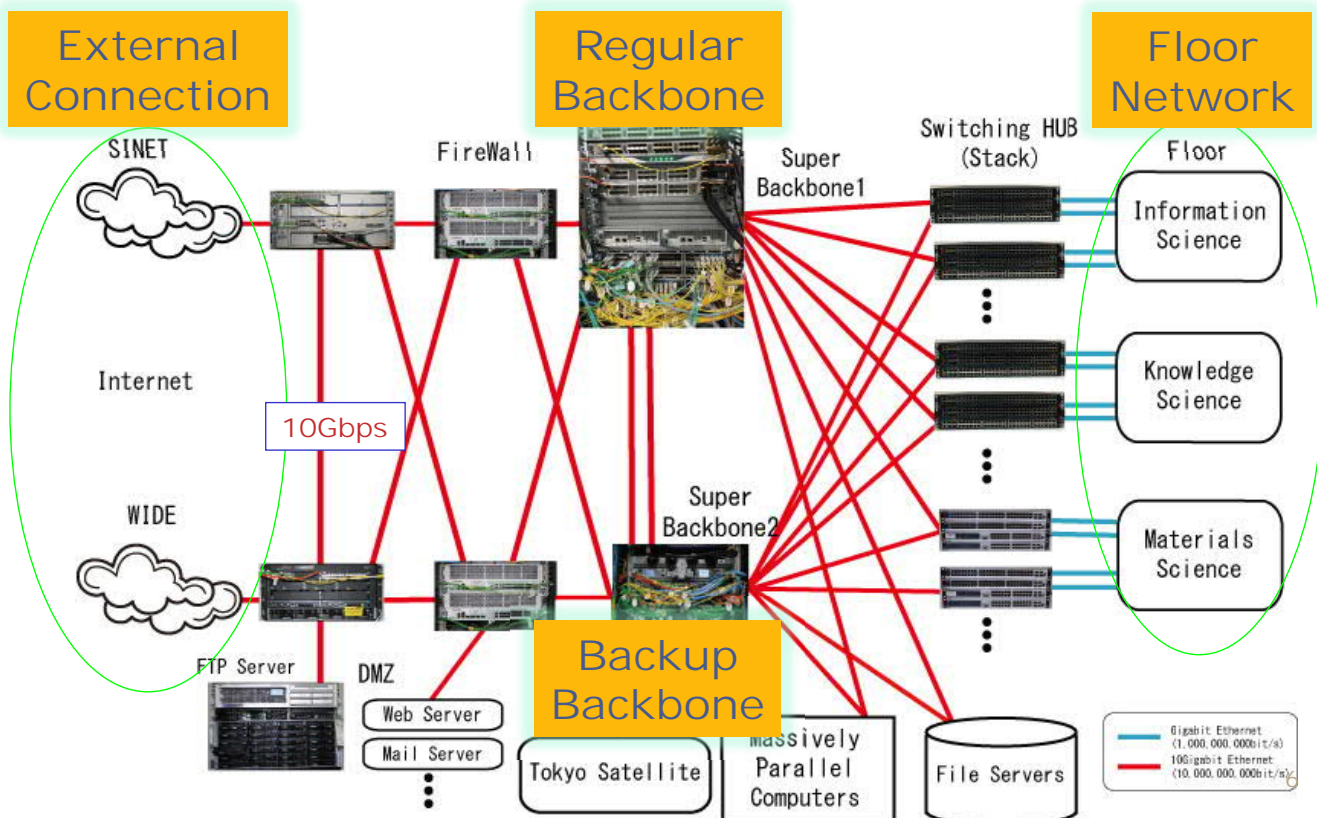Centralized management   24/7 Service (Schedule blackout 1day/year)

