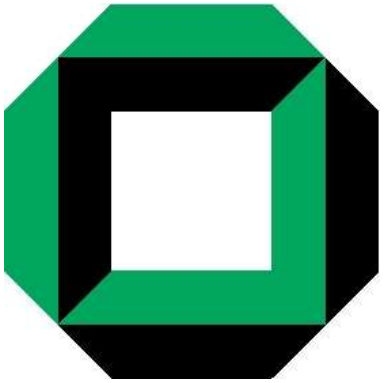
GRID activities in Karlsruhe



Christopher Jung, Yves Kemp, Ulrich Kerzel, Thomas Müller, Günter Quast, Kurt Rinnert, Hartmut Stadie,

University of Karlsruhe

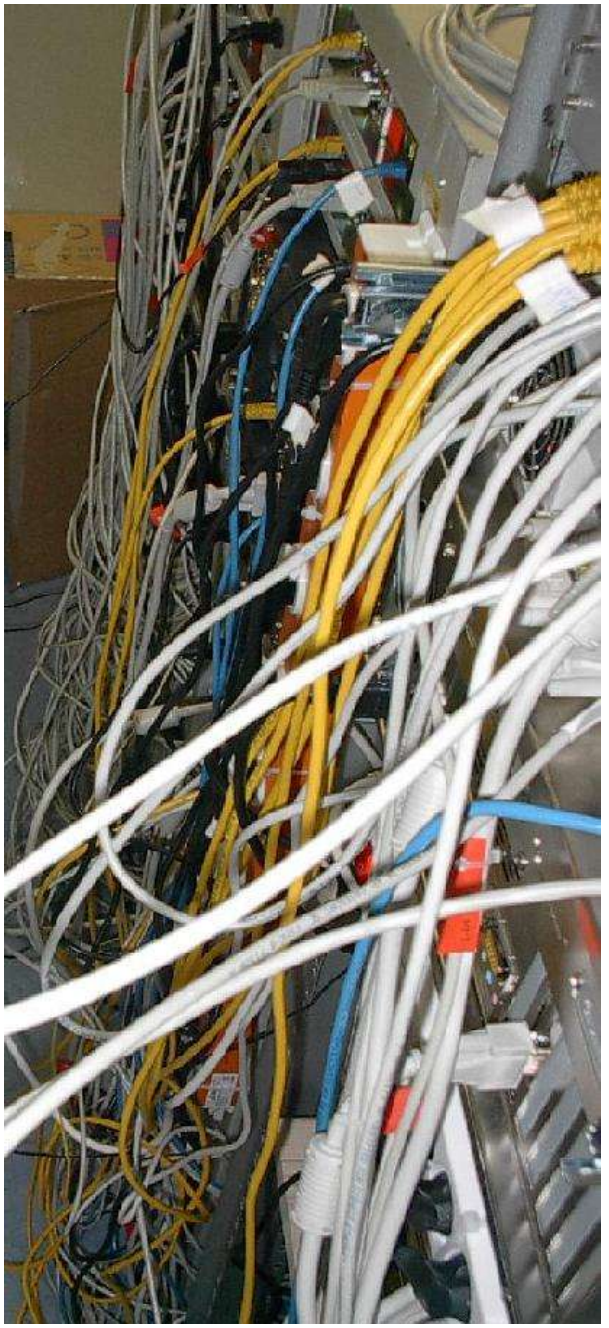
Paris, RTN meeting September 2004

