

# **Deployment of Virtual Clusters on a Commercial Cloud Platform for Molecular Docking**

## **Subtopic: Multi-Cloud**

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# Week 7 Progress

- Multi-Cloud Environement
  - The multi-cloud environment has been expanded to have two VMs on NAIST, three VMs on AIST, and three on FutureGrid
    - It is important to note that the number of VMs on FutureGrid can very easily be adjusted thus it most likely will be when doing tests regarding scalability.
  - With the current Multi-Cloud environment, the system seems fairly balanced.
    - May add one more VM to NAIST such that the distribution of VMs is three on each.



# Week 7 Progress

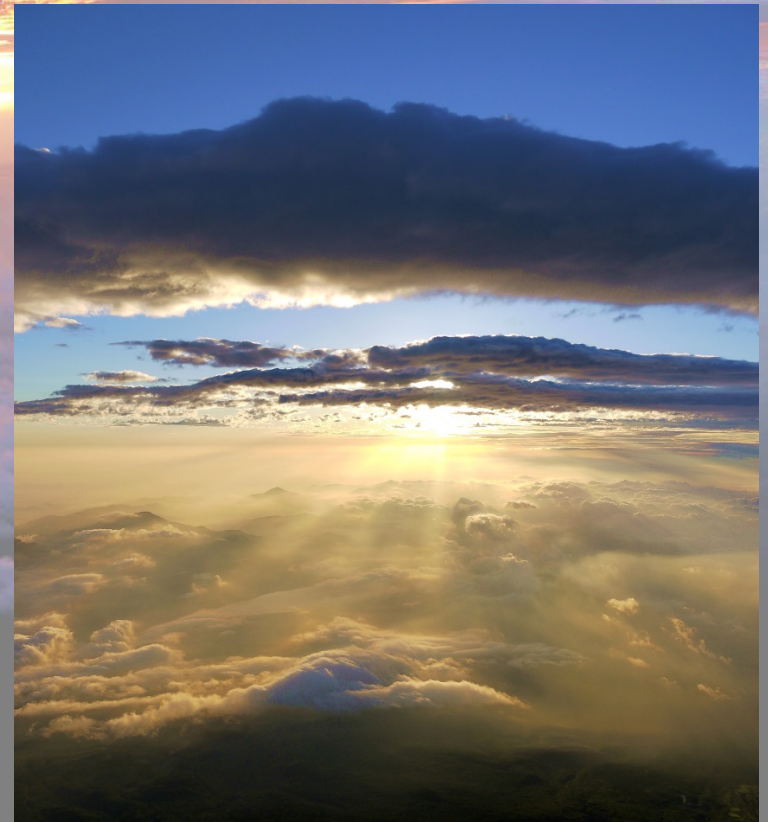
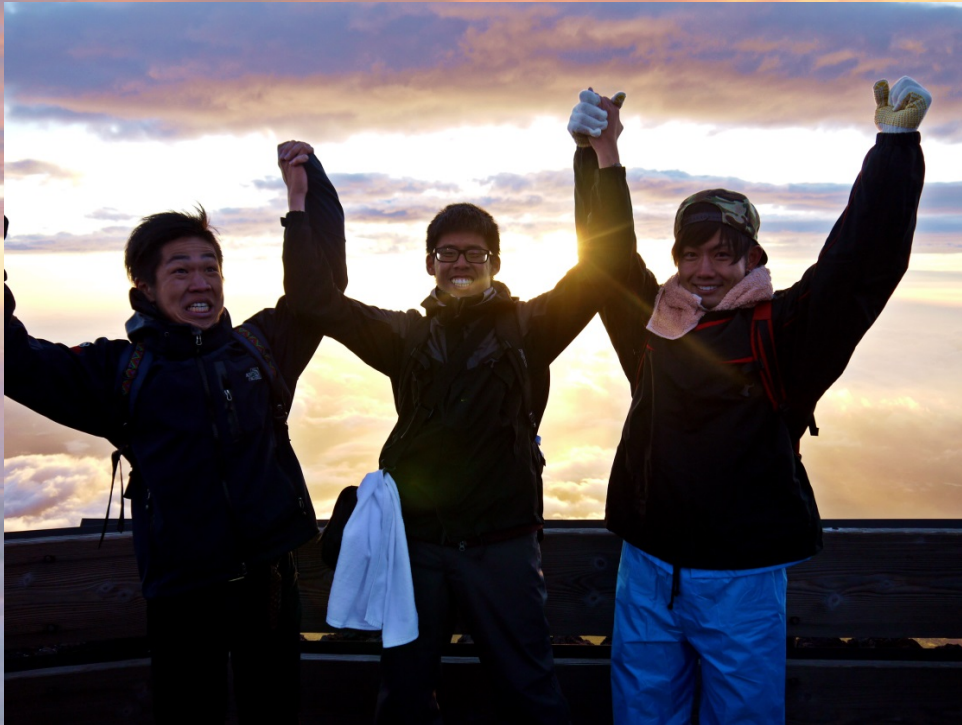
- ViNe
  - ViNe was initially having issues when the number of VMs in the Multi-Cloud environment was increased from what it was prior
    - Thanks to Dr. Tsugawa, this issue has been resolved and all VMs in the environment are correctly set up with ViNe
- Bash Command
  - A bash command was written to enable one VM to send input files to all other machines in the environment.
    - Command does this by checking if the input file exists, and if not, adds it.

# Week 8 Plans

- DOCK
  - DOCK is to be used to gauge effectiveness of multi-cloud environment.
  - Will run tests with DOCK and compare results with results from Grid Computing.
  - Will also try to scale up number of VMs, most likely on FutureGrid, to see how this change in one cloud on Multi-Cloud environment effects job distribution.



# Cultural Exploration (Obon Week)



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