France-Asia Virtual Organization

Current status

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VO-Manager

FJPPL Workshop
CC-IN2P3, Lyon, March 13, 2012

Overview

- Introduction
- Services and Infrastructure
- Activities
- Use case
- Future actions

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Introduction

France-Asia virtual organization is a collaboration to share computing resources to make them accessible to multidisciplinary scientific projects and primarily the ones which are part of the Associated International Laboratories between France and Asian countries.

Members:

- KEK (Japan)
- KISTI (Korea)
- IHEP (China) *
- CC-IN2P3 (France)

Services

- Computing
  - Grid Computing (gLite)
  - DIRAC (in test)
- Data Storage
  - IRODS
  - AFS
  - SRM and LFC
- User Support
  - Wiki Site
  - Application porting
  - High-level grid tool
- Training
  - Grid tutorials

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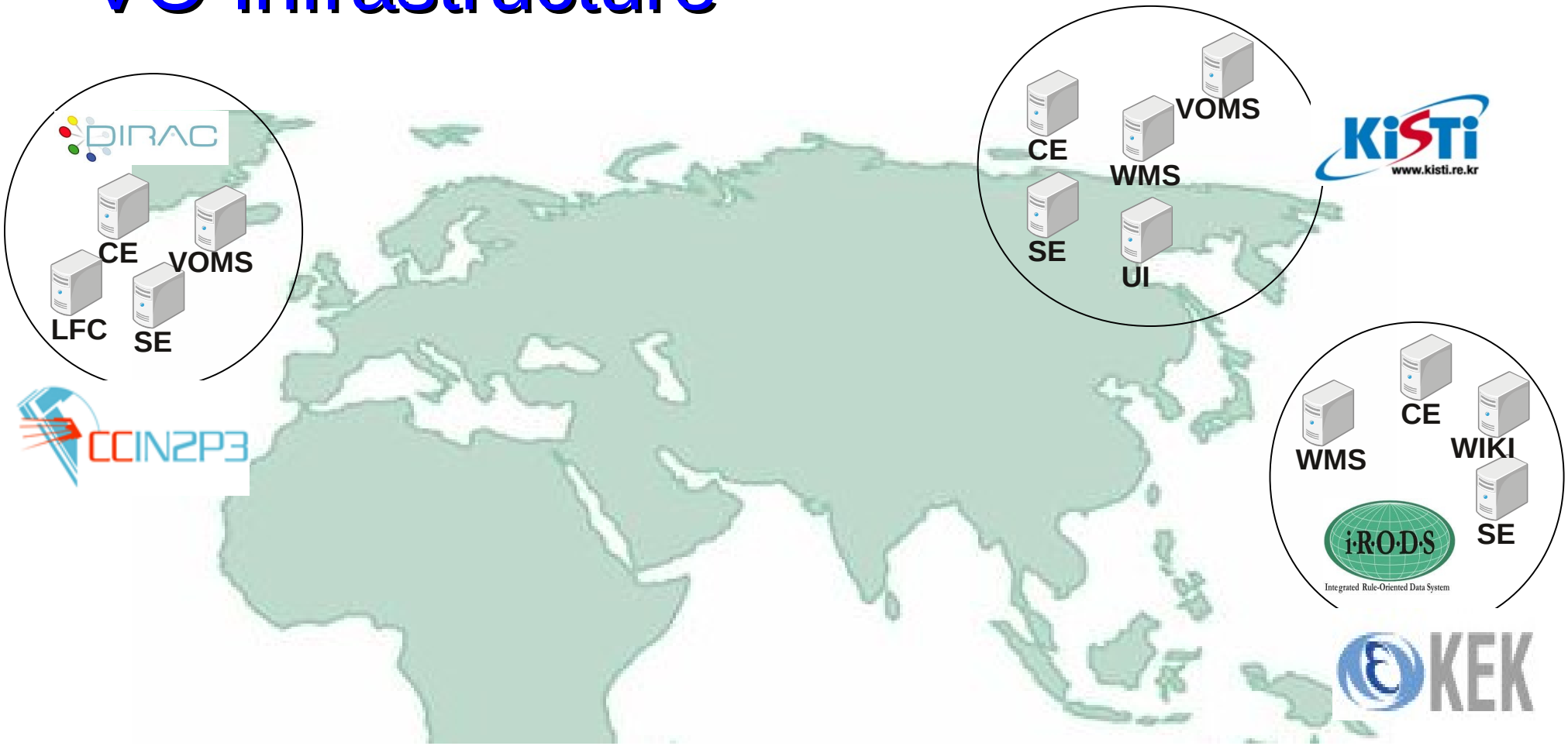
VO Infrastructure



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Activities: IHEP joints the VO

Computer Center IHEP (Institute of High Energy Physics)

Chinese Academy of Sciences

- Relationship with FCPPL

  France China Particle Physics Laboratory

- Expectation
  - Feedback of the Trend project use case (VO utilization)
- Future:
  - Come up a grid site supporting the vo

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Activities: g-2 EDM at JPARC (FJPPL)

- Japan-french collaboration (New experiment)
  - Simulation GEANT4
  - Data analysis and reconstruction
  - Data sharing
- Status
  - Application in development
- Contacts:
  - Wilfrid DA SILVA LPNHE/IN2P3
  - Frédéric KAPUSTA LPNHE/IN2P3

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Activities: Trend project (FCPPL)

- Sino-french collaboration in astronomy
  - NAOC,IHEP (China) & IN2P3/CNRS (France)
- Objective:
  - Participate in the development of the autonomous radiodetection technique
  - Radiodetection of high-energy neutrinos with earth-skimming trajectory

Activities: Trend Project (FCPPL)

- Use the existing infrastructure of the 21CMA radio telescope
- ~10 researchers
- Actually they use the CC-IN2P3 (in non grid way)

- Source: Presentation of Olivier Martineau-Huynh, 32nd International Cosmic Ray Conference, August 2011, Beijing China

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Activities: Cosmology research (FCPPL)

- Tsinghua Centre for Astrophysics (THCA)
  - expressed interested in evaluating the grid platform
  - Cosmology research
  - CPU-intensive simulations
  - Use a few hundred CPU cores
- Contact
  - Andre TILQUIN CPPM/IN2P3

IRODS federation

- Objective:
  - Use IRODS system as alternative grid storage system:
    - grid jobs use IRODS
  - Implement advanced data management policies
    - Data replication
- Federation of IRODS between VO sites
  - KEK and CC-IN2P3

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Use case: iRODS data replication

- Objective:
  - Improve data availability through redundancy
  - Support data disaster recovery
- Actions:
  - Wide-area data replication between KEK and CC-IN2P3
  - Real use-cases: g-2 EDM and Trend

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Use case: iRODS data replication

- Notes:
  - Trend Project uses IRODS as main storage system
  - CC-IN2P3 has done IRODS-gLite integration
  - IRODS servers at KEK and CC-IN2P3 support GSI authentication
  - Trend uses 28 Tbyes in IRODS at CC-IN2P3 (it's not necessary full replication)

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Future actions:

- Create iRODS federation between KEK and CC-IN2P3
- Copy of precious Trend data to second site
- Deploy iRODS rules for data replication
- DIRAC evaluation

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