NAME

CMDHL7Listener - Receive and acknowledge HL7 v2.x Delimited messages over MLLP

SYNOPSIS

java -jar CMDHL7Listener_v0.7 [OPTION]...

DESCRIPTION

Listen, on the specified TCP Port, for incoming HL7 v2.x Delimited messages, generating and sending generic HL7 v2.x acknowledgements for each. Optionally, with the -s option, store incoming messages as files in the specified file system directory, with file names derived from message content.

-p PORT, --port=PORT
TCP Port on which to listen for connections

-s DIRECTORY, --store=DIRECTORY
[Optional] File system directory in which to store received messages as files with the file name pattern derived from Message Control Id [MSH-10], Message Type [MSH-9-1], Trigger Event [MSH-9-2] and current time in milliseconds. An example would be 000000_CTLID_2008091012529_ADT_A03_1293578341691.hl7 where 000000_CTLID_2008091012529 is the content of the MSH-10, ADT is the content of the MSH-9-1, A03 is the content of the MSH-9-2 and 1293578341691 is the number of milliseconds since the epoch as given by Java's System.currentTimeMillis().

-a SENDINGAPPLICATION, --sendingApplication=SENDINGAPPLICATION
[Optional] string to use as MSH-3-1, Sending Application.
If absent, the MSH-5-1 from the message will be used.

-b SENDINGFACILITY, --sendingFacility=SENDINGFACILITY
[Optional] string to use as MSH-4-1, Sending Facility.
If absent, the MSH-6-1 from the message will be used.

-x RECEIVINGAPPLICATION, --receivingApplication=RECEIVINGAPPLICATION
[Optional] string to use as MSH-5-1, Receiving Application.
If absent, the MSH-3-1 from the message will be used.

-y RECEIVINGFACILITY, --receivingFacility=RECEIVINGFACILITY
[Optional] string to use as MSH-6-1, Receiving Facility.
If absent, the MSH-4-1 from the message will be used.

-g, --gluttonStoreAsXML
[Optional] Store received HL7 v2 messages in XML format. If -s/--storePath is not provided this switch has no effect.

-c CONTROLIDPREFIX, --controlIdPrefix=CONTROLIDPREFIX
[Optional] string to prefix a generated Message Control Id (MSH-10) which will consist of this string followed

by the underscore, followed by the sequence number of the message read from the multi-message file. This will replace the MSH-10 in the message read from the file. If absent, the MSH-10 from the message read from the file will be retained as is.

-z, --performanceMeasurement
[Optional] Whether to enable performance measurement instrucmentation and statistics collection.
If -c/--controlIdPrefix is not provided this switch has no effect.
It is assumed that the value provided by -c to the listener is the same as that provided to the sender.

-f NUMBER, --fromSequece=NUMBER
[Optional] Specifies the MSH-10 Sequence Number part from which to start accumulating run statistics. If -z is not specified this switch has no effect. If -c is not specified this switch has no effect.

-t NUMBER, --toSequece=NUMBER
[Optional] Specifies the MSH-10 Sequence Number part at which to stop collecting statistics and to emit them to stdout. If -c is not specified this switch has no effect.

The listener supports HL7 v2.1 through 2.6, including 2.3.1 and 2.5.1, as implemented in HAPI 1.0.1 libraries. It generates acknowledgements to match the version of the message and swaps MSH-3, MSH-4 and MSH-5, MSH-6 from the original message for the Acknowledgement.

CMDHL7Proxy INFO-level messages. The underlying code uses org.apache.commons.logging mechanism. The logging level can be managed through the logging.proeprties JRE configuraiton file, typically in <JDK_Dir>\jre\lib\logging.properties. Once can override this with "-Djava.util.logging.config.file=logging.properties" on the command line, for example:

C:\jdk1.6.0_20\bin\java -Djava.util.logging.config.file=logging.properties -jar CMDHL7...

There are a number of properties files provided in teh distribution - logging_debug.properties, logging_fine.properties (these two are equivalent), logging_info.properties, logging_warning.properties and logging.proeprties, which is equivalent to logging_info.properties. debug and fine variants result in no logging being emitted to the console. info emits some logging information to the console. fine and debug emit a lot of informaiton to the conole - most of it of minimal usefulnes. info is probably the most useful logging level for viewing message exchange. warning if the most useful for running the code in "production" mode.

