

National Earth Observation Group

NBAR Ancillary Data Download Scripts – Release Notes  
Release (15 May 2012)

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| Author | David Holland |
| Contributed & Reviewed By | Fei Zhang  Paul Gardner |
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# Introduction

## Purpose of this Document

This document will provide instructions on releasing the new NBAR Ancillary Data Download Scripts into the production environment. As such, the document will provide a step by step guide for release of the script components.

## Scope of this Document

The following contents are covered in this document:

Release version Number;

Summary of the included functionality;

A list of outstanding defects;

The release/deployment procedure;

Assumptions; and

A rollback guide (where relevant).

## References

| **Ref ID** | **Document name** | **TRIM Ref** | **Published Date** | **Author/s** |
| --- | --- | --- | --- | --- |
| 1 | Analysis of NBAR Ancillary Data Information Download | D2012-39234 | 27/02/2012 | Julie Rose |
| 2 | Aus NBAR Ancillary Data Functional Specification | D2012-39238 | 27/02/2012 | Julie Rose |
| 3 | New NBAR Ancillary Download Scripts | D2012-51104 | 14/03/2012 | Paul Gardner |

Table 1-Document References

# Version

|  |  |
| --- | --- |
| **Component** | **Version** |
|  | TBA |

Table 2 - Component Versions

# Functionality

## Features Implemented

The features implemented support the automated downloading of NBAR Ancillary data. The scripts are simple, robust and improve the visibility of the process.

To this end a “wrapper” script has been written around each download job to send either a Success or Failure email to an operations folder after each run. These wrapper scripts are run in the crontab in-place of existing often minimalist commands.

Common to all of the scripts a hidden lock is used to prevent the script being run simultaneously. This is required as it is conceivable that one run of the script could take more than 24 hours to complete.

Code sequence:

LOCKFILE="$NEOOPS/bin/.WV\_pr\_wtr.eatm.$Date.lock" for example

# Check not currently running

if [ -f $LOCKFILE ]; then

exit

fi

touch $LOCKFILE

.

.

.

rm $LOCKFILE

# Outstanding defects

There are no outstanding defects.

# Deployment

## Infrastructure Prerequisites

Setup password-less rsync mechanism (Contact Fei Zhang)

## Script Deployment

Backup the existing scripts in production

The current versions of the scripts are in svn and can be extracted from:

[**http://www.ga.gov.au:9080/svn/gemd/neo/comutil/NbarAnciDownload**](http://www.ga.gov.au:9080/svn/gemd/neo/comutil/NbarAnciDownload)

These should be installed in:

/usr/local/neoops/bin

($> svn co [**http://www.ga.gov.au:9080/svn/gemd/neo/comutil/NbarAnciDownload**](http://www.ga.gov.au:9080/svn/gemd/neo/comutil/NbarAnciDownload)**)**

and the production log files will be created in:

/usr/local/neoops/log

Currently success or failure emails are sent to the operations folder:

**transcription@ga.gov.au**

The five new scripts in svn are:

-rwxrwxr-x 1 lpgs dba 1469 Mar 19 09:55 aodMod04Download.ksh

-rwxrwxr-x 1 lpgs dba 1459 Mar 19 09:56 aodMyd04Download.ksh

-rwxrwxr-x 1 lpgs dba 1419 Mar 19 09:57 brdfMosaicDownload.ksh

-rwxrwxr-x 1 lpgs dba 2206 Mar 19 09:54 brdfTileDownload.ksh

-rwxrwxr-x 1 lpgs dba 2491 Mar 19 09:58 wvDownload.ksh

The crontab updated as per section 6.6.

# The Scripts:

## brdfTileDownload.ksh

This script downloads BRDF tile data from the required external ftp site via the “wget” application which “mirrors” the remote ftp site to a specified local directory (in this case on the NAS).

Remote ftp: <ftp://e4ftl01.cr.usgs.gov/MOTA/MCD43A1.005>

Local NAS: /nas/gemd/eoancillarydata/BRDF/USGS\_tile

Logfile: /usr/local/neoops/log/wget\_Brdf\_MCD43A1.log

wget options used:

* --mirror Mirror the 2 web sites
* -N Check time stamps and only download remote file if newer (1)
* -nH Remove the host name from the downloaded directory path (1)
* --cut-dirs=2 Cut the directory path back 2 levels
* -A {TileList] A comma separated list of tiles to download only (2)
* -R .jpg Exclude unwanted jpeg files

Note:

* 1. Without these options the resulting mirrored output directory structure would be:

/nas/gemd/ifcidata/IFCI/BRDF/MCD43A/e4ftl01.cr.usgs.gov/MOTA/MCD43A1.00*5*

* 1. A comma separated list of tiles to download, i.e. "\*h11v08\*,\*h11v09\*,\*h12v08\*,…”

## brdfMosaicDownload.ksh

This script downloads BRDF mosaic data from the remote server via the “rsync” application.

