

# IBERGRID

4<sup>th</sup> iberian grid infrastructure conference

## Latin American GRID Initiatives: Background, Best Experiences and Ongoing Projects

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## **Agenda**

- **Relevant Background**
- **Current Situation**
- **Some concerns and final remarks**

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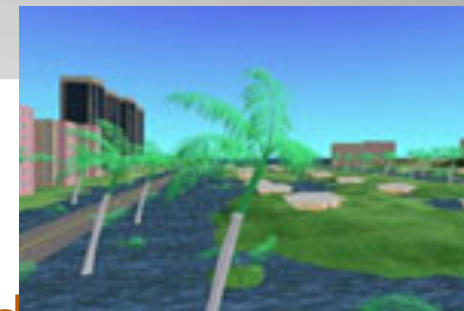
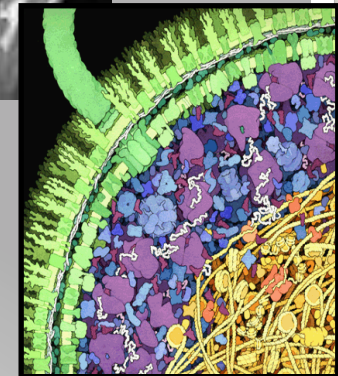
2005



Healthcare

Life Sciences

Hurricane Disaster  
Mitigation



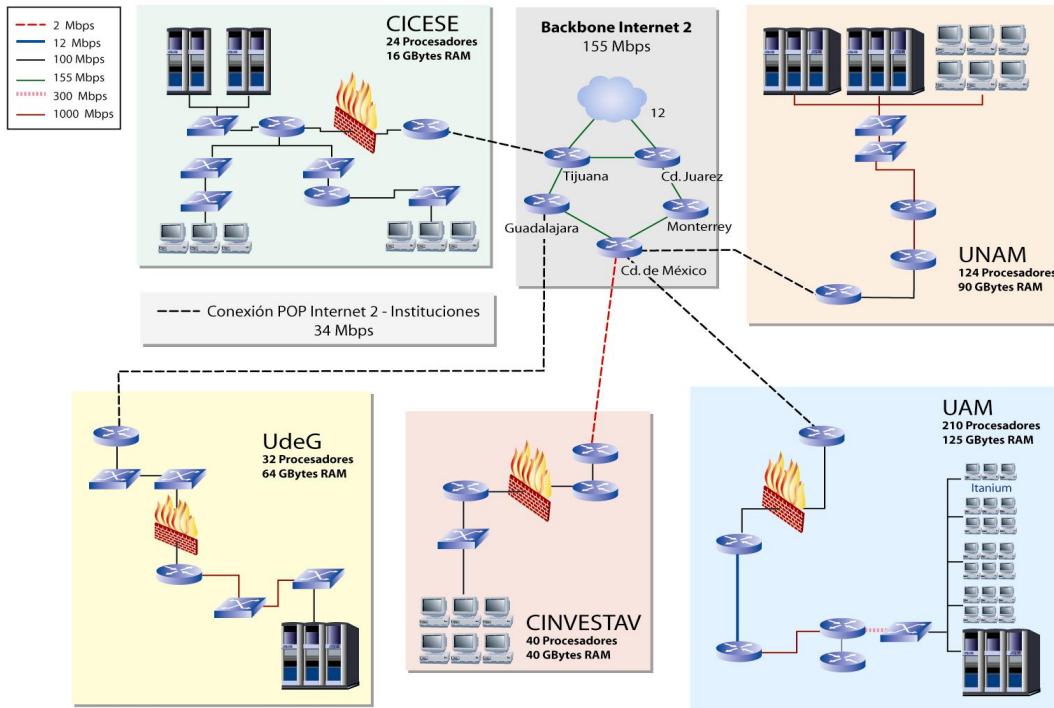
IPICYT



# Background

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**2004-2005**  
**GRAMA:**  
**Mexican Academic**  
**GRID**  
**Inter institutional**  
**GRID**