The large thing: GridKA

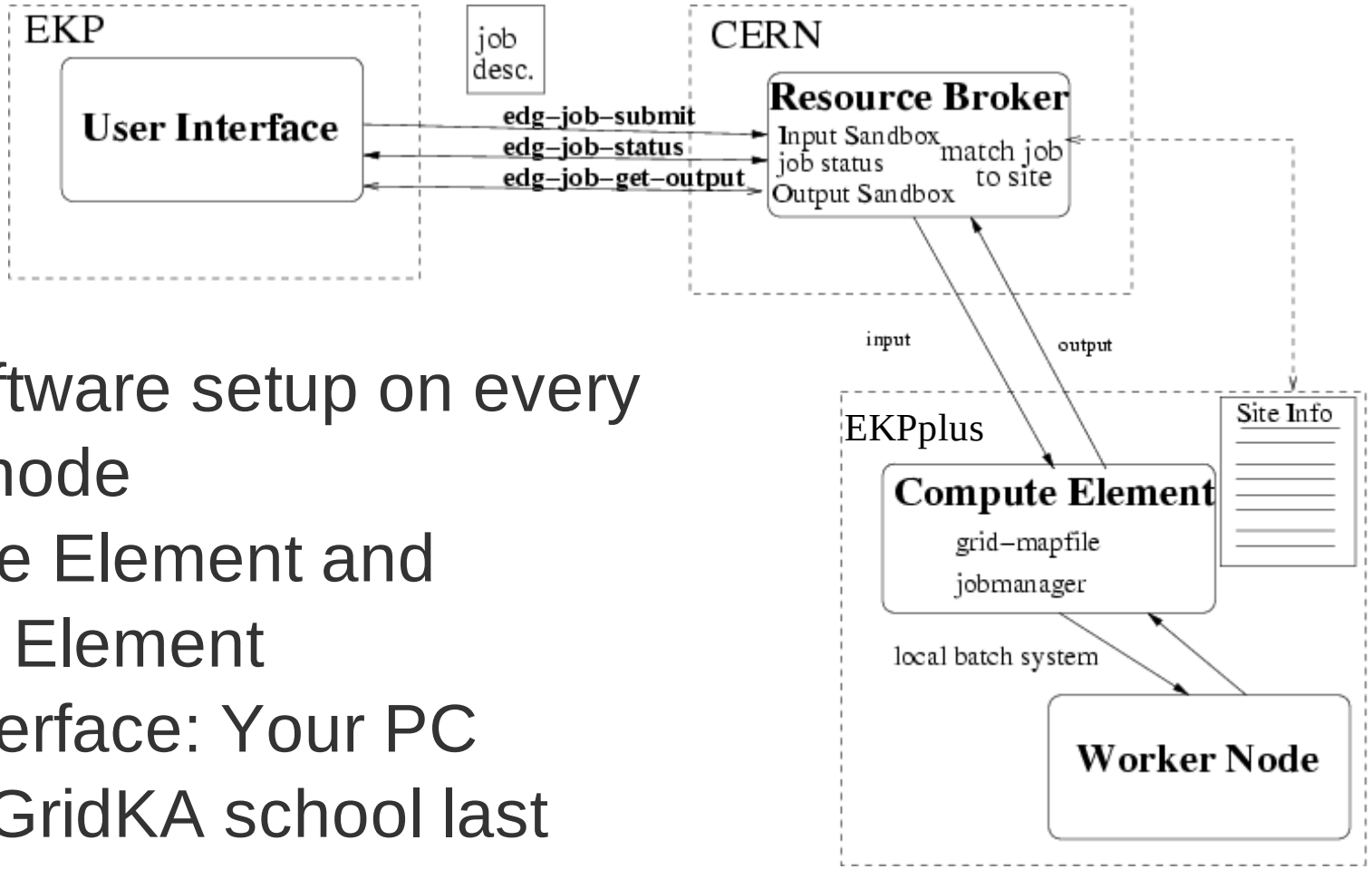
- Serves 4 LHC experiments and CDF, D0, BaBar, Compass
- Serves ~350 scientists
- 1072 CPUs → 953 kSi2000 (CDF: about 5%)
- 200 TB on disks (CDF: 10%)
- 400 TB on tape (CDF: 10%)
- Connection 2Gbit
- ROC for EGEE
- TIER 1 for LHC