EXAMPLES

java -jar CMDHL7Listener_v0.7.jar --port=22100 --store=.\files

Listen on port 22100
Store messages as files in the subdirectory files of

the current working directory

Example output emitted when a message is processed:

```
29/12/2010 6:58:53 AM au.id.czapski.hl7.CMDHL7Listener
main
INFO: Port: 22100
29/12/2010 6:58:53 AM au.id.czapski.hl7.CMDHL7Listener
main
INFO: Store in: .\files
29/12/2010 6:58:53 AM ca.uhn.log.HapiLogImpl info
INFO: au.id.czapski.hl7.SimpleACKApplication registered
to handle *^* messages
29/12/2010 6:58:53 AM ca.uhn.log.HapiLogImpl info
INFO: SimpleServer running on port 22100
29/12/2010 7:19:01 AM ca.uhn.log.HapiLogImpl info
INFO: Accepted connection from 127.0.0.1
29/12/2010 7:19:01 AM ca.uhn.log.HapiLogImpl info
INFO: Responder got message: MSH|^~
\&|SystemA|HosA|PI|MDM|2008091012529||ADT^A03|000000
_CTLID_2008091012529|P|
PID|1||A000010^^^HosA^MR^HosA||Kessel^Abigail||
19460101123045|M|||7 South 3rd Circle^^Downham
Market^England -
PV1|1
|I||I|||GOO^Goodlace^Andrew^^^^^^^^^^MAIN|||EMR|||||||
|V20080908014345^^^^VISIT|||||||||||||||||DISH DIS
P|disch loc|||||||20080908014345|2008091012529
29/12/2010 7:19:01 AM ca.uhn.log.HapiLogImpl info
PID|1||A000010^^^HosA^MR^HosA||Kessel^Abigail||
19460101123045|M|||7 South 3rd Circle^^Downham
Market^England -
PV1|1
|I||I|||GOO^Goodlace^Andrew^^^^^^^^^^MAIN|||EMR|||||||
|V20080908014345^^^^VISIT|||||||||||||||||DISH DIS
P|disch loc|||||||20080908014345|2008091012529
29/12/2010 7:19:01 AM ca.uhn.log.HapiLogImpl info
INFO: Instantiating msg of class
ca.uhn.hl7v2.model.v231.message.ADT_A03
29/12/2010 7:19:01 AM
au.id.czapski.hl7.SimpleACKApplication processMessage
INFO: Received message:
MSH|^~\&|SystemA|HosA|PI|MDM|2008091012529||ADT^A03|
000000_CTLID_2008091012529|P|2.3.1|||AL|NE
EVN|A03|2008091012529|||JavaCAPS6^^^^^^^USERS
PID|1||A000010^^^HosA^MR^HosA||Kessel^Abigail||
19460101123045|M|||7 South 3rd Circle^^Downham
Market^England -
 Norfolk^30828^UK|||||||A20080908014345
PV1|1
|I||I|||GOO^Goodlace^Andrew^^^^^^^^^^MAIN|||EMR|||||||
|V20080908014345^^^^VISIT|||||||||||||||||DISH DIS
P|disch loc|||||||20080908014345|2008091012529

29/12/2010 7:19:01 AM
au.id.czapski.hl7.SimpleACKApplication processMessage
INFO: Sending Applicaiton: SystemA
29/12/2010 7:19:01 AM
au.id.czapski.hl7.SimpleACKApplication processMessage
INFO: FileName: .\files\000000_CTLID_2008091012529
_ADT_A03_1293578341691.hl7
29/12/2010 7:19:01 AM ca.uhn.log.HapiLogImpl info
INFO: hapi.home is set to C:\tools\CMDHL7\.
29/12/2010 7:19:01 AM
```

```
au.id.czapski.hl7.SimpleACKApplication processMessage
INFO: Sending ACK:
MSH|^~\&|PI|MDM|SystemA|HosA|20101229071901.753+0800
||ACK|1|P|2.3.1
MSA|AA|000000_CTLID_2008091012529
```

AUTHOR

Michael Czapski.
michael . w . czapski at gmail . com

KNOWN ISSUES

There is no way to tell the listener to stop. I run this from a command window and use Control C to stop it.

If the target directory for --store cannot be written an ugly message - "Can't write file - ignoring directive" - is emitted to the standard output, the message is not written to the file and the listener continues anyway.

The code does not validate supposed HL7 v2.x delimited messages for correctness. For example a message with invalid TS (timestamp) data will be happily processed. I deliberately disabled HAPI's validation to allow this.

I never tested this code on non-Windows platforms. Being pure Java I expect it to work on non-Windows platforms all the same.

I never tested this code with JDK other then JDK 1.6.0_20. Since most of the good stuff comes from the HAPI 1.0.1 I expect this code to work on any version of Java which HAPI 1.0.1 supports (last time I looked it was JDK 1.4 and up, though one's experience may vary).

REPORTING BUGS

This is a rough developer tool - I am unlikely to maintain it or have the time to fix bugs - besides, most of the good stuff comes from the HAPI distribution and I don't look after bugs in that library (if any - I assume that there are none)

COPYRIGHT

SEE ALSO

CMDHL7Proxy, CMDHL7Sender

HAPI 1.0.1 - http://hl7api.sourceforge.net/