DIRAC@CNAF

THE INTERWARE

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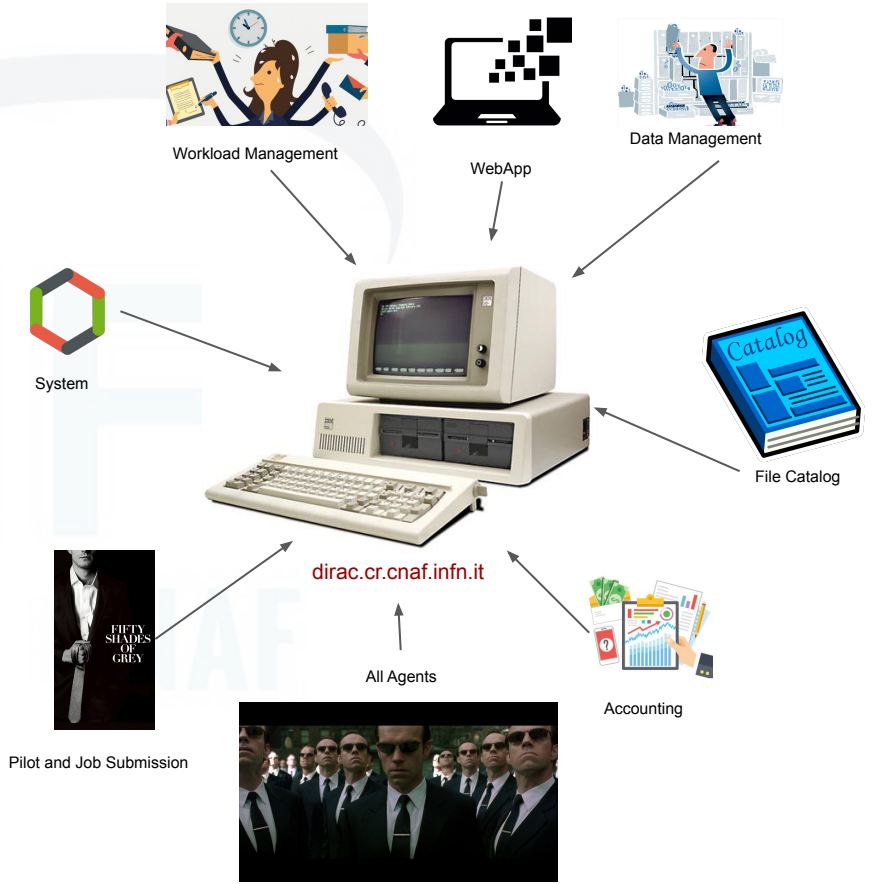
dirac.cr.cnaf.infn.it

- DIRAC version: v6r20
- Everything is in a single machine, as of now, no problem, but it is better to have a load balance
- We have added 3 VOs so far:
  - KM3Net.org
  - ICARUS
  - DTEAM for system tests
  - Included JobLaunchpad Templates
- And 2 other Computer Centers apart from CNAF
  - Pisa
  - Catania
- Systems, services, SiteDirectors, DBs and Catalogs working
- We are “puppetizing” DIRAC
- And creating a DB Backup



Large Unified Italian Grid Infrastructure

* This slide is a work of fiction. Names, characters, businesses, places, events, locales, and incidents are either the products of the author's imagination or used in a fictitious manner. Any resemblance to actual persons, living or dead, or actual events is purely coincidental.
** LUIGI is not an approved name and is only here for amusing purposes

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System

WebApp

dirac.cr.cnaf.infn.it

Accounting

Pilot and Job Submission

System

dirac-wms.cr.cnaf.infn.it

Workload Management

Agents

System

dirac-dms.cr.cnaf.infn.it

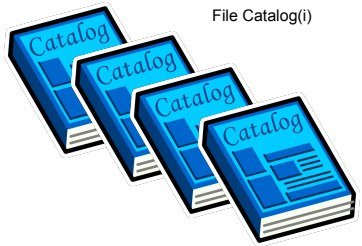
Data Management

Agents

System

dirac-catalog.cr.cnaf.infn.it

File Catalog(i)



