

TRUBA

Turkish Academic Network and Information Center
Turkish Science e-Infrastructure

Status of Tier-2 Center

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RECFA Report: NGI_TR

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Turkish Science e-Infrastructure is supported by
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Outline

- ▶ From TR-Grid to TRUBA
- ▶ Status of TRUBA Resources
- ▶ Tier-2 Operations
- ▶ Contact

Turkish Science e-Infrastructure

- ▶ TR-Grid initiative was established in 2003 and TR-Grid e-Infrastructure project was supported by TUBITAK funds between 2003-2008
 - ▶ 2003: 128 CPU linux cluster and testbeds
 - ▶ 2004: First test sites in SEE-GRID project.
 - ▶ 2005: TR-Grid CA was accredited.
 - ▶ 2006-2007: 940 CPU core cluster placed in 6 different geographical areas.
 - ▶ 2006-2008: EGEE-II, SEE-GRID-II, Eumedgrid
 - ▶ 2008: 480 CPU core cluster with DDR IB connection and 12TB lustre filesystem.



Turkish Science e-Infrastructure (cont.)

- ▶ TR-Grid Research e-Infrastructure Strengthening project was supported by T.R. Prime Ministry State Planning Organisation (SPO) funds between 2009-2011.
 - ▶ 2008-2011: SEE-GRID-SCI, SEERA-EI, EUMedGrid-Support, EGEE-III, EGI-Inspire, e-IRG-SP3, PRACE-2IP
 - ▶ 2009: 1216 CPU core cluster in ULAKBİM; 600TB dedicated area for ATLAS and CMS.
 - ▶ 2010: TR-10-ULAKBİM and TR-03-METU sites were began to serve as Tier-2 Centers of ATLAS and CMS
 - ▶ 2010: **TR-Grid** Infrastructure name was changed to Turkish Science e-Infrastructure – **TRUBA** by Scientific Council of Turkish Scientific and Technological Research Center - TUBITAK
 - ▶ 2010: 5760 CPU core cluster with QDR IB connection and 700TB lustre file system.
 - ▶ 2011: 4700 CPU core cluster
 - ▶ Supported VOs: trgrida, trgridb, trgridd, trgride, seegrid, seismo, meteo, env, see, comchem, biomed, atlas, cms

