

Site Report

Manfred Alef

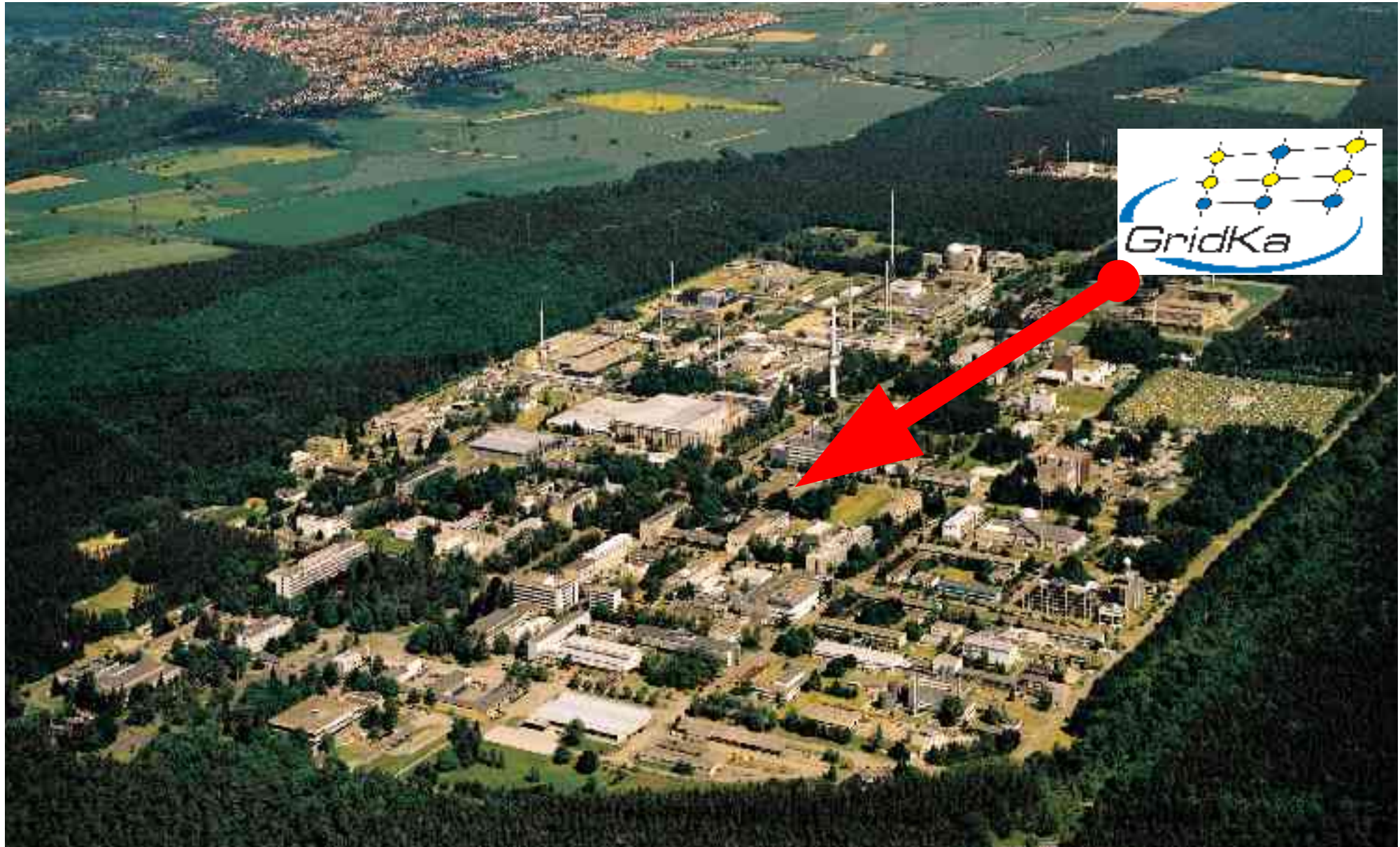
Grid Computing Centre Karlsruhe (GridKa)