**2008-2009**  
**LNGSeC:**  
**GRID National**  
**Laboratory for e-**  
**Science Support**

## Background

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2006-2008

Remote Instrumentation in  
Next-generation Grids



Mexico, Uruguay, Chile, Brazil



NSF funded, 2002

## Background

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EP6  
2006-2008



Infrastructure  
Development

Training

Applications



Argentina  
Brazil  
Chile  
Mexico  
Cuba  
Peru  
Venezuela  
Cuba  
Colombia  
Ecuador  
Panama  
Uruguay

JRU-MX

UNAM  
ITESM  
CUDI  
UMSNH  
CICESE  
IPN  
UAEM  
IPICyT  
UNISON

### Background

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E-science grid facility for  
Europe and Latin America



FP7  
2008-2010



Infrastructure  
Development

Training

Applications

61

- 41 Resource Centres
- ~ 3000 CPU Cores
- ~700 TB of Storage



JRU-MX  
JRU-ARG  
JRU-BRA  
JRU-PAN  
JRU-CL  
JRU-COL  
JRU-ECU  
JRU-PER  
JRU-VEN

78 MEMBERS  
50 LA  
28 EU

### Current situation

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Chilean Grid Initiative @ Centro de Modelamiento Matemático.  
Scientific applications of national interest

GRID tools for the integration and administration of network services in Latin America,  
Centro Nacional de Cálculo Científico, U de Los Andes

### Venezuela GRID



Metropolitan Delta for High performance computing in Mexico  
High performance computer centers connected through 10Gbps dedicated links



Other Relevant Projects and Initiatives  
in terms of National Coverage and LA involvement



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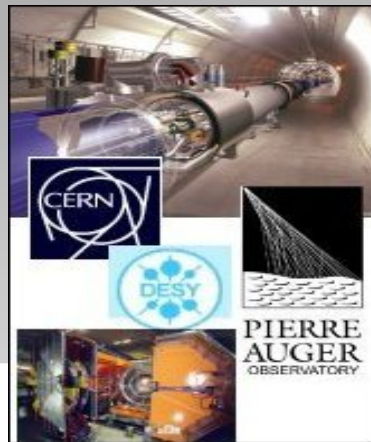
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**HELEN**



39 member institutions from 14 countries (6 in Europe, 8 in Latin America).

