# Computing for LHC / LCG
# Status in Switzerland

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# Situation in Switzerland

## We are in process of

- setup ONE SINGLE national Tier-2 centre at CSCS in Manno
  to serve all 3 experiments (Atlas, CMS, LHC); setup in stages

  **Status :** prototype hardware present (see below),
  software implementation in progress (see below)

- contribute resources to the LCG core team in terms of 3 FTE

**Status:**

- two persons deployed to CERN since Fall 2002:
  - Derek Feichtinger (funded by PSI/ETHZ)
  - Frederik Orellana (funded by Universities, employed by U.Geneva)
- resources for one person from CSCS not (yet) available;
  promised by CSCS in 2002; waiting for answers …

# Status of Step-1

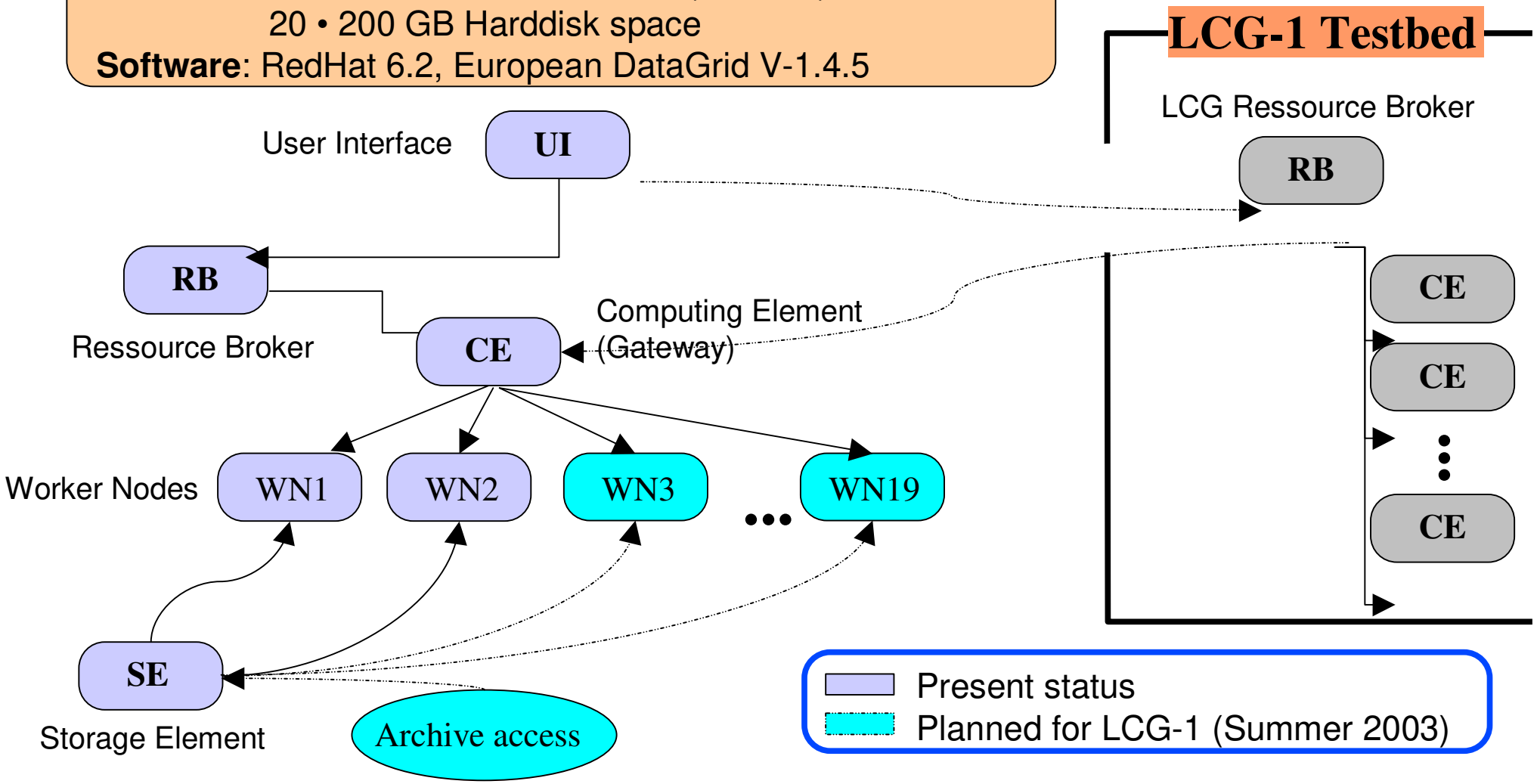
- **Participation in phase-1 of LCG1 :**

  **Setup prototype Tier-2 RC and join the LCG-1 "grid":**

  - **Hardware installed ok**
  - **LCG operations SW installation + testing in progress (EDG, …)**
  - **Scheduled to attach to LCG Tier1 (CERN) in summer/fall 2003**
  - **install experiment's SW to be next (scheme in discussion, allocation of personnell under discussion with LCG)**
  - **Personnell:**
    - **part of our 2 FTE located @CERN**
    - **2*0.1 FTE at CSCS (cluster hardware and OS maintenance), future??**
    - **contribution from experiments (1 FTE from Atlas ?)**
    - **0.1 FTE organisation + coordination (me)**

# Setup of CH-LCG RC at CSCS (opt)

**Hardware**: 20 dual CPU AMD Athlons (1.7 Ghz), 1GB RAM
20 • 200 GB Harddisk space
**Software**: RedHat 6.2, European DataGrid V-1.4.5



# Swiss direct contribution to LCG

- Our Swiss contribution to the LCG project happens directly through our two persons assigned to LCG at CERN :

  Derek Feichtinger and Frederik Orellana

  They are deployed to "Applications Area" within LCG.

- Apart from smaller tasks, one of their major achievement up to now was to develop and setup the Savannah portal at CERN:

  http://savannah.cern.ch

# Networking Issues in Switzerland

**SWITCH:** http://www.switch.ch/network

**Provides national academic and research network infrastructure, and supplies very favourable conditions (sufficient bandwidth for now)**

- **connects all Universities and CERN by national peerings using SWITCH- lambda fiber links (multiple Gbit E-net links)**
  **(PSI and S.Gallen on old STM-1 / ATM net, upgrade in 2003 planned)**
- **connects CH to Europe's GEANT and to USA (Abilene/Internet2) with up to 10 Gbit/s; (CIXP @ Geneva and TIX @Zuerich)**
- **Direct fully optical 2.5 – 10 Gbit/s ZH – CERN in operation**

# Conclusions

- Continue as planned to setup our Swiss "Tier-2" at CSCS:
  - Serving Swiss participators in LHC-experiments (CMS, ATLAS, LHCb)
  - Hardware prototype in operation; Software installation in progress
  - Resources/commitment situation at CSCS uncertain … ??? !!!
- Switzerland is taking part in the global "LCG Project phase-1"
- Swiss direct contribution to LCG successful thanks to our two FTE (Feichtinger and Orellana)
- Next steps :
  - Install experiment specific SW, update the LCG-operations SW
  - use prototype HW resources for experiments data challenges
  - link into LCG-Tiers framework according to LCG schedule (Q3/2003)