

Scheduled Tasks via Cron

Several DSpace features **require** that a script is run regularly (via cron, or similar). Some of these features include:

- the [e-mail subscription feature](#) that alerts users of new items being deposited;
- the ['media filter' tool](#), that generates thumbnails of images and extracts the full-text of documents for indexing;
- the (optional) ['checksum checker'](#) that tests the bitstreams in your repository for corruption;
- and the (optional) [registration of DOIs](#) using DataCite as registration agency.

There are some optional periodic tasks as well:

- [Updating the geolocation database](#) used to enrich usage statistics. At this writing, the database publisher issues monthly updates.

These regularly scheduled tasks should be setup via either [cron](#) (for Linux/Mac OSX) or [Windows Task Scheduler](#) (for Windows).

Recommended Cron Settings

If you are on Linux or Mac OSX, **you should add these cron settings under the OS account which is running Tomcat (and owns the [dspace] installation directory)**. For example, login as that user and type the following to edit the user's crontab.

```
crontab -e
```

While every DSpace installation is unique, in order to get the most out of DSpace, we highly recommend enabling these basic cron settings (the settings are described in the comments):

```
## SAMPLE CRONTAB FOR A PRODUCTION DSPACE
## You obviously may wish to tweak this for your own installation,
## but this should give you an idea of what you likely wish to schedule via cron.
##
## NOTE: You may also need to add additional sysadmin related tasks to your crontab
## (e.g. zipping up old log files, or even removing old logs, etc).

#-----
# GLOBAL VARIABLES
#-----
# Full path of your local DSpace Installation (e.g. /home/dspace or /dspace or similar)
# MAKE SURE TO CHANGE THIS VALUE!!!
DSPACE = [dspace]

# Shell to use
SHELL=/bin/sh

# Add all major 'bin' directories to path
PATH=/usr/local/sbin:/usr/local/bin:/sbin:/bin:/usr/sbin:/usr/bin

# Set JAVA_OPTS with defaults for DSpace Cron Jobs.
# Only provides 512MB of memory by default (which should be enough for most sites).
JAVA_OPTS="-Xmx512M -Xms512M -Dfile.encoding=UTF-8"

#-----
# HOURLY TASKS (Recommended to be run multiple times per day, if possible)
# At a minimum these tasks should be run daily.
#-----

# Send information about new and changed DOIs to the DOI registration agency
# NOTE: ONLY NECESSARY IF YOU REGISTER DOIS USING DATACITE AS REGISTRATION AGENCY (Disabled by default)
# 0 4,12,20 * * * $DSPACE/bin/dspace doi-organiser -u -q ; $DSPACE/bin/dspace doi-organiser -s -q ; $DSPACE/bin
/dspace doi-organiser -r -q ; $DSPACE/bin/dspace doi-organiser -d -q

#-----
# DAILY TASKS
# (Recommended to be run once per day. Feel free to tweak the scheduled times below.)
#-----

# Update the OAI-PMH index with the newest content at midnight every day
# REQUIRED to update content available in OAI-PMH (However, it can be removed if you do not enable OAI-PMH)
0 0 * * * $DSPACE/bin/dspace oai import > /dev/null
```

```

# Clean and Update the Discovery indexes at midnight every day
# (This ensures that any deleted documents are cleaned from the Discovery search/browse index)
# RECOMMENDED to ensure your search/browse index stays fresh.
0 0 * * * $DSPACE/bin/dspace index-discovery > /dev/null

# run the index-authority script once a day at 12:45 to ensure the Solr Authority cache is up to date
45 0 * * * $DSPACE/bin/dspace index-authority > /dev/null

# Cleanup Web Spiders from DSpace Statistics Solr Index at 01:00 every day
# (This removes any known web spiders from your usage statistics)
# RECOMMENDED if you are running Solr Statistics.
0 1 * * * $DSPACE/bin/dspace stats-util -i

# Send out "daily" update subscription e-mails at 02:00 every day
# (This sends an email to any users who have "subscribed" to a Community/Collection, notifying them of newly
added content.)
# REQUIRED for daily "Email Subscriptions" to work properly.
0 2 * * * $DSPACE/bin/dspace subscription-send -f D

# Run the media filter at 03:00 every day.
# (This task ensures that thumbnails are generated for newly add images,
# and ensures full text search is available for newly added PDF/Word/PPT/HTML documents)
# REQUIRED for Thumbnails to be generated & full-text indexing to work.
0 3 * * * $DSPACE/bin/dspace filter-media

#-----
# WEEKLY TASKS
# (Recommended to be run once per week, but can be run more or less frequently, based on your local needs
/policies)
#-----
# Send out "weekly" update subscription e-mails at 02:00 every Sunday
# (This sends an email to any users who have "subscribed" to a Community/Collection, notifying them of newly
added content.)
# REQUIRED for weekly "Email Subscriptions" to work properly.
0 2 * * 0 $DSPACE/bin/dspace subscription-send -f W

# Run the checksum checker at 04:00 every Sunday
# By default it runs through every file (-l) and also prunes old results (-p)
# (This re-verifies the checksums of all files stored in DSpace. If any files have been changed/corrupted,
checksums will differ.)
# OPTIONAL, but useful if you want to enable regular regular checksum validation of files stored in DSpace.
# 0 4 * * 0 $DSPACE/bin/dspace checker -l -p
# NOTE: LARGER SITES MAY WISH TO USE DIFFERENT OPTIONS. The above "-l" option tells DSpace to check
*everything*.
# If your site is very large, you may need to only check a portion of your content per week. The below
commented-out task
# would instead check all the content it can within *one hour*. The next week it would start again where it
left off.
# 0 4 * * 0 $DSPACE/bin/dspace checker -d 1h -p
# Mail the results of the checksum checker (see above) to the configured "mail.admin" at 05:00 every Sunday.
# (This ensures the system administrator is notified whether any checksums were found to be different.)
# 0 5 * * 0 $DSPACE/bin/dspace checker-emailer

#-----
# MONTHLY TASKS
# (Recommended to be run once per month, but can be run more or less frequently, based on your local needs
/policies)
#-----
# Send out "monthly" update subscription e-mails at 02:00, on the first of every month
# (This sends an email to any users who have "subscribed" to a Community/Collection, notifying them of newly
added content.)
# REQUIRED for monthly "Email Subscriptions" to work properly.
0 2 1 * * $DSPACE/bin/dspace subscription-send -f M

# Permanently delete any bitstreams flagged as "deleted" in DSpace, on the first of every month at 01:00
# (This ensures that any files which were deleted from DSpace are actually removed from your local filesystem.
# By default they are just marked as deleted, but are not removed from the filesystem.)
# REQUIRED to fully remove deleted content files from the "assetstore" folder
0 1 1 * * $DSPACE/bin/dspace cleanup > /dev/null

```

