GAIA-Cloud

Graphical workstations and engineering applications in a high-performance and efficient cloud infrastructure

The goal of the GAIA Cloud project is the development of an integrated cloud infrastructure, which will enable the resource-efficient usage of high-performance work stations. The workplace itself will be transferred into the cloud - this will allow new and flexible usage scenarios and an efficient utilization of the infrastructure. Among the possible use cases within the cloud are rendering, video editing, CAD applications and virtual reality.

Partners in realizing the project are the companies Christmann GmbH from Ilsede, Dataquest GmbH from Göttingen and NorCom IT AG from Munich, the High Performance Computing Center Stuttgart (HLRS), the Hochschule Hannover, the Ostfalia University, as well as the Bielefeld University.

The primary goal of the project is the development of a high-performance cloud infrastructure which can master the challenge of bandwidth when connecting to a local network. For this high-performance cloud infrastructure, the demands of graphics-heavy engineering applications (in 2D and 3D) should be fulfilled as well as the special requirements of media work-places. Complementary structures for communication and cooperation need to be created for the workplaces that are transferred into the cloud. These will enable education facilities and companies to coordinate tasks in flexible and dynamic team constellations.

Within GAIA Cloud the HLRS is developing an interactive remote application, which can be used for the simulation of computer rooms for instance. This will enable the use of interactive simulation and visualization without the need of local high-end workstations. COVISE, a software developed at HLRS, provides the basis for these interactive simulations.

Contact: Dr. Uwe Wössner
Höchstleistungsrechenzentrum Universität Stuttgart
Nobelstraße 19, 70569 Stuttgart, Germany
Phone: +49-711-685-65790 and +49-711-685-65970
Fax: +49-711-68587209
E-Mail: woessner@hlrs.de