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ARM Climate Research Facility DMF Quarterly Report

NN Keck

April 2014



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1.0 Introduction

The Data Management Facility (DMF) is the data center that houses several critical Atmospheric Radiation Measurement (ARM) Climate Research Facility services, including first-level data processing for the ARM Mobile Facilities (AMFs), Eastern North Atlantic (ENA), North Slope of Alaska (NSA), Southern Great Plains (SGP), and Tropical Western Pacific (TWP) sites, as well as Value-Added Product (VAP) processing, development systems, and other network services.

2.0 Key Events During the Quarter

During the second quarter of fiscal year (FY) 2014, the DMF:

- Supported Brazil (AMF1) Deployment
- Supported Finland (AMF2) Deployment
- Collected update for raw data flow (ECO-1019)
- Continued migrating services/processes to RedHat 6 (ECO-867)
- Tested/migrated to RedHat 6
- Contributed to Manus Data Recovery Efforts
- Released first ADI XSAPR ingest and started processing
- Participated in the Reprocessing Kaizen
- Dealt with SGP power outage (stuck ingest/rename/bundles)
- Delivered remaining AMF2 spectra data to the ARM Data Archive (EWO-15272)
- Started receiving/processing TWP E[30-32] ECOR and SEBS data
- Collected and archived CF radial netCDF data from C-Band ARM Precipitation Radar (CSAPR) instead of MDV format (BCR-1985).

3.0 Upcoming Next Quarter

In the third quarter of FY2014, the DMF will:

- Support the Azores deployment (Phase 2)
- Support the Oliktok deployment (Phase 2)
- Complete Manus data recovery, reprocessing, and general cleanup (EWO-15979)
- Complete PVC data cleanup (EWO-15980)
- Complete MAG data cleanup (EWO-15981).

4.0 Follow-up Items, Questions, and Issues:

Currently, the DMF is:

- Waiting on a large file storage at the ARM Data Archive (ECO-00969)
- Waiting on the Beam-Steered Radar Wind Profiler (BSRWP) Ingest (EWO-13813)
- Waiting on the Shortwave Array Spectroradiometer (SAS) Ingest (EWO-14745)
- Waiting for radar time checks (EWO-15006)
- Wrapping up data/archive policy on a new DMF storage system (ECO-975, EWO-15120)
- Waiting for Operational VAP documentation (EWO-14455)
- Waiting for DSDB's to be disabled on remote sites (EWO-14891)
- Following up on disk shipping procedures (EWO-15052)
- Completing DMF to ARM Data Archive data flow (ECO-1030)
- Working on a new ingest for WACR2a new wacr radar for installation at MAO (EWO-15735).

5.0 DMF Metrics

In the first quarter of FY2014, the DMF had:

- 2.7 million files received in 60 TB
- 262 thousand files delivered in 15.8 TB
- 128.5 thousand files delayed for archival
- 404 software package releases
- 583 thousand ingest processes ran
- 114 instrument issues entered in the Data Quality and Problem Reporting System (DQPRS)
- 35 unique VAPs run in production for multiple sites/facilities
- 25 processing issues on average per day
- 18 archival issues on average per day.