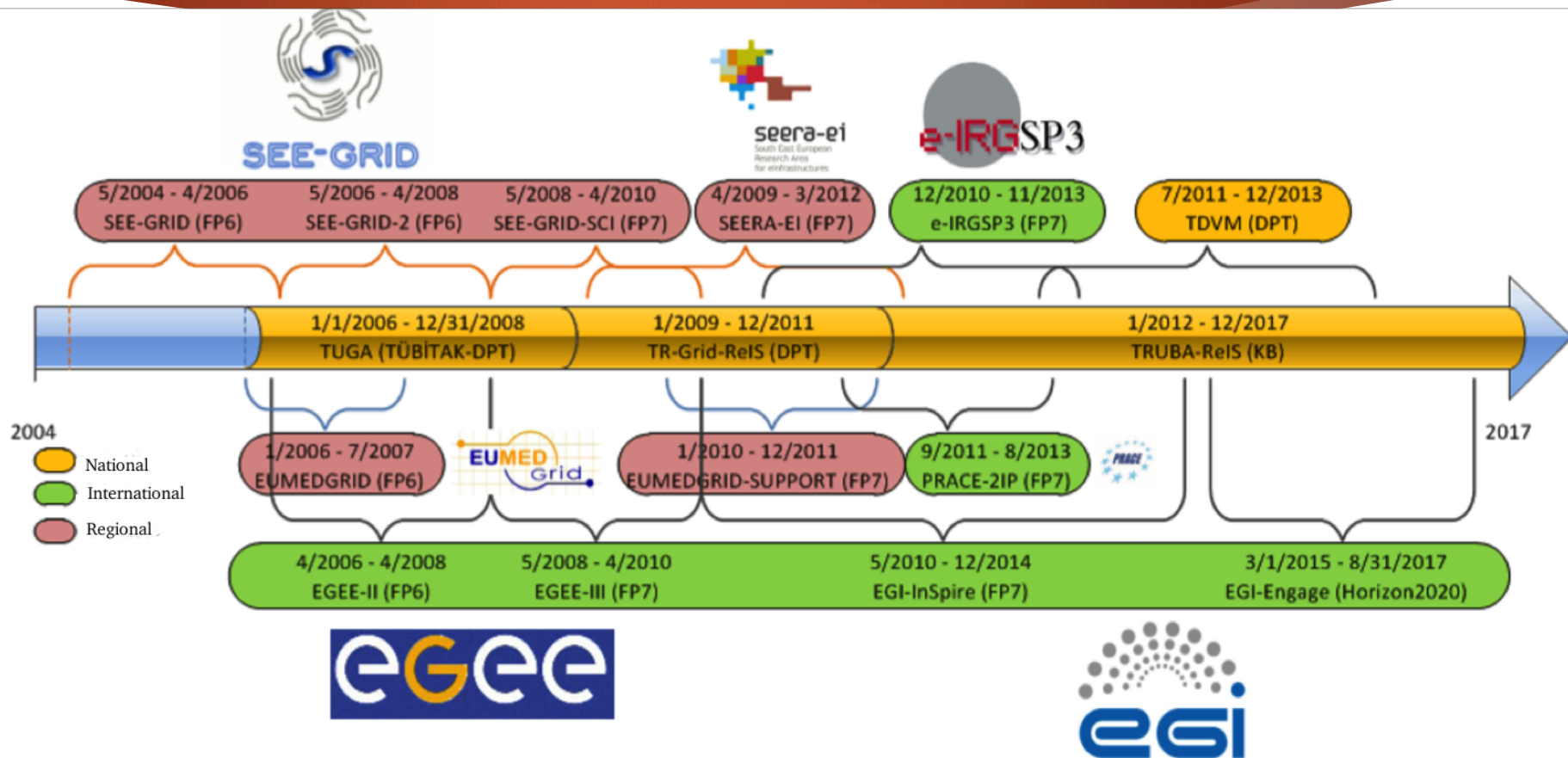


Turkish Science e-Infrastructure (cont.)

- ▶ TRUBA Strengthening project is supported by Republic of Turkey Ministry of Development funds between 2012-...
 - ▶ 2012-2017: SEERA-EI, EGI-Inspire, e-IRG-SP3, PRACE-2IP, EGI-Engage
 - ▶ 2012: 32 GPU and 700TB High Available Storage
 - ▶ 2013: 3072 CPU core cluster in ULAKBİM
 - ▶ 2014: 1024 CPU core cluster and 1.5 Pbyte lustre file system
 - ▶ 2015: 2 Pbyte lustre file system
 - ▶ 2017: 4284 CPU core cluster with EDR IB connection.
 - ▶ Supported VOs: trgrida, trgridb, trgridd, trgride, seismo, see, biomed, belle, atlas, cms



Turkish Science e-Infrastructure (cont.)



Status of TRUBA Resources

General Statistics	Values
The Total CPU Core Number	13.000+
The Total Theoretical Tflops	378 Tflops
The Total Size of Performance Storage Resources	3.2 PByte
The Number of Registered Users	1628
The Total Usage of Computing Resources (January 2012- July 2017)	310M CPUcore hour
The Number of Publication in SCI (January 2012- July 2017)	311
The Number of Thesis (January 2012- July 2017)	40
The Number of Supported Research Projects	50
Supported National Communities	HEP, Seismology, ELIXIR
Participated EU Projects	11
The Number of EGI Sites	2 Grid, 1 Federated Cloud

Tier-2 Operations: ATLAS

▶ TR-10-ULAKBIM

- ▶ Main site of NGI_TR with the following services: BDII, LFC, WMS, VOMS, MyProxy, ARGUS, FRONTIER, DPM, CREAM CE

▶ Disk

- ▶ 250 TB now. The bid document will be ready soon to be extend in 2018.
- ▶ 750 TB 2018 Pledge
- ▶ 1+1 DPM installation. It will be extend 2018 with new disk servers.
- ▶ Location: TUBITAK ULAKBIM

▶ CPU

- ▶ 2500 HEPSpec06 now. It will be extend in 2018.
- ▶ AMD Opteron 6174
- ▶ 5180 HEPSpec06 2018 Pledge

▶ Network

- ▶ 10Gb/s to ULAKNET

Tier-2 Operations: CMS

- ▶ TR-03-METU
 - ▶ Services: ARGUS, FRONTIER, PHEDEX, DPM, CREAM CE
 - ▶ Disk
 - ▶ 350 TB now. The bid document will be ready soon to be extend in 2018.
 - ▶ 550 TB 2018 Pledge
 - ▶ 1+1 DPM installation. It will be extend 2018 with new disk servers.
 - ▶ Location TUBİTAK ULAKBİM
 - ▶ CPU
 - ▶ 2900 HEPSpec06 now. It will be extend in 2018.
 - ▶ AMD Opteron 6174
 - ▶ 4700 HEPSpec06 2018 Pledge
 - ▶ Network
 - ▶ 10Gb/s to ULAKNET



TÜBİTAK

ULAKBİM

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