Remote server: [lpgs@dc.nci.org.au:/projects/u39/lpdaac/data/aust/MCD43A1.005](mailto:lpgs@dc.nci.org.au:/projects/u39/lpdaac/data/aust/MCD43A1.005)

Local NAS: /nas/gemd/eoancillarydata/BRDF/CSIRO\_mosaic

Logfile: /usr/local/neoops/log/rsync\_Brdf\_MCD43A1.log

rsync options user:

* -r Recursive download
* -t Preserve timestamps

**How to step-up passwordless rsync?**

* Step 1 make a public key on the local machine cen-neo-ops:

neoops@cen-neo-ops> ssh-keygen -t rsa

* Step 2: copy our public key to the remote machine dc.nci.org.au

neoops@cen-neo-ops> ssh-copy-id -i ~/.ssh/id\_rsa.pub lpgs@dc.nci.org.au

Note the second step will prompt password to be typed in and please contact Fei Zhang during the setup.

## aodMod04Download.ksh

This script downloads AOD MOD04\_L2 data from the required external ftp site via the “wget” application which “mirrors: the remote ftp site to a specified local directory (in this case on the NAS).

Remote ftp: ftp://ladsweb.nascom.nasa.gov/allData/5/MOD04\_L2

Local NAS: /nas/gemd/eoancillarydata/aerosol/MODIS/MOD04\_L2

Logfile: /usr/local/neoops/log/wget\_Aod\_ MOD04\_L2.log

wget options used:

* --mirror Mirror the 2 web sites
* -N Check time stamps and only download remote file if newer
* -nH Remove the host name from the downloaded directory path (1)
* --cut-dirs=3 Cut the directory path back 2 levels (1)
* -R .jpg Exclude unwanted jpeg files

## aodMyd04Download.ksh

This script downloads AOD MYD04\_L2 data from the required external ftp site via the “wget” application which “mirrors: the remote ftp site to a specified local directory (in this case on the NAS).

Remote ftp: ftp://ladsweb.nascom.nasa.gov/allData/5/MYD04\_L2

Local NAS: /nas/gemd/eoancillarydata/aerosol/MODIS/MYD04\_L2

Logfile: /usr/local/neoops/log/wget\_Aod\_ MYD04\_L2.log

wget options used:

* + --mirror Mirror the 2 web sites
  + -N Check time stamps and only download remote file if newer
  + -nH Remove the host name from the downloaded directory path (1)
  + --cut-dirs=3 Cut the directory path back 2 levels (1)
  + -R .jpg Exclude unwanted jpeg files

## 

## wvDownload.ksh

This script downloads Water Vapour data from the required ftp site via the “curl” application. A second step in the process converts the “.nc” file into the required .tif file using “gdal\_translate”.

Remote ftp: ftp://ftp.cdc.noaa.gov/Datasets/ncep.reanalysis/surface

Local NAS: /nas/gemd/eoancillarydata/water\_vapour/source

Logfile: /usr/local/neoops/log/WV\_pr\_wtr.eatm.$Date.log

Where “$Date” is the current year (one file is downloaded for each rear). This file is updated regularly during the year and so must be re-acquired.

curl options used:

* -s “Silent” mode
* -S But show error if failure

gdal\_convert sets the library path to:

LD\_LIBRARY\_PATH=/usr/local/FWTools-2.0.6/lib

and options:

* -a\_srs "+proj=latlong +datum=WGS84" Set projection and datum

## Required new cen-neo-ops crontab

**This crontab is under the user neoops (not the system)**

NOTE: timing parameters determined by sys admin as per commented requirements.

#

# ***8 day cycle*** rsync mosaiced NBAR data from NCI.

#

? ? ? ? ? /usr/local/neoops/bin/brdfMosaicDownload.ksh

#

# ***Daily*** Download and convert water vapour data (small FTP download unlikely to fail but the gdal\_convert may).

#

? ? ? ? ? /usr/local/neoops/bin/wvDownload.ksh

#

# To deal with FTP failures, rerun large FTP downloads/reports until successful.

#

# ***Daily*** Mirror the AOD remote site.

? ? ? ? ? /usr/local/neoops/bin/aodMod04Download.ksh

? ? ? ? ? /usr/local/neoops/bin/aodMyd04Download.ksh

# ***8 day cycle*** Mirror BRDF tile remote site

? ? ? ? ? /usr/local/neoops/bin/brdfTileDownload.ksh

Note:

The original crontab entries can simply be commented out to facilitate easy roll-back if necessary.