Linux Cluster at the IEKP

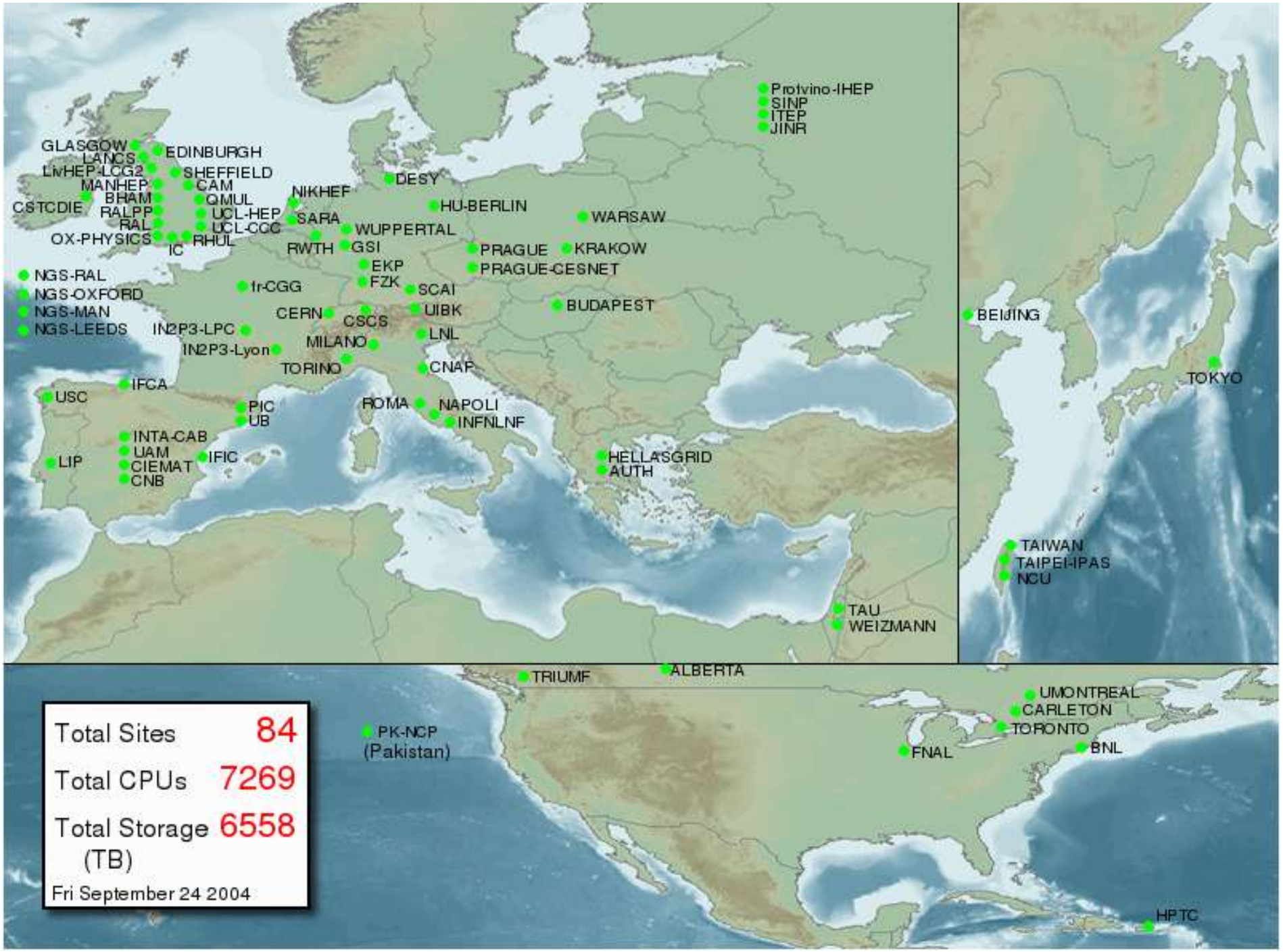
- Serves 25 people
- CDF and CMS
- 20 CPU
- 4 development nodes
- 10 TB on disks
- Some Grid machines



LCG Setup @ IEKP



- LCG software setup on every worker node
- Compute Element and Storage Element
- User Interface: Your PC
- Works: GridKA school last week
- Physics analysis jobs can be submitted and run