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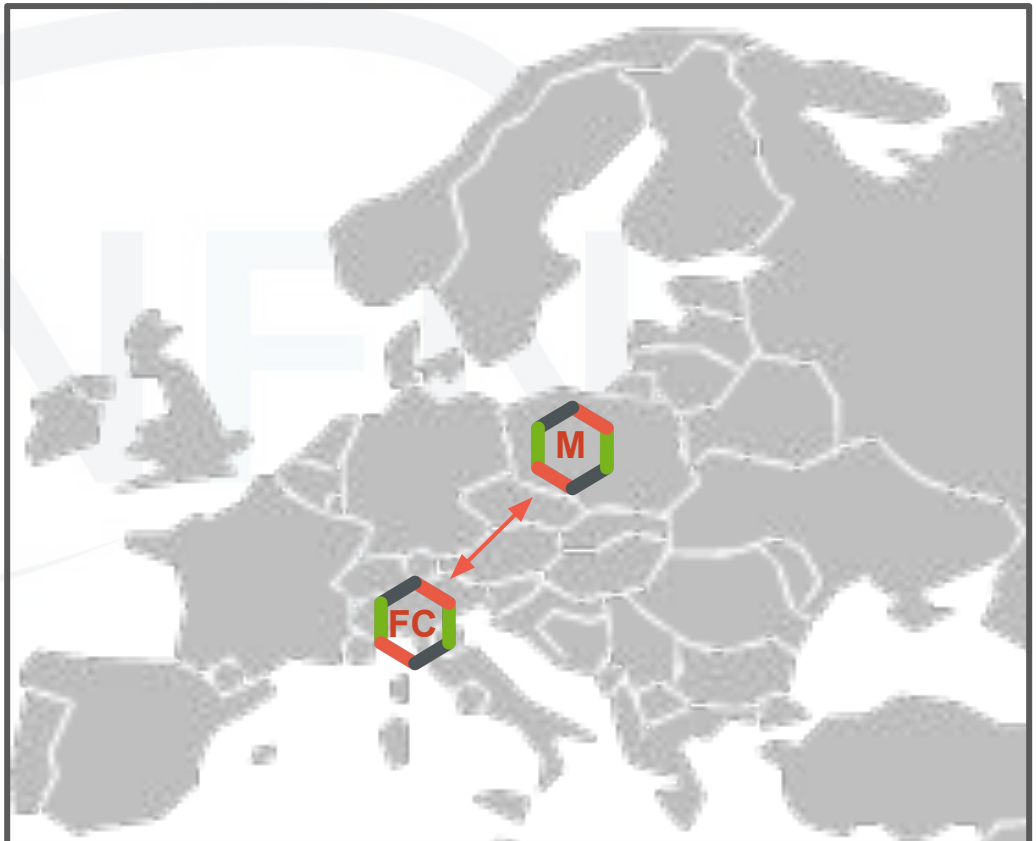
VIRGO use case

- VIRGO is using EGI Dirac
- CNAF is VIRGO's T0 site
- CNAF has a DIRAC server dedicated to VIRGO's File Catalog
- 1st case of a DIRAC installation distributed and shared among 2 different locations, in a very simple setup
- This brought new questions
  - Is it any safe at all for user?
  - Is it reliable at all for user?
  - Who's responsible for the servers?



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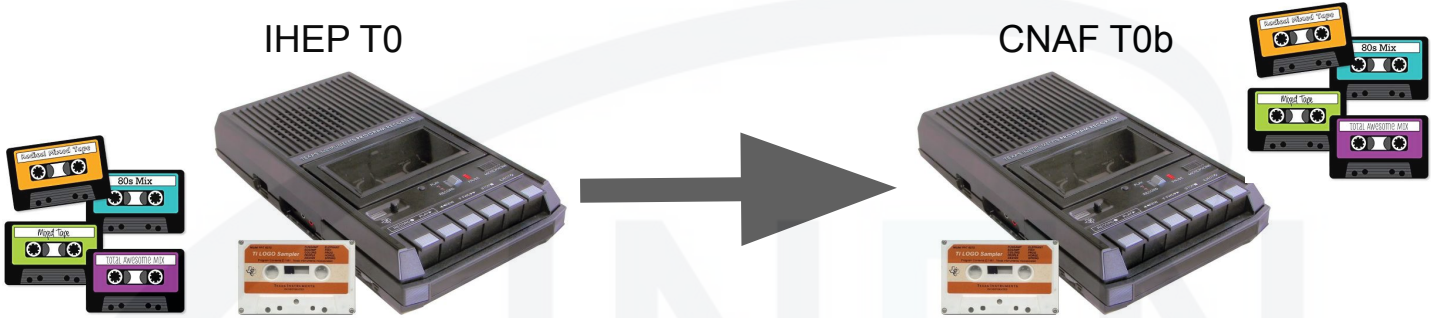
JUNO use case



DATA STORAGE

- CNAF will have an exact copy of data as IHEP
- IN2P3 and JINR will contain part of the data

DATA TRANSFER

- IHEP will transfer all data online direct to CNAF
- CNAF than will copy and distribute the files among T1s
- CNAF will host FTS.

