

On Board Cloud System

Sabri Mutlu, TUBITAK MAM (Turkey), sabri.mutlu@tubitak.gov.tr Pamir Talazan, TUBITAK MAM (Turkey), pamir.talazan@tubitak.gov.tr



Problems

- Merging data after the cruise causes mismatching problems due to erroneous records on board
- Too much rework if there is any problem with the data record
- hidden patterns between Missing different types of data in this oldfashioned study
- One-way data process & backup is at

«ownCloud» a client-server software is installed and configured on the server and other computers for file hosting service. This software works like wellknown web cloud storage services e.g. Google Drive, Dropbox and so on. The best part to run ownCloud is that its openness avoids enforced quotas on storage space or the number of connected clients, instead having hard limits (like on storage space or number of users) defined only by the physical capabilities of the server. Thus, huge size of data can be shared with scientists, technicians and even ship crew easily. In other words, no one has to deal with the data sharing, storing and backing-up processes after the file is saved in an ownCloud



Building a private cloud-service on board:

Avoids any data conflict during offline

this of the had been and and a second

- Allows to gather and analyse data during cruise (Collaborative Work)
- Creates a two-way communication between office and vessel efficiently and takes backup of data automatically
- Offers limitless storage area and keeps the data under control

References

Mościcki, J. T., & Lamanna, M. (2014). Prototyping a file sharing and synchronization service with Owncloud. Journal of Physics: Conference Series, 513(4), 042034. doi:10.1088/1742-6596/513/4/042034

Hildmann, T., & Kao, O. (2014). Deploying and Extending On-Premise Cloud Storage Based on ownCloud. 2014 IEEE 34th International Conference on Distributed Computing Systems Workshops. doi:10.1109/icdcsw.2014.18

Gregus, M., & Karovic, V. (2015). Practical Implementation of Private Cloud Based on Open Source ownCloud for Small Teams - Case Study. 2015 10th International Conference on P2P, Parallel, Grid, Cloud and Internet Computing (3PGCIC). doi:10.1109/3pgcic.2015.149