Including student dormitory
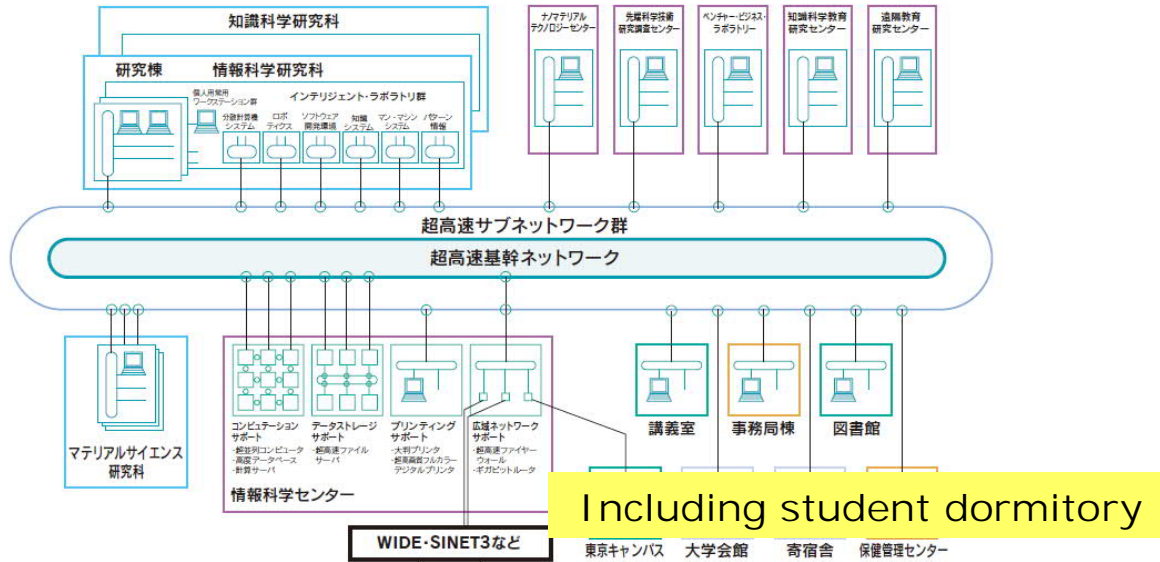
From user devices to massive computational servers

Overview of FRONTNET

External Connection

Regular Backbone

Floor Network

10Gbps

Backup Backbone

Key Features of JAIST I-Env.

■ **Centralized Management**
- Client: Laptop PCs are distributed to all students.
- Server: Supporting both Windows and Linux.
- File: Providing centralized data storage with backup.
- Computation: Massively parallel computers.
- Network: Giga-bit class connection at your booth.
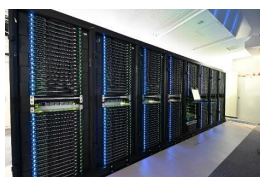
■ **Uniform Services at High Level**
- Freely use of JAIST I-Env. anytime & anywhere.
- Uniform access by high-speed wired and wireless LAN.
- Centralized data management from our cloud services.
- Transparent access to massively parallel computers.
- Wide-bandwidth connection to internet/academic network.

Equipment of JAIST I-Env.

Massively Parallel Computers

Kagayaki (2022)

JAIST Cloud Systems

LMPCC(2020)
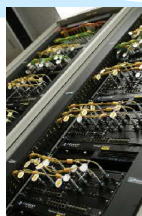
10Gbit/s broad-band access(2006～)

File Servers

DDN SFA7990X (2021)

User Terminals   **High-Speed Network**

SurfacePro

Dell EMC Isilon (2020)

プレスリリース

北陸先端科学技術大学院大学、新しい超並列計算機システム「KAGAYAKI(かがやき)」を、デル・テクノロジーズのスーパーコンピュータシステムで本格運用開始 − 旧システムと比較し、約2.24倍の性能向上を実現 −

https://www.jaist.ac.jp/whatsnew/press/2021/04/07-1.html
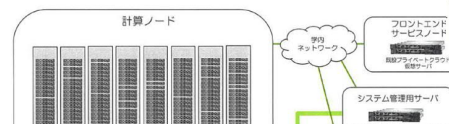
[北陸中日新聞]
令和3年4月14日付 14面