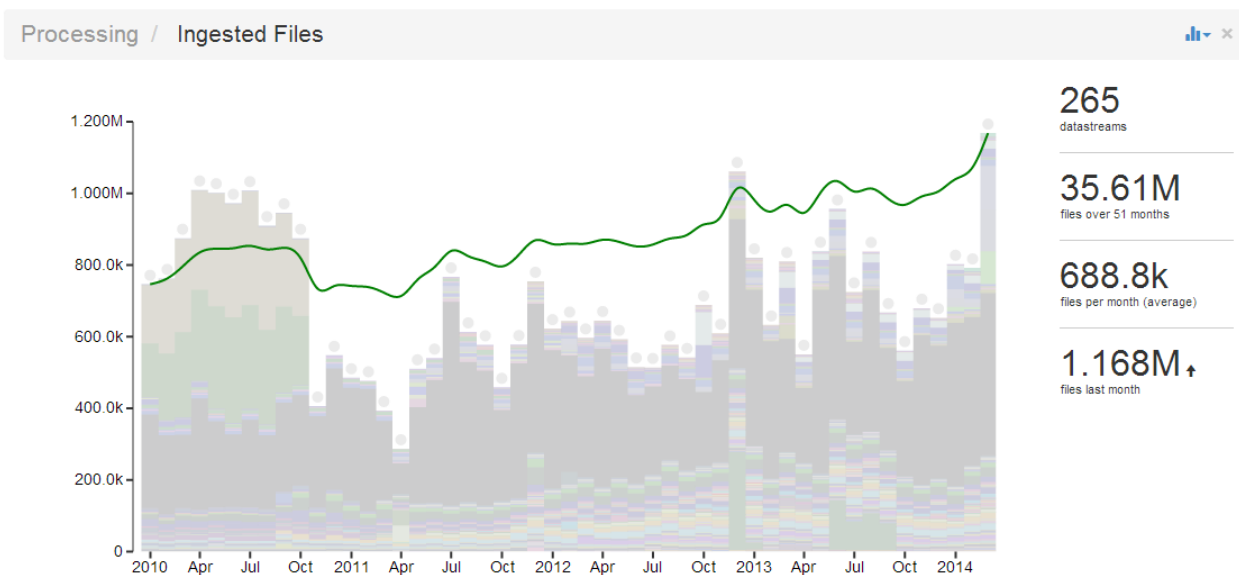


Figure 1. This graph shows the trend for ingested files since 2010.

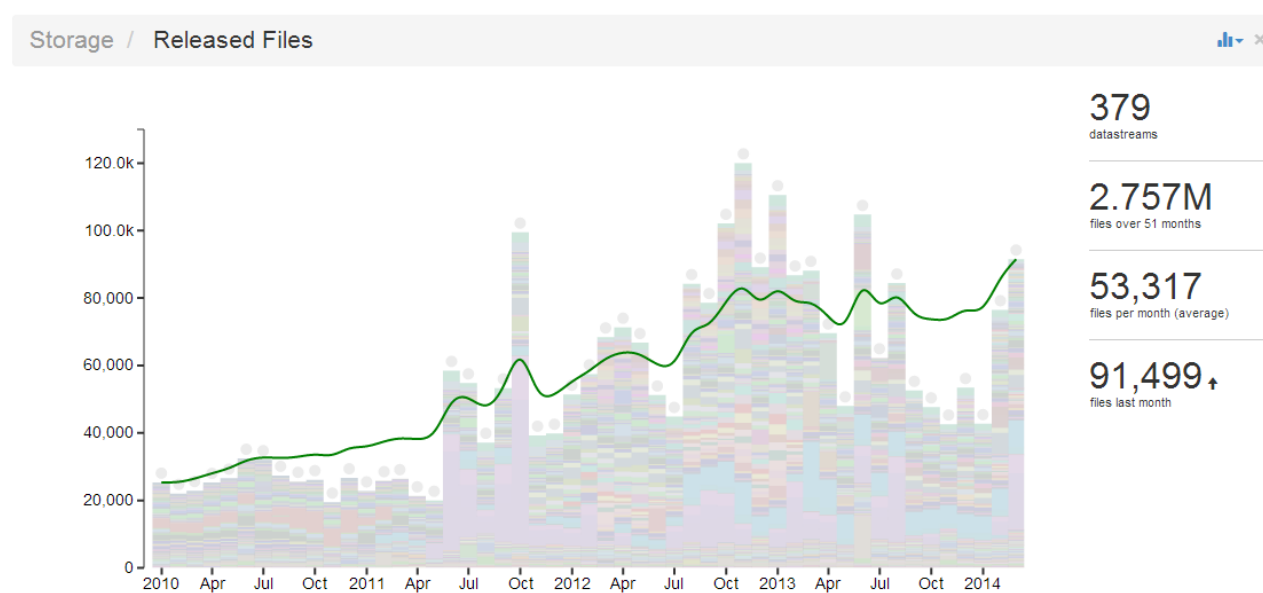


Figure 2. The trend for released files since 2010 is shown in this graph.



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