Updating of leapseconds and utcpole files

This past May, the Naval Observatory put their servers offline for maintenance. Since that time, users must receive their updated leap second and utcpole data files from the Crustal Dynamics Data Information System (CDDIS) located at the Goddard Space Flight Center. The second change is the imminent shutdown of FTP service being provided by CDDIS on 10/31/2020 in favor of HTTPS/Earthdata Login or ftp-sll.

In order to ensure continuous download of the leap second and utcpole data files, the EED-2 project is hereby making available updates to our scripts to retrieve these data files via HTTPS and Earthdata Login credentials. The updated scripts are update_leapsec.sh and update_utcpole.sh.

Instructions for leapsec/utcpole

Download of the leapsec and utcpole data files requires users to have a production Earthdata Login account for which users can register at https://urs.earthdata.nasa.gov/users/new . Otherwise, users must use an existing account in order to retrieve the data files. Also, users must set the environment variable PGS_PC_INFO_FILE to point to their SDP Toolkit Process Control File (PCF.relB0) so that SDP Toolkit functions can properly execute to combine the downloaded leapsec and utcpole data files into the existing data files. Manual execution of the update_leapsec.sh and update_utcpole.sh scripts is required the first time these new scripts are run. For example, running the update_leapsec.sh script will prompt as follows:

1. Copy the update_leapsec.sh and update_utcpole.sh script to the executable directory:

cp update_leapsec.sh $PGSBIN/linux64/update_leapsec.sh

cp update_utcpole.sh $PGSBIN/linux64/update_utcpole.sh

1. cd $PGSBIN/linux64
2. Execute the update_leapsec.sh script

[kcockerill@localhost bin]$ **./update_leapsec.sh**

Do you want to modify the preamble in the emails [yes/no]

no

Do you want to add users to the e-mail recipient list [yes/no]

no

Enter your Earthdata Login user id:

kcockeri

Enter your Earthdata Login psswd:

<obfuscated>

Status of PGS_TD_NewLeap call was (0)

Status of MOVE command was (0)

The first prompt asks the user if they would like to modify the default preamble to the email message to tailor it to their particular needs. The second prompt requests if there are additional email addresses for which to send any notifications upon execution of the script. The third and fourth prompt are the user's Earthdata Login credentials. The above example shows the calls to the SDP Toolkit function PG_TD_NewLeap and the MOVE command (that updates the new leapsec.dat file) and that they returned no errors (0). Execution of the update_utcpole.sh script should yield the same prompts. However, the user will not have to re-input their Earthdata Login credentials as they have been encrypted and set aside for subsequent runs of the script. The updated leapsec.dat file is located in $PGSHOME/database/common/TD/leapsec.dat and the updated utcpole.dat file is located in $PGSHOME/database/common/CSC/utcpole.dat. It is suggested that each of the invocations of these scripts be set up as cronjobs to account for the fact that the utcpole data is updated roughly once a week. The leapsec data is updated less frequently however.