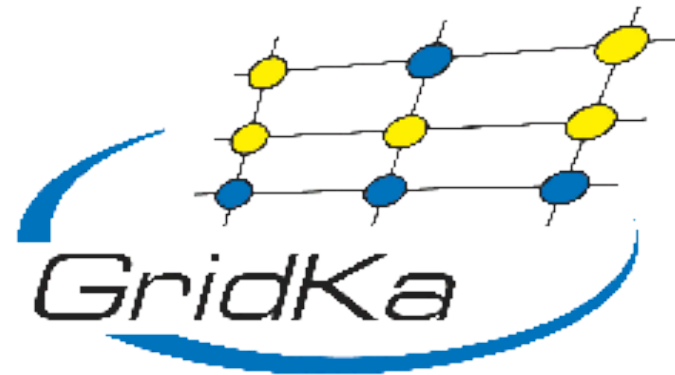
Forschungszentrum Karlsruhe
Institute for Scientific Computing
Hermann-von-Helmholtz-Platz 1
D-76344 Eggenstein-Leopoldshafen

<http://www.fzk.de>, <http://www.gridka.de>

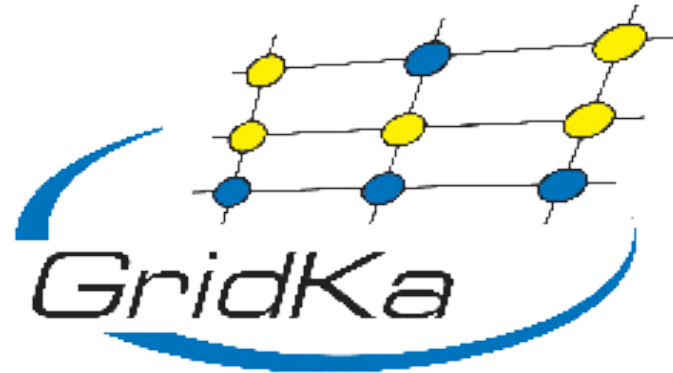
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Forschungszentrum Karlsruhe in der Helmholtz-Gemeinschaft





- German LHC tier-1 centre



- German LHC tier-1 centre
- 4 additional HEP experiments couple to the tier-1 centre:
 - + BaBar (SLAC)
 - + CDF (Fermilab)
 - + D0 (Fermilab)
 - + Compass (CERN)

GridKa Hardware (Milestone: October 1, 2004)

GridKa Hardware (Milestone: October 1, 2004):

- More than 1,000 CPUs!

GridKa Hardware (Milestone: October 1, 2004):

- 1,070 CPUs:

95	*2	Intel Pentium 3, 1.266 GHz
65	*2	Intel Xeon, 2.2 GHz
72	*2	Intel Xeon, 2.66 GHz
267	*2	Intel Xeon, 3.06 GHz
36	*2	AMD Opteron 246 (2 GHz)
		1 ... 2 GB memory,
		40 ... 80 GB disk per system

GridKa Hardware (Milestone: October 1, 2004):

- 1,070 CPUs (RH 7.3 + LCG 2.2)

