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Blacknest Data System (BDS)

BdsImportScream Daemon – 2.0.9 - 2013-09-10

1. Introduction

The BdsImportScream daemon is a data import daemon that is designed to import incoming GCF files from the Gurlap Satellite data feed into the BDS system.

There is one BdsImportScream daemon running on a suitable host, possibly the master BDS host computer. The BdsImportScream daemon is a client of the BdsServer and connects through the DataAddAccess API in order to import the requested data.

2. Usage

The BdsImportScream is normally started off at system boot time by the BdsImportScream initialisation script in /etc/rc.d/init.d. It can thus be started and stopped with the following command line commands:

service BdsImportScream start
service BdsImportScream stop

The BdsImportScream daemon runs as the **bds** user to enhance system security. For debugging the BdsImportScream also takes the following command line arguments:

-help	Help on command line parameters
-f	Run in foreground mode
-d <0x01>	Print debugging information
-force	Force import although validation fails
-c	Catch up without importing the data
-w	Print validation warnings

3. Configuration

The BdsImportScream uses a single text file, /etc/BdsImportScream.conf, to define its configuration. This configuration file is read when the program starts up. The configuration file's mode only allows the user **bds** and **root** to access it to provide a degree of protection for the DataBase password. The configuration file has the following parameters defined:

BdsServer	The BdsServer host name
BdsUser	The BDS user and password
DataDirectory	The root directory fro the SCREAM data files
FileAgeMinimum	The minimum age of the file in seconds when importing. Default is 864000 (1 day)
LogFile	The file to log file import statuses to

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ProcessTime	The time in minutes between processing the directory. default is 10 minutes.
Source*.name	A title for this set of data
Source*.network	The Network Organisation for this set of data
Source*.channels	The list of station/channel pairs to import from the file. Normally one channel. (eg: EKB:BHE_01)
Source*.format	The files format, normally GCF or LOG
Source*.dir	The directory for the files relative to the directory defined in DataDirectory.
Source*.source	The BDS source to import the files under.

There can be any number of "Source*" entries each with a different number in place of the "*" field.

4. Operation

The bdsImportScream daemon operates once every 10 minutes or that time programmed in the **ProcessTime** configuration parameter. It scans each of the source directories for new files based on their modified time field compared with the time it last run. It keeps the time it was last run in the file /var/cache/bdsImportScreamTimes.cache. Where new files are found it will first validate the data and then import the data. It will ignore files that are younger that the time set in the configurations **FileAgeMinimum** parameter. This is done as the SCREAM system may update the blocks in these files to fix missing blocks during reception.

If the format is specified as "GCF" all files in any directory structure beneath the configured "Source*.dir" directory are searched for GCF data files. The files should have the file name format of: "YYYMMDD_*.gcf".

If the format is specified as "LOG" all files in any directory structure beneath the configured "Source*.dir" directory are searched for SCREAM ASCII log files with the extension ".txt". The files should have the file name format of: "*.txt".

The "-c" option is available for the bdsImportScream program to catch up with the present data files. In this case the bdsImportScream program will just update its last processed time to the current time by writing a suitable entry into /var/cache/bdsImportScreamTimes.cache.

5. Errors

The BdsImportScream daemon is configured to re-order blocks, delete duplicate blocks and ignore missing block errors when importing. If validation fails, for another reason, then an error message will be printed in the BDS logs and and the data will not be imported.

The BdsImportScream daemon will send logs to the BDS standard logging system. Some logs are also written to the standard system log file /var/log/messages via the systems syslog daemon. Import Validation warnings are added to the BDS Notes database as well as the import files MetaData.

The BdsImportScream keeps a log of the files it has imported with a success or otherwise indication in the file: /var/log/bds/bdsImportScream.log as defined by the "LogFile" parameter in the configuration file.

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6. Further Information

For further information please look at the BDS system documentation at:
https://portal.beam.ltd.uk/supportblacknest .