- Available for all students and faculty members
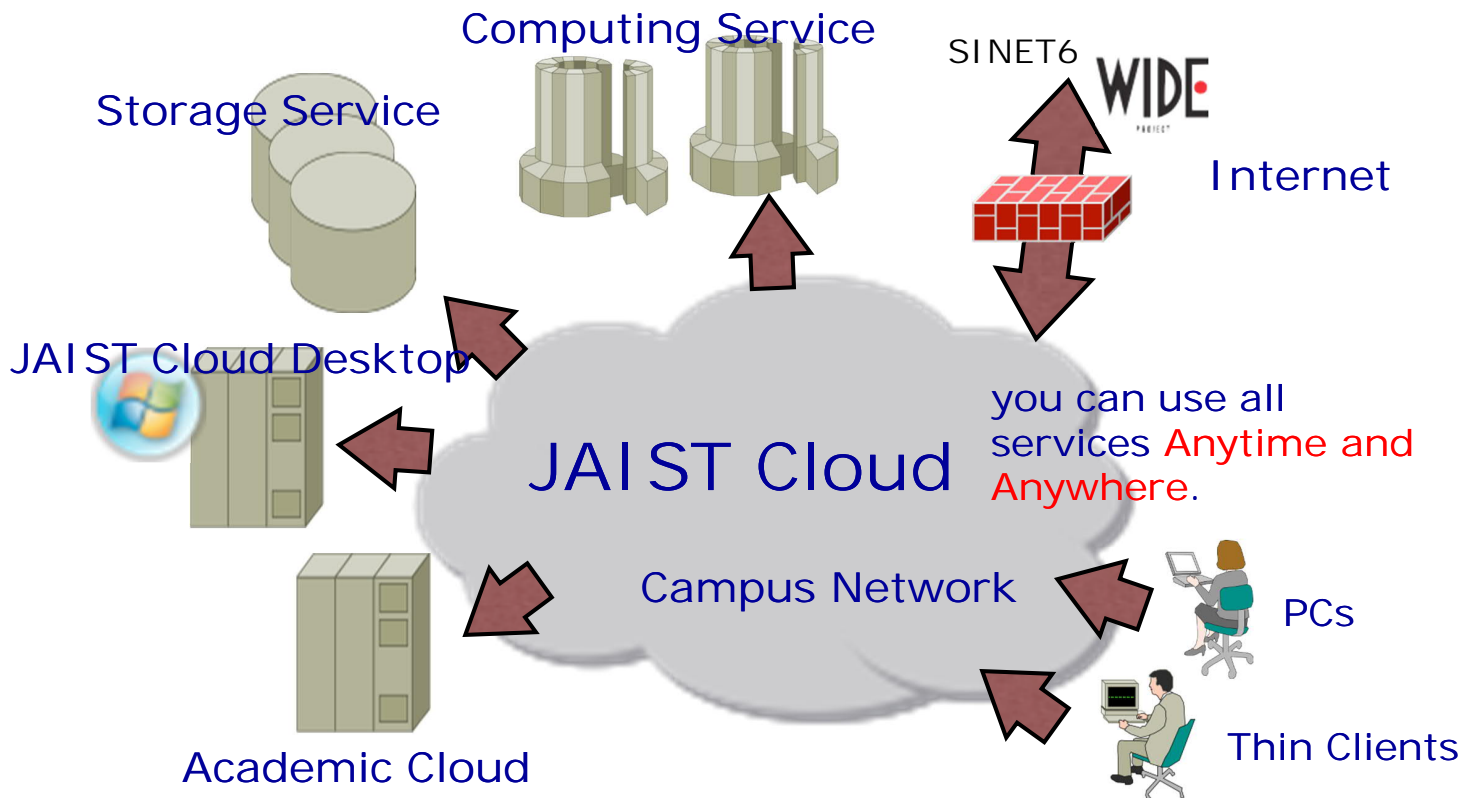- Workshop for users holds on June and Oct.

Summary of JAIST I-Env.

- **JAIST Cloud**
  - Uniformed and centralized management of data
  - Providing uniform environment, anytime and anywhere
 - Users can focus on their research activities.

- **Advanced equipment in I-Env.**
- **Operation by high technical center**
- **Contribution to society via technologies**

Architecture of JAIST I-Env.

Computing Service

Storage Service

SINET6   WIDE

Internet

JAIST Cloud Desktop

JAIST Cloud

you can use all services Anytime and Anywhere.

Campus Network

PCs

Academic Cloud

Thin Clients

Surface Pro

- **You can borrow a MS Surface Pro one by one.**
  - **You must return it at the time of graduation.**
  - **It is your luck to get new or old because it is rental one.**
    - ♯ **If it will have hardware troubles, we will replace it.**
  - **Display/dock in your desk will be distributed by mid of Oct.**
    - ♯ **If needed, consult with your supervisor.**
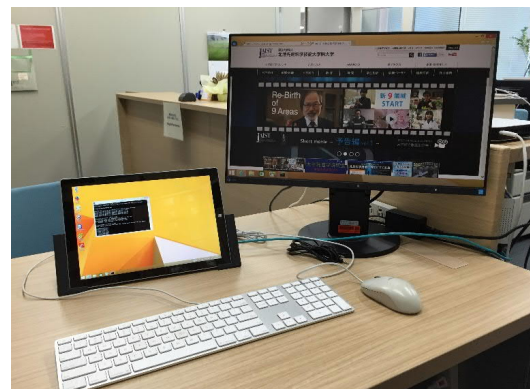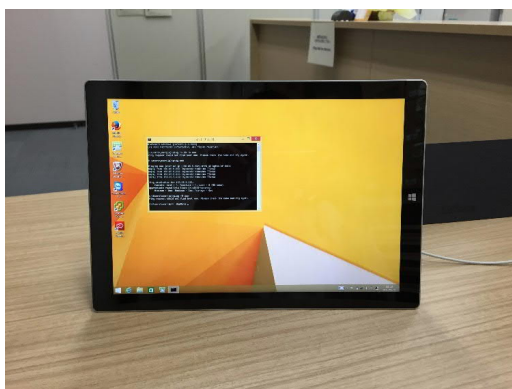
JAIST Cloud Desktop

- Anyone can use same environment from any clients.
  - Using VMware Horizon Client.
- Different OS servers are available.
  - For Research : Windows, Linux servers
- All files can be stored and backed up at file servers.

