



Resources & Data working group summary

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Work plan

1. Transferring the data across PRP to ABCI
2. Kubernetes
3. EduGain
4. S3

1. Data transfer PRP-ABCI

- 60Tb, each chunk 30Tb
 - 1 complete experiment after processing is 30 Tb (~ 70k time series)
 - Ideally to move entire experiment data set
- Work assignment: Gerald, Shava and Nadya, Takano-san
 - Preprocessing in SD
 - Talk to Cornell + PRP and what is the right setup.
 - Start at UCSD, figure out the steps and then transport to Cornell
 - What software to use,
 - what is the authentication to use
 - On AIST site, there will be a gate node
 - Ssh authentication
 - md5sum on each end
 - Small transfers first
 - Identify what is the optimal environment (VM, container).

2. Kubernetes

- K8s - You want your app to run everywhere
 - Monitors containers
 - Can scale
 - Coordinates what containers run and when across your system
 - Creates networking layer that enables different types of containers
 - Not trivial to setup. Easier with k8s roll
- Are containers good for PRAGMA ? - yes
 - We need to support both: containers and VMs
 - Build k8s as a virtual cluster and move anywhere using pragma_boot
 - Is it possible to couple with IPOP?
 - Define specific docker images and use registry created with k8s roll

2. Containers and VMs

- Python virtual environment, python 3
- R container
- SDN controller container – can we run it on the RPAGMA testbed (Osaka U, UCSD)
- Extend the GRAPLER VM with additional functionality (lake expedition, Ken)
- Deploy EDISON platform container on PRAGMA testbed (Ruth, Nadya)
- Possible container/vm using Deep Learning (Ary)
- Tensorflow + cuDnn container /vm

Add support in pragma_boot for containers (Shava, Nadya)

Work on Lifemapepr optimization of the job submission (KU – Aimee, CJ, UCSD – Nadya)

3. EduGain

- If an Institution is a member of EduRoam then can use EduGain
- Can use CILogon as an authentication mediator
- PRAGMA members should become members of EduGain.
 - HKU ready to become a member
 - MIMOS is in a process
- Anyone can become EduGain member
 - Number of requirements
 - Facilitates all logins and authentication
 - Contact with Jim Basney
 - Make a list of steps (logical) and follow up in email and also add to PRAGMA website

4. S3

- Work on issues in connection of container to s3 storage
 - Can mount s3 bucket outside of the container
 - Inside the container not yet
 - Singularity container. May be related to setUID
- user authentication – try to use KeyCloack and CILogin
 - Currently for testing ssh
 - NCHC – Max, AIST – Yusuke-san, UCSD – Shava and Nadya