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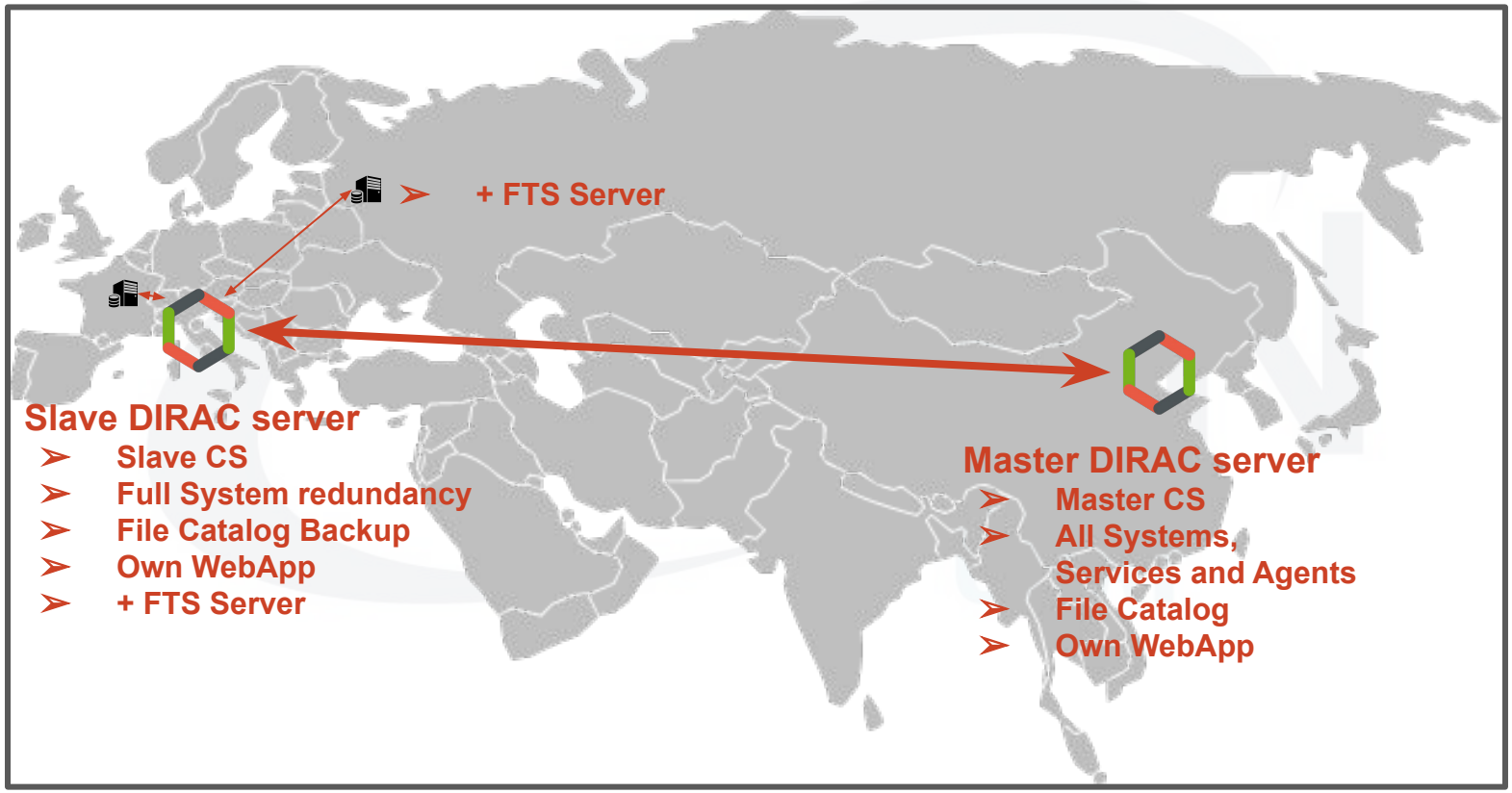
JUNO use case



One’s Perception

- DIRAC community is growing.
- Other solutions too, and they also have strong marketing and development.
- So far, mostly experiments were responsible for their own DIRAC.
  - Smaller experiments depending on larger experiments support or a dedicated person from an institute.
- With EGI, DIRAC is now offered as a general service.
- Distributed DIRAC Services is a great idea, but centralized System can be risky.
  - Distributing the system is fault proof, which is great!
  - In the other hand, a unique central system (CS and WebApp) increase the chances of service interruption.

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One Direction

- Institutes, like CNAF or IGI, could offer DIRAC as a Service.
- For the institute, it is better that users use the resources in a more “standard” way.
  - It is safer and more reliable .
  - The institute can monitor more easily users activities.
  - The institute has more chirurgical intervention power over users activities.
- DaaS (“DIRAC as a Service”) opens possibilities for smaller experiments to profit from the GRID environment.
  - Smaller experiments lack human resources, DIRAC is a easy solution for them.
  - At the same time, more experiments can bring new use cases and even some development.
- Institutes can promote and provide Workshops and more Training for local users.
- The proximity with the end service and resources administrators makes the setup and debugging process much easier.

