

Instant-Grid

Fraunhofer Enterprise Grids
<http://www.epg.fraunhofer.de>

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Complex calculations, e.g., rendering animation movies or simulations of environmental processes, often exceed the capacity of a single computer. Thus, in industry and science, large computing problems are tackled using distributed IT resources which are combined to computing clusters or computing grids. Up to now, it was very time-consuming and costly, though, to install and deploy such solutions.

Instant-Grid: A Computing Grid bootable from CD

With the help of Instant-Grid, conventional, locally-linked PCs can be switched together to form a computing grid in a matter of minutes. Using such a grid, users can solve compute-intensive problems much faster as the workload is distributed onto several computers. The project is funded by the BMBF. Partners are beside Fraunhofer FIRST the Gesellschaft für wissenschaftliche Datenverarbeitung mbH Göttingen, ed-media education & media GmbH, FernUniversität Hagen and FIZ Chemie Berlin.

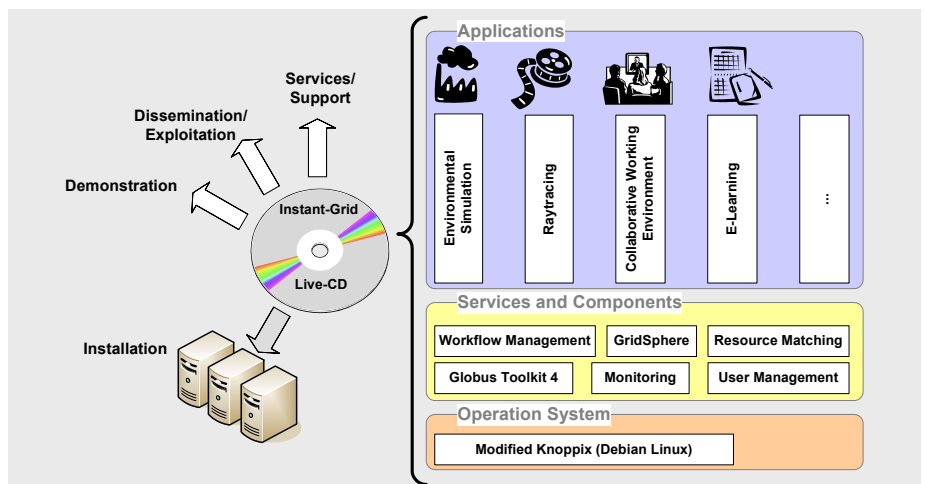
Instant-Grid can be downloaded for free as an ISO 9660 image under <http://instant-grid.de/>

Technology

Instant-Grid is a Knoppix-based live-CD with a pre-configured grid environment based on the Globus Toolkit. After one PC has been booted from the CD, further PCs will be integrated via network booting using PXE. Together, the computers form a functioning grid – without further user involvement. After restart, the original computer configuration is available at once.

Application domains

Instant-Grid has several applications from different domains pre-installed, such as the environmental risk analysis and management system ERAMAS as well as a parallelized version of POV-Ray. Users can utilize Instant-Grid also for test and demonstration purposes of grid technology and for the development of distributed applications. If you would like to use Instant-Grid for your own applications, Fraunhofer FIRST offers a broad range of relevant services, such as adapting applications, or consulting services for the introduction and operation of grids.



Instant-Grid contains all necessary software components to build a computing grid