- Available on JAIST Cloud Desktop (Windows/Linux)
  - Microsoft Office
  - Computation/Visualization software:
    - **M**atlab, Mathematica, etc.
  - Others:
    - MobaXterm , Firefox, Thunderbird, etc.

JAIST Cloud Desktop

JAIST Cloud System (Linux)

File Servers

Your own PC

Same Data

Transparent Access

JAIST Cloud System (Win)

Massively Parallel Computers
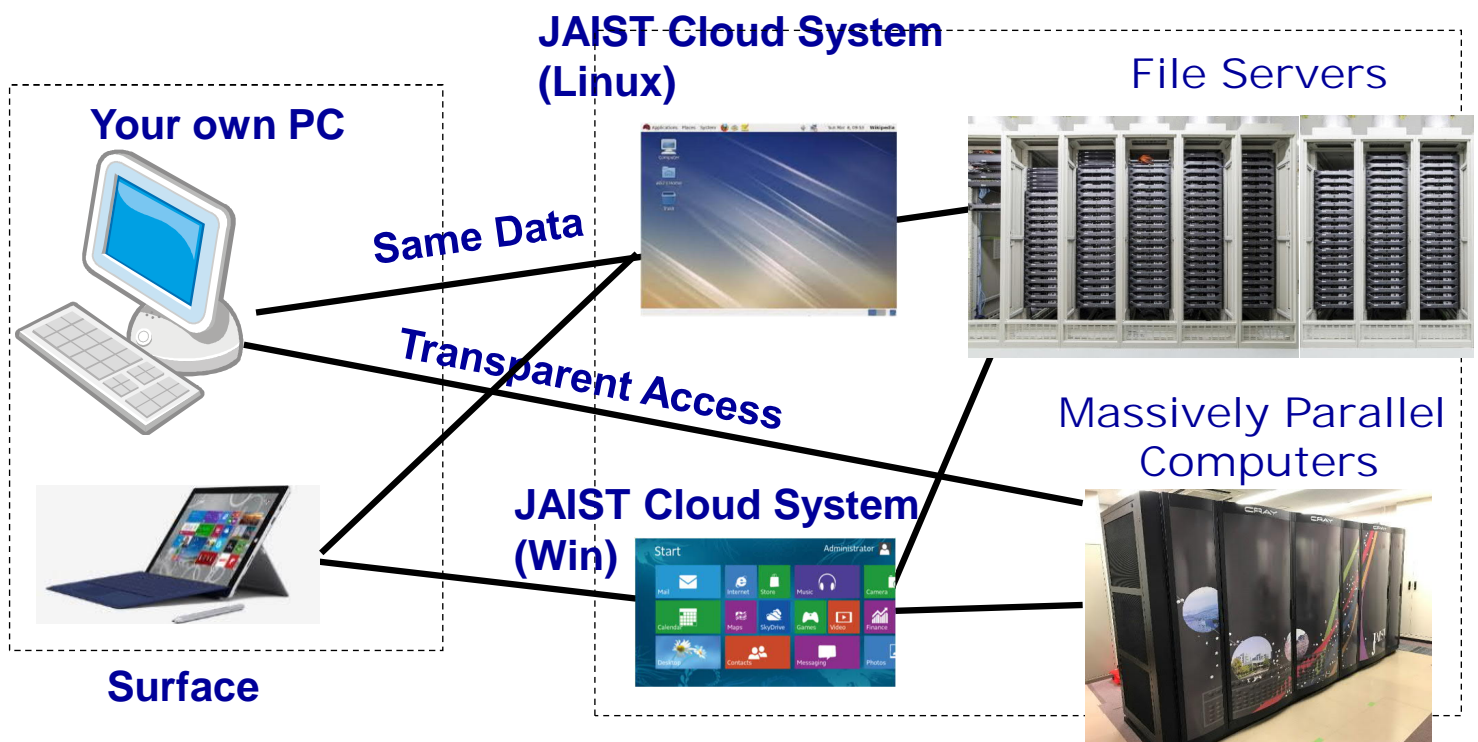
Surface

Computing Servers

Surface

LMPCC(2020)
Large memory:Large
Scale

**Linux Server
General-Purpose**

KAGAYAKI (2022)
Most powerful in JAIST

- Available 24/7 （except outage and maintenance）
- All students and faculty members can use them.
- Various libraries/software for scientific calculation are available.

