

The Munich Tier-2 Center for ATLAS as Part of the LHC Grid Project



- common site of LRZ and RZG at Garching Campus
- MoU ready for signature
- resources not fully secured (LMU: pending decisions by funding agency)
- already used existing Linux cluster (LRZ) for ATLAS DC2 test production (100.000 jobs)
- 2005: installation of 140 CPUs (IBM blade) and 15 TB disk at RZG

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| | | Recon- struction | Simu- lation | User Analysis | Tier-2 total |
|---------|---------|---------------------|-----------------|------------------|-----------------|
| CPU | (kSI2k) | 65 | 180 | 295 | 540 |
| Disk | (TB) | 20 | - | 210 | 230 |
| Tape | (TB) | | | | |
| Network | (Gb/s) | | | | 1 -> 10 |

Table 1: Tasks and resource requirements for one nominal year of data taking

| Munich LCG TIER-2 cluster resources (2008, for one nominal year of LHC data taking) | | | | |
|--|---------|---------|---------|-------|
| | MPI | RZG | LRZ | LMU |
| hardware operation | - | 1.5 FTE | 1.5 FTE | - |
| operating system + batch | - | 0.5 FTE | 0.5 FTE | - |
| GRID middleware | - | 1 FTE | 1 FTE | - |
| ATLAS s/w + data managem. | 1 FTE | - | - | 1 FTE |
| hardware (CPU+disk+racks+LAN) [Euro] | 212,000 | - | 212,000 | - |
| electricity + cooling [Euro] | 122,000 | - | 122,000 | - |
| networking (30 MB/s sustained) [Euro] | - | 80,000 | 80,000 | - |
| infrastructure [Euro] | - | 54,000 | 54,000 | - |

Table 2: Manpower requirements and cost estimates for the Tier-2 part.

| | 2007 | 2008 | 2009 |
|-------------|------|------|------|
| CPU (kSi2k) | 180 | 1000 | 1600 |
| Disk (TB) | 80 | 440 | 800 |

Table 3: Evolution of resources 2007–09.