Topics for Advanced Distributed and parallel computing lab projects:

(50 points)

Each project is for 1-3 Students each with a planned working-time of 20 hours per student! If a project explodes and takes more than 40 hours per student please contact me. If you think you are done but invested less than the required 20 hours also contact me and we will find some extensions for your topic. Each project needs to be presented in one of the following slots and a documentation work submitted via OLAT:

- 21.6.2015 (submission till 20.6. 16:00)

- 28.6.2015 (submission till 27.6. 16:00, featuring Radu at the presendations)

Lab on 12.6.2015 will be used to check progress, have open discussion on issues and possible topic extensions / shorting. Remaining time might be used to recheck some of the previews homework's handed in! No lab on 5.6.2015!

Topics:

1. MapReduce with Povray
2. Dockers with Povray
3. Rockets with Povray
4. ASKALON with Povray
5. AFF with Povray
6. CDN with Amazon CloudFront (Use different Zones to network-benchmark CloundFront compared to regular S3. Latency, bandwidth, hops, average measurements of multiple runs, …)
7. P2P Cloud computing (Students promised some ideas… I hope they have something in mind that's meaningful!)

Single player topics, more theoretical nature:

8. Top 500k crawler (producing outcome like shown on http://www.jackofallclouds.com/2011/01/state-of-the-cloud-january-201/)
9. Comparison of Cloud middleware's (OpenStack, Nebular, Eucalyptus, Dockers, Rockets, Federations, …)

For the Topics with Povray, the task is to use the given technology to render our Povray example video. If the technology is easy to use then your program should me flexible enough to render different Povray example files from: http://www.ms.uky.edu/~lee/visual05/povray/povray.html

You will need your own environment to use most of those technologies, which should be easy to create on Amazon EC2! ASKALON will use the AustrianGrid or EC2 for execution.

More detailed TODO lists can be requested via simon@dps.uibk.ac.at but I think everyone should be able to work something out based on the title. This is a chosen subject and now is the time to show your interest in the topics by impressing me with your project results ;)