Software lineup

- **Available Software on JAIST**
  - Microsoft umbrella agreement ※1
    - http://www.jaist.ac.jp/iscenter/en/software/microsoft/
 - MATLAB umbrella agreement ※2
  - ESET Endpoint Protection ※2
  ※1 Additionally, available on privately-owned devices (Office 365)
  ※2 Additionally, available on privately-owned devices
  - Other Software
    - https://www.jaist.ac.jp/iscenter/en/software/

Printing・Bookbinding

- **JAIST Printing Service**
  - Color Multifunction Printer
- **Large sized Printer (60-inch)**
  - For A0/A1 Poster
- **Combined printer**
  - Copy/Scanner/Bookbinder
- **Media Cutter**
- **Simple book binder**
- **Large size scanner**
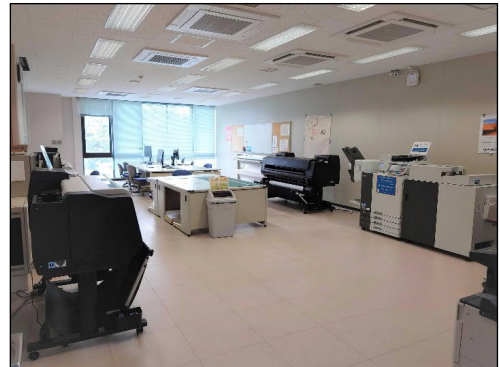
Center for Innovative Distance Education and Research (CIDER)

- **Support for Distance Education/Learning**
  - http://dlc.jaist.ac.jp/dlc/ (Web site)
  - dlc@ml.jaist.ac.jp (Contact e-mail)

- To support distance educational activities
  - Hyflex/online lectures
  - Learning management system
  - Video conferencing system

- All services are centralized by CIDER

Lecture Archive System

- ## Recording F2F lectures
  - https://dlc-lms.jaist.ac.jp/
  - You can access it from campus network
  - Authentication : JAIST-SSO
  - Environent : Web Browser (FireFox recommended)
- ## Learning management system: Moodle
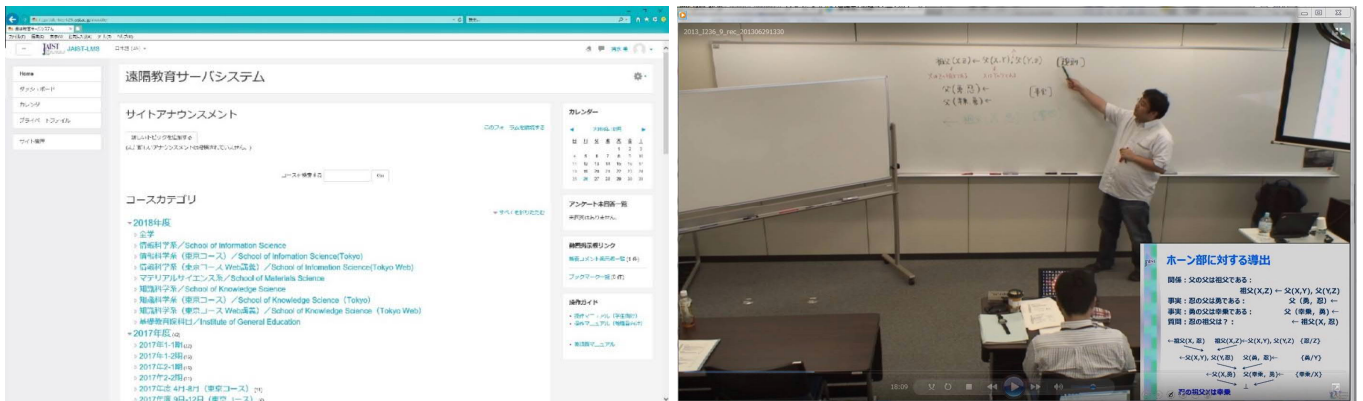
Video Conferencing System

- ## Webex : PC Conferencing System
  - https://jaist.webex.com
  - JAIST users can reserve online meetings (anyone can join them)
  - Screen and application sharing is available
- ## Poly Video Conferencing System
  - Installed at lecture rooms, collaboration rooms.
  - High-quality video/audio by specific equipment.
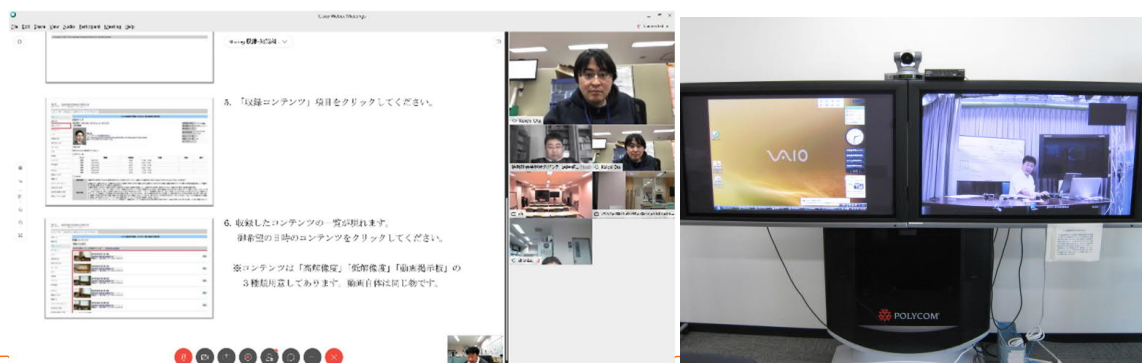
# Today's Agenda

JAIST Information Environment = I-Env.

