### 3.1 Ingest Filter Configuration

Ingest filtering is controlled through the pqact.conf file, which resides in the /usr/local/ldm/etc directory. The general syntax of an entry in the file is as follows:

feedtype TAB Regex Pattern

TAB action TAB [arg]

Where TAB is an actual TAB. Lines can, and are, split between new lines at a TAB.

**Table 3.1-1** is a list of feedtypes that can be used (reference <http://www.unidata.ucar.edu/software/ldm/ldm-6.7.1/basics/feedtypes/index.html> ).

Table 3.1-1. LDM Feedtypes

| Primary Name | Alternate Names | Description |
| --- | --- | --- |
| **PPS** | FT0 | [Public Products Service](http://www.unidata.ucar.edu/software/ldm/ldm-current/basics/feedtypes/public_bulletins.html#public) |
| **DDS** | FT1, DOMESTIC | [Domestic Data Service](http://www.unidata.ucar.edu/software/ldm/ldm-current/basics/feedtypes/public_bulletins.html) |
| **HDS** | FT2, HRS | [High resolution Data Service](http://www.unidata.ucar.edu/software/ldm/ldm-current/basics/feedtypes/hds.html) |
| **IDS** | FT3, INTNL | [International Data Service](http://www.unidata.ucar.edu/software/ldm/ldm-current/basics/feedtypes/public_bulletins.html#international) |
| **SPARE** | FT4 | Reserved for IDD use |
| **UNIWISC** | FT5, MCIDAS | [Satellite imagery and derived products from the Unidata/Wisconsin Broadcast](http://www.unidata.ucar.edu/data/datastream.html) |
| **PCWS** | FT6, ACARS | [ACARS data from commercial aircraft](http://acweb.fsl.noaa.gov/FAQ.html) |
| **FSL2** | FT7, PROFILER | [Wind profiler data](http://www.unidata.ucar.edu/data/wind_profiler.html) |
| **FSL3** | FT8 | Reserved for NOAA/GSD use |
| **FSL4** | FT9 | Reserved for NOAA/GSD use |
| **FSL5** | FT10 | Reserved for NOAA/GSD use |
| **GPSSRC** | FT11, NMC1, AFOS | SuomiNet GPS data gathering |
| **CONDUIT** | FT12, NMC2, NCEPH | [NCEP high-resolution model output](http://www.unidata.ucar.edu/software/ldm/ldm-current/basics/feedtypes/conduit.html) |
| **FNEXRAD** | FT13, NMC3 | [NEXRAD Level-III composites](http://www.unidata.ucar.edu/software/ldm/ldm-current/basics/feedtypes/fnexrad.html) |
| **LIGHTNING** | FT14,NLDN | [Lightning data](http://www.unidata.ucar.edu/data/lightning.html) |
| **WSI** | FT15 | [NEXRAD Level-III (NIDS) radar products and composites from WSI Corporation](http://www.unidata.ucar.edu/software/ldm/ldm-current/basics/feedtypes/wsi.html) |
| **DIFAX** | FT16 | Unidata community-generated replacement for defunct DIFAX feed |
| **FAA604** | FT17, FAA, 604 | FAA604 products for NWS use (private network), but available for IDD use |
| **GPS** | FT18 | [SuomiNet GPS data](http://www.unidata.ucar.edu/data/suominet/index.html) |
| **FNMOC** | FT19, SEISMIC, NOGAPS | [NOGAPS and COAMP model output from FNMOC](http://www.unidata.ucar.edu/software/ldm/ldm-current/basics/feedtypes/nogaps_coamps.html) |
| **GEM** | FT20, CMC | [Canadian Meteorological Center GEM model output](http://www.unidata.ucar.edu/software/ldm/ldm-current/basics/feedtypes/gem.html) |
| **NIMAGE** | FT21, IMAGE | [NOAAport satellite imagery](http://www.unidata.ucar.edu/software/ldm/ldm-current/basics/feedtypes/nimage.html) |
| **NTEXT** | FT22, TEXT | [NOAAport textual products](http://www.unidata.ucar.edu/software/ldm/ldm-current/basics/feedtypes/ntext.html) (for future use) |
| **NGRID** | FT23, GRID | [NOAAport high-resolution model output](http://www.unidata.ucar.edu/software/ldm/ldm-current/basics/feedtypes/ngrid.html) |
| **NPOINT** | FT24, POINT, NBUFR, BUFR | NOAAport point products (for future use) |
| **NGRAPH** | FT25, GRAPH | [NOAAport Redbook Graphics](http://www.unidata.ucar.edu/software/ldm/ldm-current/basics/feedtypes/ngraph.html) (for future use) |
| **NOTHER** | FT26, OTHER | NOAAport miscellaneous products (for future use) |
| **NEXRAD3** | FT27, NNEXRAD, NEXRAD | [NEXRAD Level-III products](http://www.unidata.ucar.edu/data/radar.html) |
| **NEXRAD2** | FT28, CRAFT, NEXRD2 | NEXRAD Level-II radar data |
| **NXRDSRC** | FT29 | [NCDC NEXRAD Level-II data archiving](http://www.unidata.ucar.edu/software/craft/craft.9.98.html) |
| **EXP** | FT30 | For experiments, testing, etc. |
| ANY | FT0 | FT1 | FT2 | ... | FT31 | Predefined feed set name for any feed type |
| NONE | -- | Predefined feed set name for no feed types (will not match anything) |
| DDPLUS | FT0 | FT1 | Predefined feed set name for PPS or DDS |
| WMO | FT0 | FT1 | FT2 | FT3 | Predefined feed set name for PPS, DDS, HDS, or IDS |
| UNIDATA | FT0 | FT1 | FT2 | FT3 | FT5 | Predefined feed set name for PPS, DDS, HDS, IDS, or UNIWISC |
| FSL | FT6 | FT7 | FT8 | FT9 | FT10 | Predefined feed set name for PCWS, FSL2, FSL3, FSL4, or FSL5 |
| NMC | FT11 | FT12 | FT13 | Predefined feed set name for AFOS, NMC2, or NMC3 |
| NPORT | FT22 | FT23 | FT24 | FT25 | FT26 | Predefined feed set name for NTEXT, NGRID, NPOINT, NGRAPH, or NOTHER |