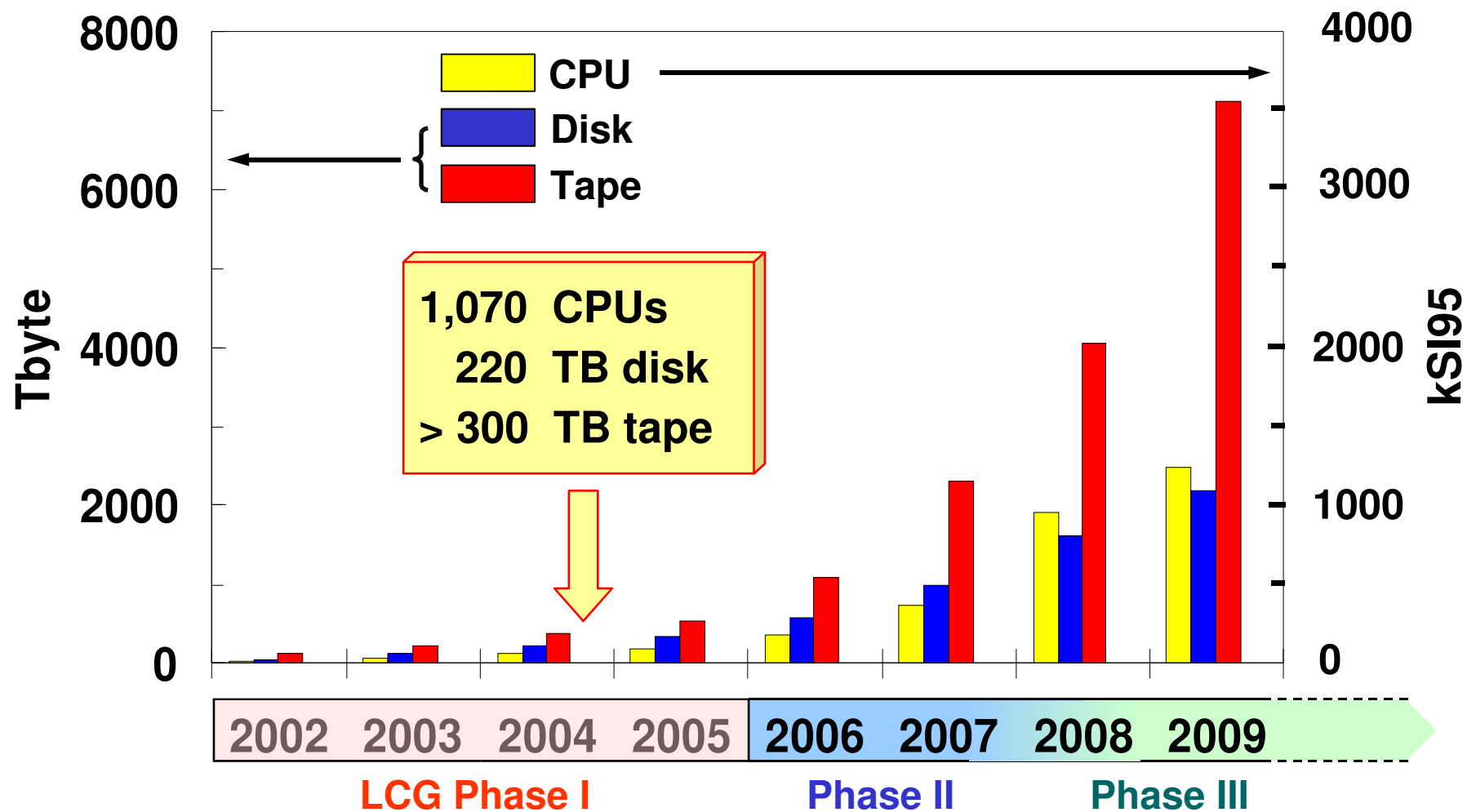
GridKa Hardware (Milestone: October 1, 2004):

- 1,070 CPUs
- 220 TB disk storage (net)

GridKa Hardware (Milestone: October 1, 2004):

- 1,070 CPUs
 - 220 TB disk storage (net)
 - 300 TB tape
-

GridKa Hardware (Milestone: October 1, 2004):



Connection to CERN:

- 10 Gbit/s test installation

(→ Bruno Hoefft, GridKa)

Problems:

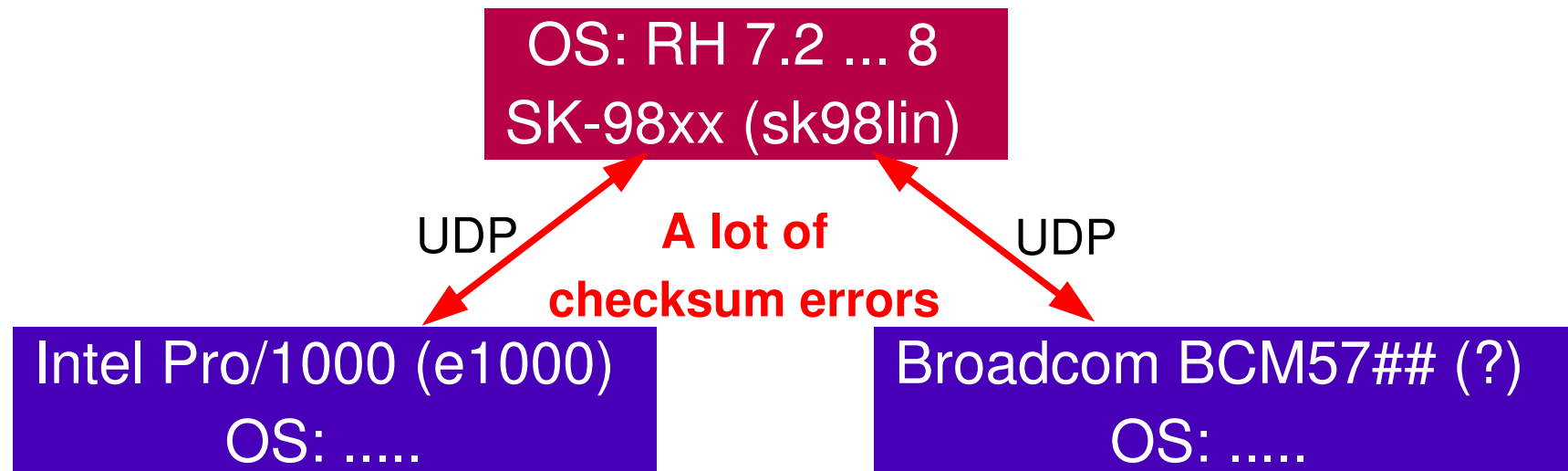
- PBS (Pro) server+scheduler crashed repeatedly when starting a particular LCG monitoring job