1. Overview of I-Env.
2. Specific Topics in I-Env.
3. How to use, the first step to use.
4. Security Introduction Seminar

How to Use JAIST I-Env.

- User Account
- E-mail
- Network Access
- Digital Certificate
- Remote Access

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User Account

- **User account is used for identification of I-Env.**
  - Login to terminal (Windows, Linux) on I-Env.
  - Sending and receiving E-mail
  - Using remote access (SSL-VPN) service
  - Using campus Web services i.e. Academic affairs system, library system, lecture archive system
- **You will receive your user account, initial password, and e-mail address after this session.**
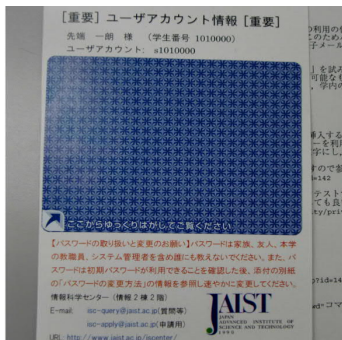
- **Student user account is like** s2201234

Change Initial Password

- ● Be sure to change your initial password!
  - ● https://www.jaist.ac.jp/iscenter/useraccount/modifyattr/
  - ● Be different from other sites
  - ● Register an e-mail for password reset
    - ● From the Change Attribute menu
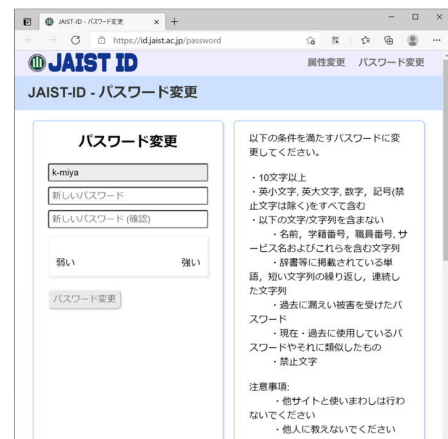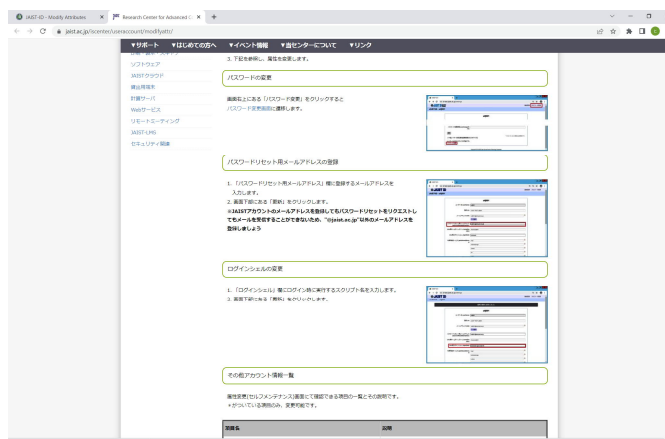
JAIST-SSO

- **JAIST Single Sign-on System**
    - Centralized authentication for various systems
    - It allows you to use other systems without authentication for a certain period.
    - Do not bookmark the JAIST-SSO page.
    - Multi-factor authentication from outside of JAIST
        - Multi-factor authentication must be configured in advance.

If the authentication fails, check the following page.

https://www.jaist.ac.jp/iscenter/en/sso/sso-fail/

E-mail

- **E-mail is a fundamental communication at JAIST.**
    - You can forward e-mail to another address.
      (You should consider whether external service is secure.)
    - You can make mailing lists.
    - We have web mail service. (https://web-mail.jaist.ac.jp)
    - Access RCACI web page to set the configuration.

- **Initial e-mail address**
    - Students: made from their ID Ex.) s2212345@jaist.ac.jp

- **Students can change e-mail address all of the time.**
    - https://www-rcaci.jaist.ac.jp/cgi-bin/regmailaddress/regmail-e.cgi
    - After changing, ID-based address is accepted only JAIST e-mails.
    - After changing, you need to re-apply your digital certificate.

Network Connection

- Wired LAN http://www.jaist.ac.jp/iscenter/en/network/wired-lan/
  - If you want to connect your own equipment to JAIST network (including student dormitory), you need to register from Web.
  - You can connect it by DHCP using a cable at your desk.
    - 2 LAN **cables (Max 1Gbps) per your laboratory desk.**
  - If you need a static address (i.e. for server), apply to RCACI.
  - You can also connect wired LAN at student dormitory.