Protvino-IHEP
SINP
ITEP
JINR
GLASGOW
EDINBURGH
LANCS
LivHEP-LCG2
SHEFFIELD
MANHEP
CAM
BHAM
QMUL
CSTCDIE
RALPP
UCL-HEP
RAL
UCL-CCC
OX-PHYSICS
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NIKHEF
SARA
DESY
HU-BERLIN
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WUPPERTAL
RWTH
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PRAGUE
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PRAGUE-CESNET
FZK
SCAI
NGS-RAL
NGS-OXFORD
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NGS-LEEDS
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CSCS
IN2P3-LPC
LNL
MILANO
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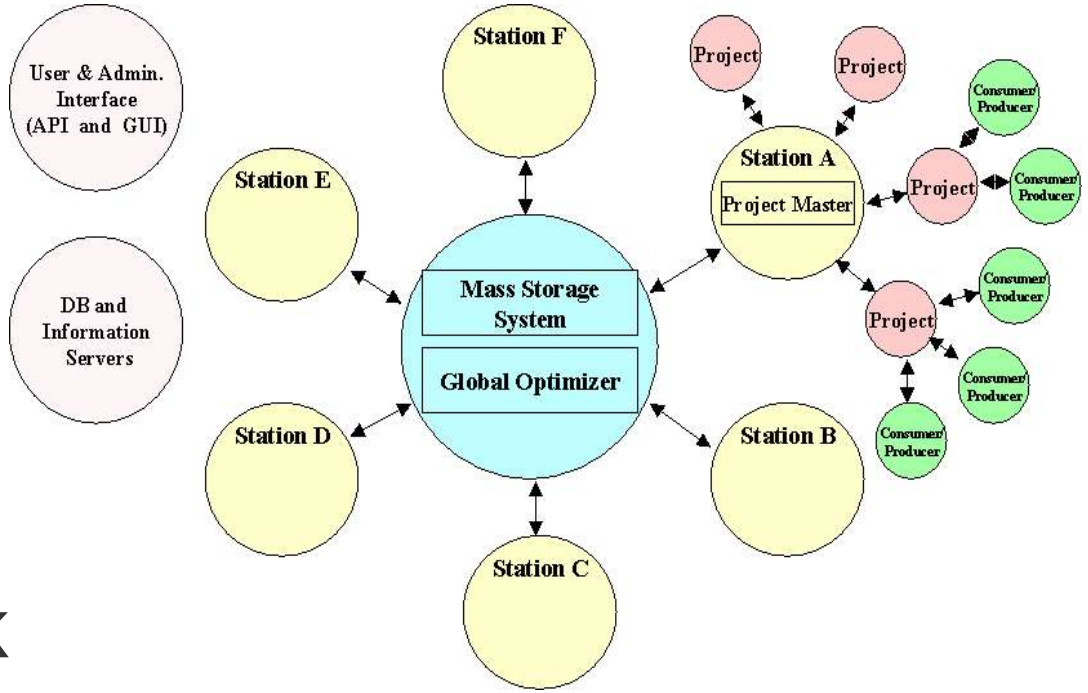
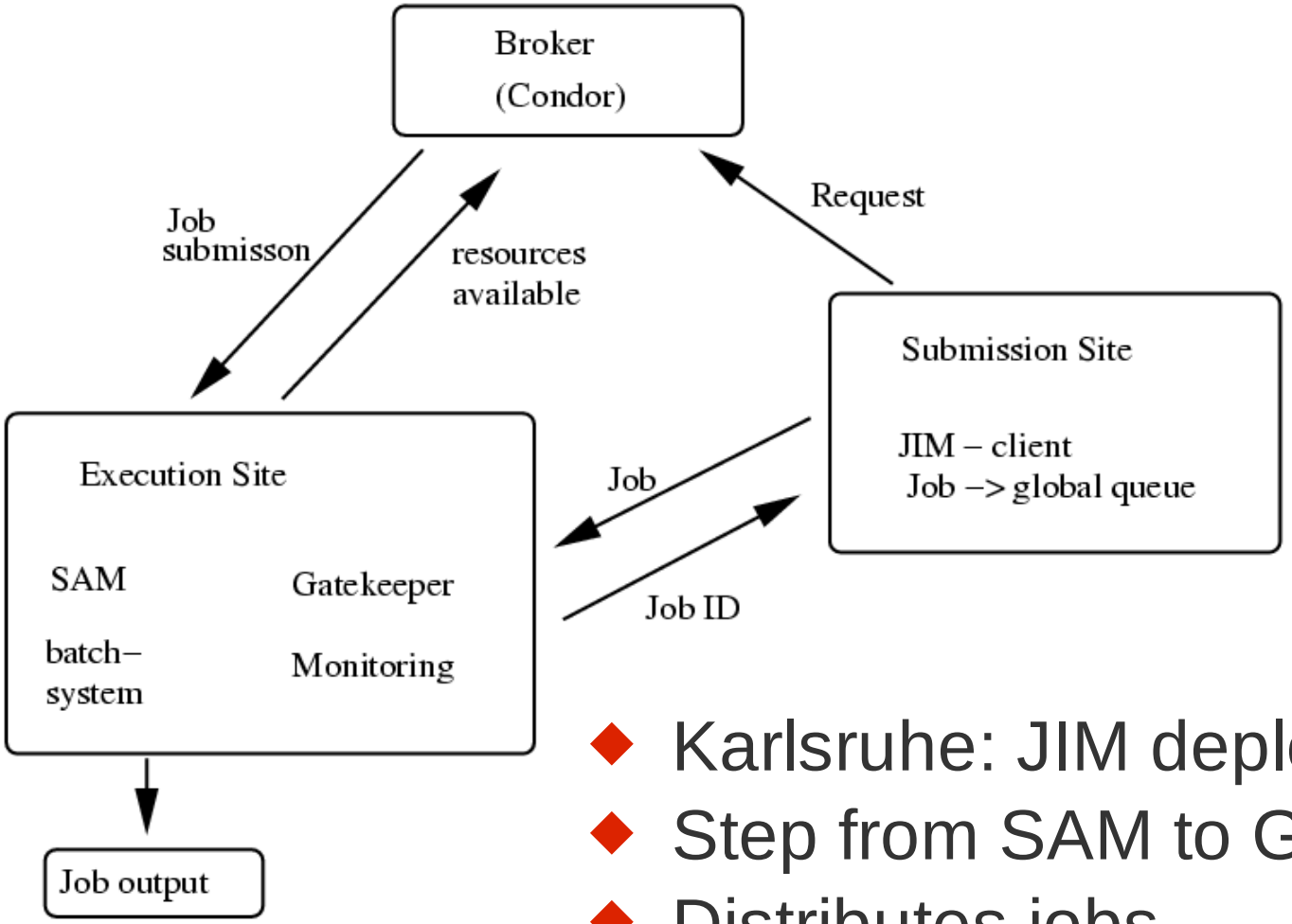
UAM
LIP
IFIC
CIEMAT
CNB
HELLASGRID
AUTH
TAIWAN
TAIPEI-IPAS
NCU
TAU
WEIZMANN
TRIUMF
ALBERTA
UMONTREAL
CARLETON
TORONTO
PK-NCP
(Pakistan)
FNAL
BNL
HPTC
Total Sites 84
Total CPUs 7269
Total Storage (TB) 6558
Fri September 24 2004

SAM: Sequential Access via Metadata for CDF

- Adds Metadata (Selection)
- Transfers Data to job
- Integrated to CDF analysis framework
- Exports produced data (to FNAL tape e.g)
- Imported ~25 TB, up to 300 GB/day
- Processed ~200 TB, up to 2 TB/day
- Karlsruhe b-group first production users



JIM: Job Information Manager



- Karlsruhe: JIM deployment
- Step from SAM to GRID
- Distributes jobs
- Handles authentication
- Makes use of GLOBUS
- Developed at FNAL from D0 and CDF

Conclusion, outlook

- LCG software is working
- SAM is working and used for analysis
- Large physics analysis made easier with GRID tools already at CDF
- Karlsruhe early adopters of GRID tools in CDF
- CMS starting to use LCG for MC production, Data Challenge and Analysis