*Regex Pattern*  is a regular expression used in pattern matching the LDM stream for ingest.

*Action* is the action to take on the product once it arrives. **Table 3.1-2** describes the possibilities for action and can be found on LDM’s Web page here: <http://www.unidata.ucar.edu/software/ldm/ldm-current/basics/pqact.conf.html>

Table 3.1-2. LDM Action Options

| Action | Description |
| --- | --- |
| NOOP | Don’t do anything with the product. |
| FILE | Write the data product to a file using the write() function. |
| STDIOFILE | Write the data product to a file using the fwrite() function. |
| DBFILE | Write the data product to a database. |
| EXEC | Execute a program. |
| PIPE | Write the product to a program’s standard input. |

*Arg* is any optional arguments for the *Action* and is generally one of the following:

In general, the syntax for the ARG portion of the line in the pqact.conf file is as seen below:

–overwrite –close –log –edex <tab> /store/path

Where:

<tab> indicates hitting the tab key on the keyboard

/store/path is the path the file should be written to disk.

-overwrite indicates overwrite the file (if exists)

-close indicates to close the file after fwrite() function

-log indicates log the product to the ldmd.log

-edex indicates the sending of data over edexBridge for processing

In order to determine the correct FEEDTYPE above, the following command can be run from a downstream LDM host.

# ./notifyme –h $LDM\_HOST –v –l- -p ‘$REGEX’

Where $REGEX is a regular expression that will match against the type of data which is of interest. Once a match is found, it is displayed on the screen as seen in **Example 3.1-1.**

##### Example 3.1-1

Dec 21 15:52:21 notifyme[32196] INFO: 1522 20101221155220.618 **IDS|DDPLUS** 11247393 SOAK45 KWBC 211549

Dec 21 15:52:21 notifyme[32196] INFO: 408 20101221155220.618 **HDS** 11247394 SFUS41 KWBC 211545

The example shows the FEEDTYPE in bold type.

AWIPS I customizes only specific patterns based on the localized site. **Tables 3.1-3** and **3.1-4**  depict information on each, and where to find the corresponding information.

Table 3.1-3. Hydrology Patterns

|  |  |  |
| --- | --- | --- |
| AWIPS I Pattern | Information Location | AWIPS II LDM Pattern |
| ^SRU[EMSW][1-9]**..(Wxxx)** | **Wxxx** from XXX-hydroSiteConfig.txt file in /awips/fxa/data/localization/XXX | IDS|DDPLUS ^(SRU[EMSW][1-9].) (**Wxxx**) |
| SRUS**RegCode**.KWBC | **RegCode** from XXX-hydroSiteConfig.txt file in /awips/fxa/data/localization/XXX | IDS|DDPLUS ^(SRUS**RegCode**) (KWBC) |
| FOUS...(**Rxxx**) | **Rxxx** from XXX-hydroSiteConfig.txt file in /awips/fxa/data/localization/XXX | IDS|DDPLUS ^(FOUS..) (**Rxxx**) |
| FGUS[57]..(**Rxxx**) | **Rxxx** from XXX-hydroSiteConfig.txt file in /awips/fxa/data/localization/XXX | IDS|DDPLUS ^(FGUS[567].) (**Rxxx**) |
| [AF][BS]US...(**Wxxx**) | **Wxxx** from XXX-hydroSiteConfig.txt file in /awips/fxa/data/localization/XXX | IDS|DDPLUS ^([AF][BS]US..) (**Wxxx**) |
| AGUS5..(**Rxxx**) | **Rxxx** from XXX-hydroSiteConfig.txt file in /awips/fxa/data/localization/XXX | IDS|DDPLUS ^(AGUS5.) (**Rxxx**) |
| AGUS4..(**Wxxx**) | **Wxxx** from XXX-hydroSiteConfig.txt file in /awips/fxa/data/localization/XXX | IDS|DDPLUS ^(AGUS4.) (**Wxxx**) |
| [YZ]EI.98.(**Rxxx**) | **Rxxx** from XXX-hydroSiteConfig.txt file in /awips/fxa/data/localization/XXX | ANY ^([YZ]EI.98) (**Rxxx**) |
| **Note:** An example of the first row in the pqact.conf would look like this:  IDS|DDPLUS ^(SRU[EMSW][1-9].) (**Wxxx**) (..)(..)(..)  FILE -overwrite -log -close -edex /data\_store/shef/\4/\1\_\2\_\3\4\5\_(seq).txt  Remember that there are TABs between the different sections of the entry and that **Wxxx** would be substituted based on the rules above. | | |