- Wireless LAN https://www.jaist.ac.jp/iscenter/en/network/wireless/
  - You can use wireless LAN almost everywhere at JAIST.
  - You need to install your digital certificate in your PC.
  - We support Eduroam (roaming service among educational/ research institutes)

Remote Access from Outside of JAIST

- Webmail https://web-mail.jaist.ac.jp
  - E-mail through Web browser.
  - You need 2-factor authentication from outside of JAIST
- SSL-VPN https://vpn.jaist.ac.jp
  - SSL-VPN allows you to access campus LAN from outside.
  - You require Digital Certificate from campus LAN.
- SSH https://fep.jaist.ac.jp
  - After login to "fep" by SSH, you can access servers by SSH.
  - You require pre-registration.
- Online Storage Service (J-Storage)
  - https://jstorage-2018.jaist.ac.jp/
  - You can send and receive large files using Web browser
  - You can share files with others with version control.
  - The files can be synchronized with your local PC using software.

Multi-factor Authentication

Combination of multiple elements for security
Client Certificates

- Digital Certificate
  - Next slide
- One-time Password(OTP)
  - Generated by private key and time
  - The encoded value must be secret
- FIDO2
  - Passwordless with authentication devices
    - Windows Hello PC
    - FIDO2-enabled Yubikey devices
    - Google Titan devices

Digital Certificate

- Electric ID in addition to your password.
  - Identification for Web-services in JAIST
  - Identification for Wireless Network (Eduroam)
  - Password change
  - Encrypted or signed E-mail
  - SSL-VPN (Connection from outside of JAIST)

- JAIST-UPKI http://www.jaist.ac.jp/iscenter/en/digital-certificate/
  - Download and install your web browser by yourself.
    https://pki.jaist.ac.jp/jupki/ (Accessible only from inside JAIST)
  - If you change e-mail, you must re-apply the certificate.
  - If you use the certification outside of JAIST, prepare it before your trip.

Conclusion

- **Web site of RCACI**
  - http://www.jaist.ac.jp/iscenter/en/
  - Please ask questions by following web form or e-mail.
    - https://www.jaist.ac.jp/iscenter/en/support/form/
    - E-mail: isc-query@ml.jaist.ac.jp
  - Reception Desk
    - IS building-II 2F (I-24)   8:30 - 17:00

- **IT-helpdesk members**
  - JAIST student members for supporting your problems.
  - https://www.jaist.ac.jp/iscenter/en/support/helpdesk/
 - E-mail: it-helpdesk@ml.jaist.ac.jp

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Security Introduction Seminar