**High Energy Physics for the Latin American-European Networks**

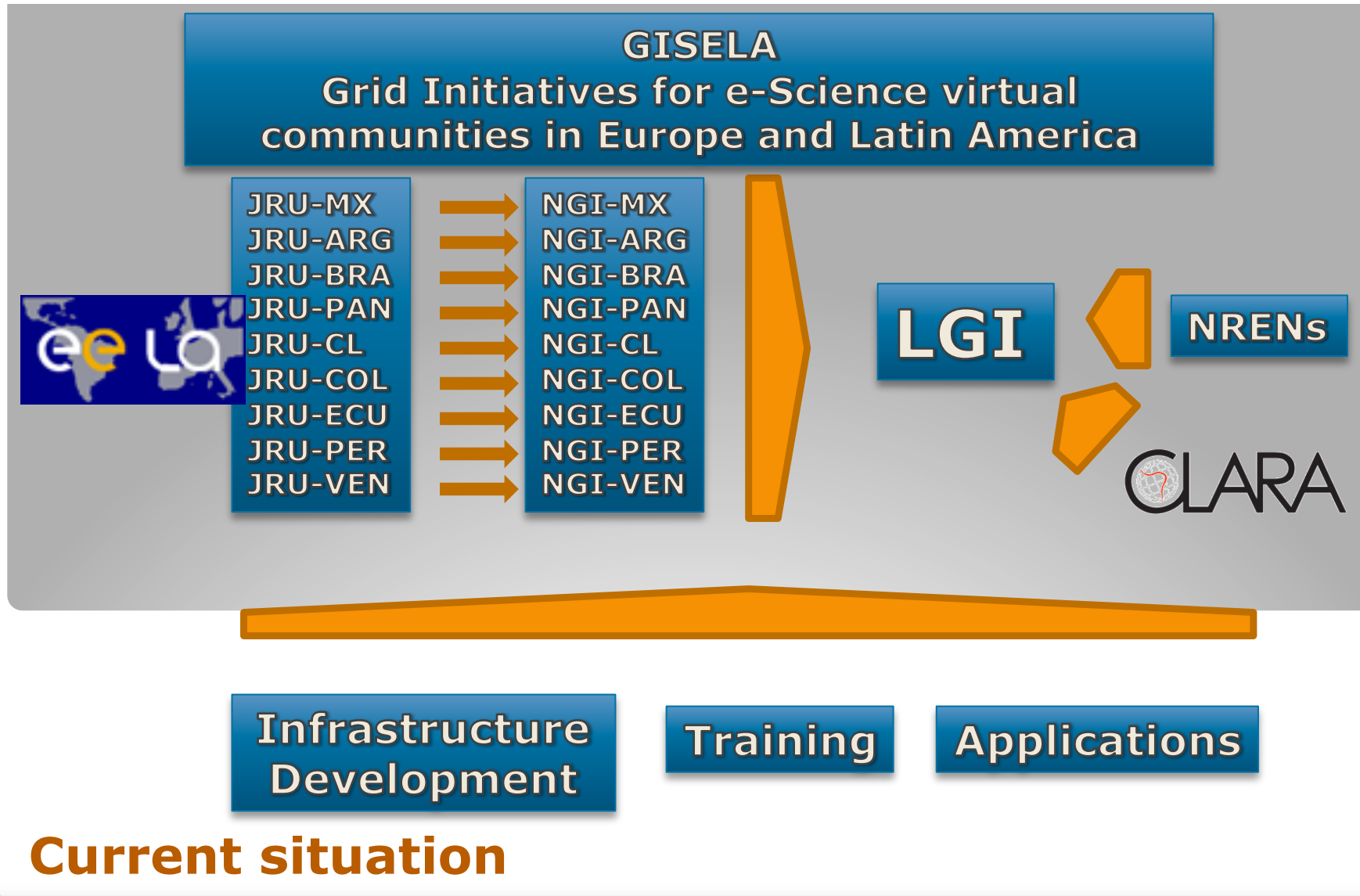


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FP7 2010-2012

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## Two LA ROCs in operation



ROC-CERN

EGEE  
Enabling Grids  
for E-science

IGALC – Latin American and Caribbean Grid Initiative is an entity devoted to the development and dissemination of grid technologies through the region.

Supporting different middlewares (gLite, OurGrid and possibly others), it aims to integrate the existing grids in LAC, becoming a common interface between initiatives such as EGI, EGEE, OSG, TeraGrid. Furthermore, another goal is to foster an ever-increasing overall quality of the infrastructure. The federation of resources gives the communities access to more computational power than what isolated departments are able to provide.

Uniandes para  
ca Latina.

Uniandes para  
na.

Colombia

ity

## Current situation

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EPIKH: Exchange Programme to advance e-Infrastructure Know-How



Brazil

Mexico

Chile

Reinforce the impact of e-infrastructure  
in scientific research by means of:  
GRID Schools  
HPC Courses

**Current situation**

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*It is well known that grid applications depend highly on connectivity, international and domestic; hence, CLARA is a critical regional infrastructure that needs to find a long term financial model and increase bandwidth to its member countries.*

*With the exception of Brazil and few other countries, NRENs of Latin America lack adequate bandwidth for grid applications. Fortunately, several international grid initiatives as the ones just mentioned, are gathering organisational strengths, and helping to effectively address this issue.*

## Some concerns and final remarks



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