Table 3.1-4. Radar Patterns

| AWIPS I Pattern | Information Reference |
| --- | --- |
| CODE 17 INCLUDE SDUS2??KZZZ | Substitute KZZZ for the reporting site for each radar listed in:  /awips/fxa/data/localizationDataSets/XXX/dialRadars.txt  Reporting sites can be found by issuing the following command:  grep –i xxxy /awips/fxa/data/wmoSiteInfo.txt  Where xxx is the radar ID without the preceding K, P or T.  The following file on DX1 also contains the information needed:  /awips/fxa/data/localizationDataSets/XXX/acq\_wmo\_parms.sbn.radar |
| CODE 17 INCLUDE SDUS3??KZZZ |
| CODE 17 INCLUDE SDUS4??KZZZ |
| CODE 17 INCLUDE SDUS5??KZZZ |
| CODE 17 INCLUDE SDUS7??KZZZ |
| CODE 17 INCLUDE SDUS8??KZZZ |
| CODE 17 INCLUDE NXUS6??KZZZ |
| AWIPS II has only one pattern in the pqact.conf file, which lists all KXXX:  NNEXRAD ^(SDUS[234578].|NXUS6.) (K|P|T)(XXX|XXX|XXX|XXX|XXX)  Change the XXX to match each of the reporting sites for the radars listed in dialRadars.txt file. An example of a full NNEXRAD localized line for site LWX follows. Please note there are only two lines, so word wrap applies (see Appendix A for more detailed information on LDM acquisition patterns):  NNEXRAD ^(SDUS[234578].|NXUS6.) (K|P|T)(LWX|BGM|CHS|RLX|ILN|CLE|AKQ|JKL|CTP|MHX|MRX|OKX|PHI) (..)(..)(..) /p(...)(...)  FILE -overwrite –close –log –edex /data\_store/radar/\2\8/\7/\5\6\_\2\8\_\7\_(seq).rad | |

Additional patterns can also be found in the acqPatternsAddOn.txt file, which can reside in /awips/fxa/data/localization/XXX or /data/fxa/customFiles. These patterns should also be added to the pqact.conf.xxx file in the proper syntax (where xxx is your site ID).

Delivered with the AWIPS II LDM rpm is a baselined pqact.conf.template file which should be used as a basis for the active pqact.conf file. It should not be edited; rather, it should be copied into the active pqact.conf file. From there, custom patterns can be concatenated onto the active file.

***Note:*** ADAM platform’s active file is adam-pqact.conf

To manually edit or add a new filter rule, follow these steps. Utilize Appendix A, LDM Ingest Checklist, as a tool to help ensure all the correct information is known before proceeding:

* Log into the downstream LDM client host (normally PX2) as user *root:*

# ssh root@$LDM\_DOWNSTREAM

* Change directories to the pqact.conf location on the server:

# cd /usr/local/ldm/etc

* Edit the pqact.conf using a text editor (shown here is vi):

# vi pqact.conf.xxx

* Once you are finished making changes, save the file and exit the editor:

# :wq!

* Check to ensure that the edited file still has the proper syntax using the *ldmadmin*  command:

# su ldm –lc “ldmadmin pqactcheck –f /usr/local/ldm/etc/pqact.conf.xxx”

Expect the phrase “syntactically correct” for each file you have configured in ldmadmin-pl.conf

* Concatenate this file with the pqact.conf.template file to create the active pqact.conf file:

# cat pqact.conf.template pqact.conf.xxx > pqact.conf

* Ensure the proper ownership and permissions:

# chown ldm:fxalpha /usr/local/ldm/etc/pqact.conf

* Signal the LDM server to re-read the configuration files:

# su ldm –lc “ldmadmin pqactHUP”