- Understand today's seminar and pamphlet
- Complete I-Env. Usage consent procedure (online)
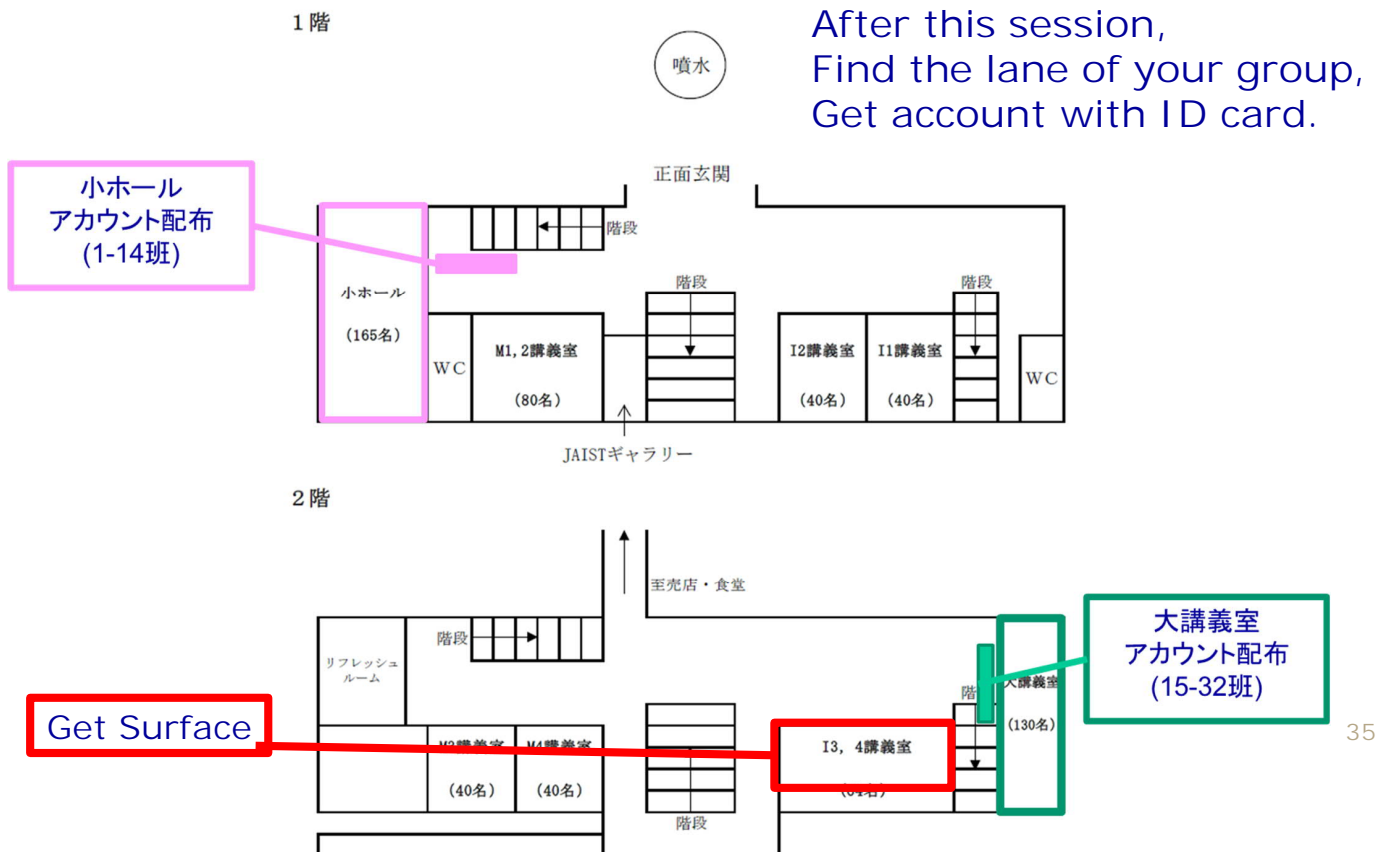 → Account will be suspended if not completed by 10/31
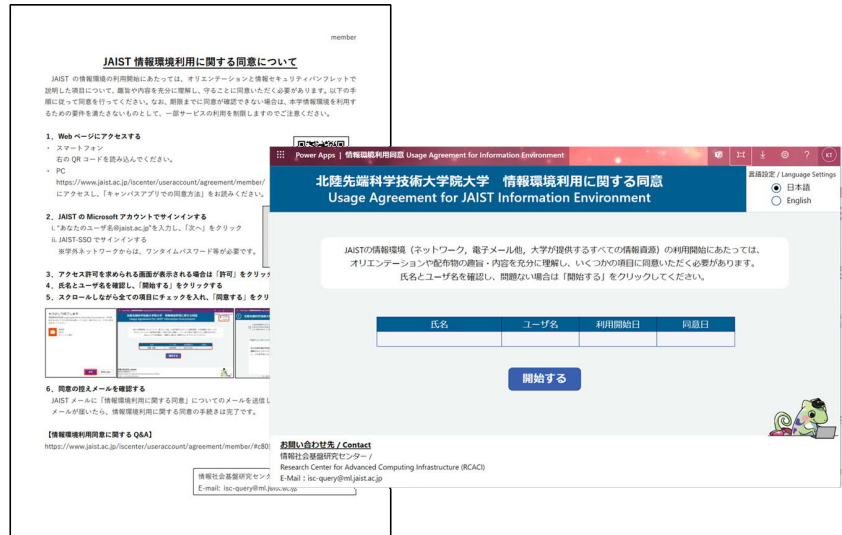
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Here you are in JAPAN

- Japanese legal may be much strict!!
  - Cyber Security
  - Copyright

- You need pay attention on a risk to face prosecution

- There are prohibited:
  - Use of illegal software copy
  - Providing/downloading illegal contents

Pick up Your Account

After this session,
Find the lane of your group,
Get account with ID card.

1階

噴水

正面玄関

小ホール
アカウント配布
(1-14班)

階段

階段

階段

小ホール
(165名)

WC

M1,2講義室
(80名)

I2講義室
(40名)

I1講義室
(40名)

WC

JAISTギャラリー

2階

至売店・食堂

リフレッシュ
ルーム

階段

Get Surface

M3講義室
(40名)

M4講義室
(40名)

I3,4講義室
(64名)

階段

大講義室
(130名)

大講義室
アカウント配布
(15-32班)

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階段

Pick up your Surface!

You can borrow a Surface to use JAIST I-Env.

• If you get it, you should manage it by yourself.
• You must return it back when you graduate/leave from JAIST.
• **It is your luck to get new or old because it is rental one.**

Place/Time to pick-up：
・Today 14:00-16:00 @ Lecture Room I3・4
・Others: @ RCACI [IS building-II 2F (I-24)]

Necessary Document：
・Student ID card