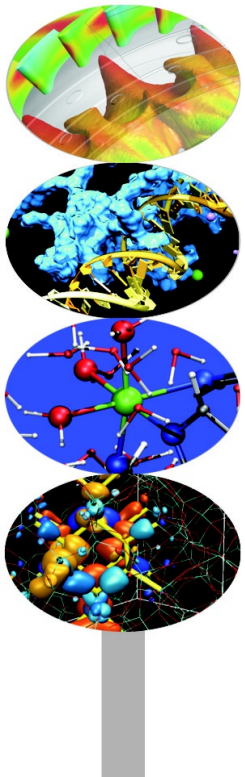
CINECA SCAI
SuperComputing Applications and Innovation

CINECA COURSES
High Performance Computing 2014

Remote Visualization @ CINECA: RCM



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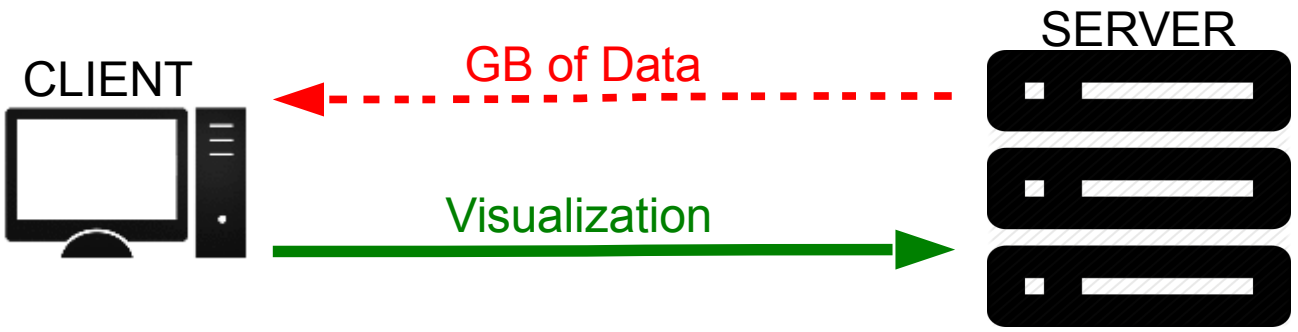
PRACE

CINECA

Outline

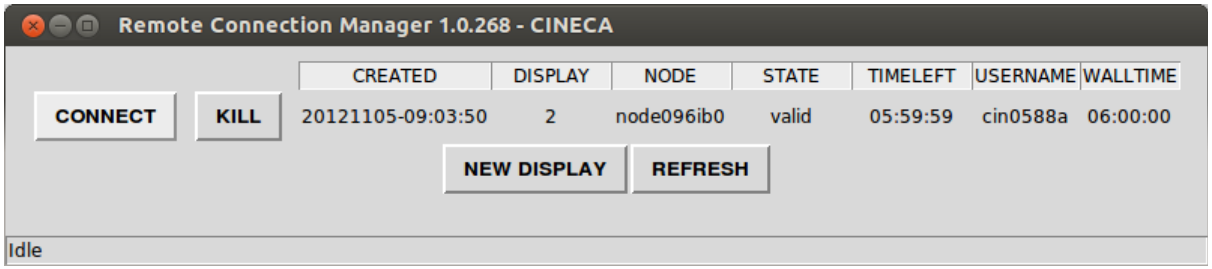
- Objective of the service
- RCM: Remote Connection Manager
- Remote visualization infrastructure
- Links
- Demo

Objective of the service



- **Avoid transferring** of GB of data produced on Cineca HPC systems
- Allow users to **performe visualization** e post-processing activities **on HPC machines** (**GPU**)
- **Simplify** operations to create and manage remote displays

RCM: Remote Connection Manager



- cross platform client/server **GUI application**
- automates operations to setting up a remote connection to the Cineca clusters
- simplify the management of the remote dislpays
- integration of existing open-source technologies:
  - **TurboVNC**: remote controll software
  - **VirtualGL**: gives any linux vnc software the ability to run OpenGL application with full 3D acceleration

Remote visualization infrastructure

- **PLX** cluster
  - 274 IBM iDataPlex M3 nodes
  - **2 Nvidia GPU per node**
- 3 queues available:
  - **visual**: node with 48 GB of RAM (open to every user)
  - **rvn_visual**: 2 nodes with 128 GB of RAM (on request)
  - **big1_visual**: node with 512 GB of RAM (on request)
- WallTime limit of **12 hours**
- **2** concurrent displays per user

Links

- RCM user documentation and download page: http://www.hpc.cineca.it/content/remote-visualization
- User support: superc@cineca.it
- VirtualGL & TurboVNC: http://www.virtualgl.org/

RCM during the course

In order to distribute users among the available resources please use the queues as follows:

- from *a08tra**01*** to *a08tra**10*** → **visual**
- from *a08tra**11*** to *a08tra**35*** → **rvn_visual**