One Purpose

USERS!

- Users don’t mind who, how or where, they just need their job done.
- Users need solution, we can provide it.
- Let’s not get political among us, there is already too much around us!
- Let’s let Users use the system!
- Let’s let sites fight for providing resources!

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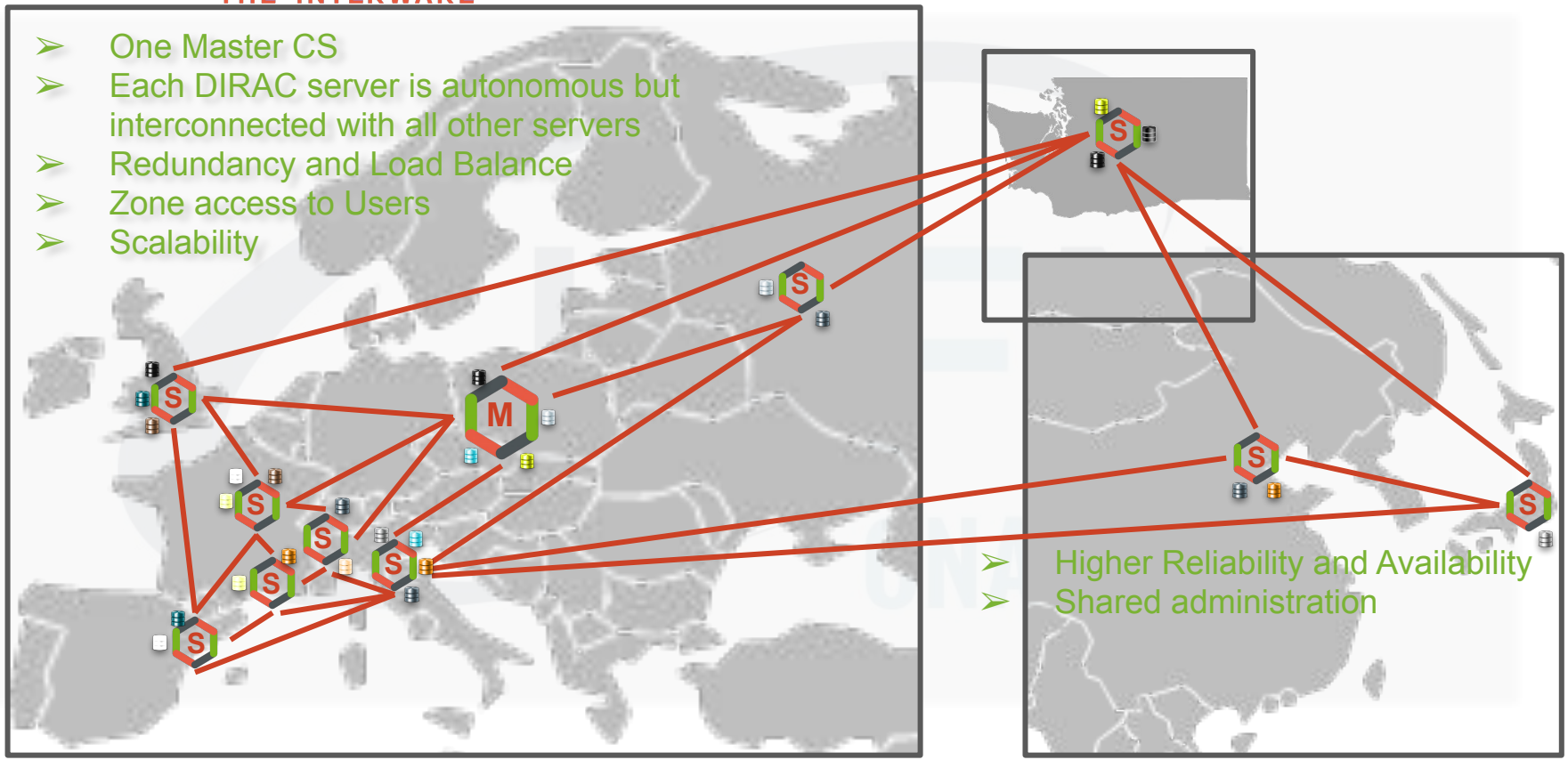
One Idea



DaaS ist gut

Please Kill My Idea!

- DBs and CS redundancies
  - Synchronous or Asynchronous?
  - Master/Slave?
  - How?
- Sensitive information?
  - Changes in the CS and/or WebApp?
- Concept of Zones instead of Installation?
- Network stress?
- Race Condition?
- All possible and imaginable political/financial problem
- Would anyone be willing to give design ideas?
- Anyone else apart from me thinks this is a crazy idea?

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Question, Suggestions...

Outcome Discussion