Problems:

- Checksum errors after copying files over gigabit ethernet

Problems:

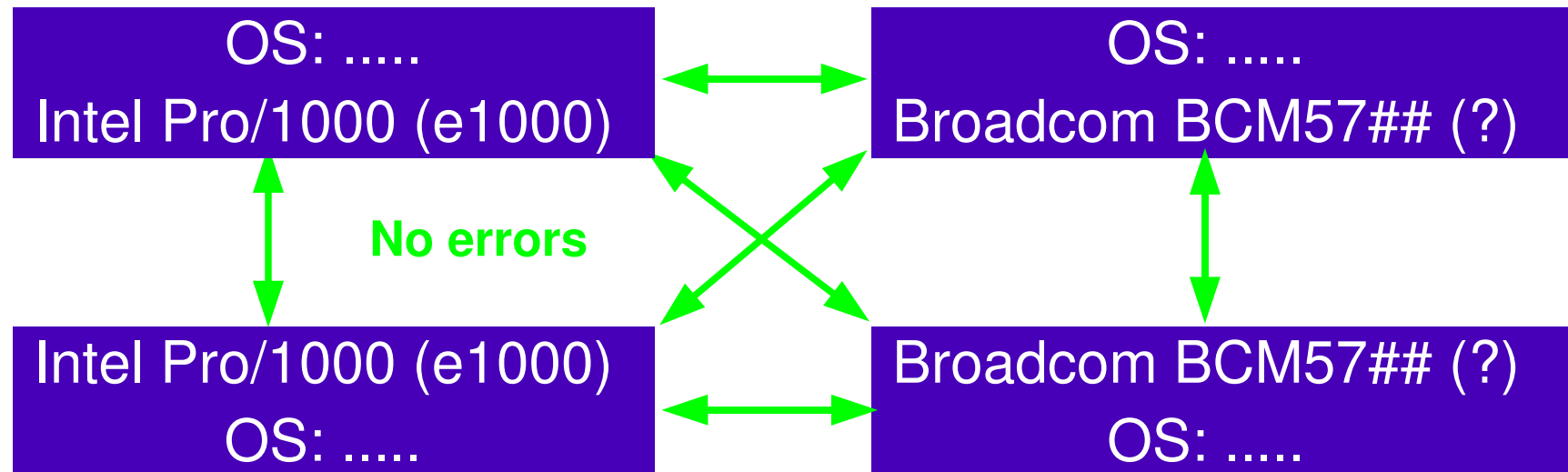
- Checksum errors after copying files over gigabit ethernet



Network independent (also with cross link cable, TP or fibre)

Problems:

- Checksum errors after copying files over gigabit ethernet



Problems:

- Checksum errors after copying files
over gigabit ethernet ...

... caused by conflicts between
GbE driver sk98lin and RH 7.x,8 ?

Solution of Gigabit Checksum Problem:

- Replaced some SysKonnnect GbE adapters by Intel's

Solution of Gigabit Checksum Problem???

- Replaced some SysKonnnect GbE adapters by Intel's ...

```
# cat Config.help
```

```
Marvell Yukon / SysKonnnect SK-98xx and SK-95xx Gigabit Ethernet Adapter  
family support
```

```
CONFIG_SK98LIN
```

```
Say Y here if you have a Marvell Yukon or SysKonnnect SK-98xx/SK-95xx  
compliant Gigabit Ethernet Adapter. The following adapters are supported  
by this driver:
```

- 3Com, Abocom, Allied Telesyn, Belkin, DGE, EG10##, Marvell,
...
- Marvell 88E8050 Gigabit Ethernet Controller (Intel)
- N-Way, SK, SMC
...

Problems:

- Cooling of large PC clusters

Solution of Cooling Problem:

- Water cooled cabinets (→ special talk)

Questions, Comments?
