HL7 Analyzer® for HL7

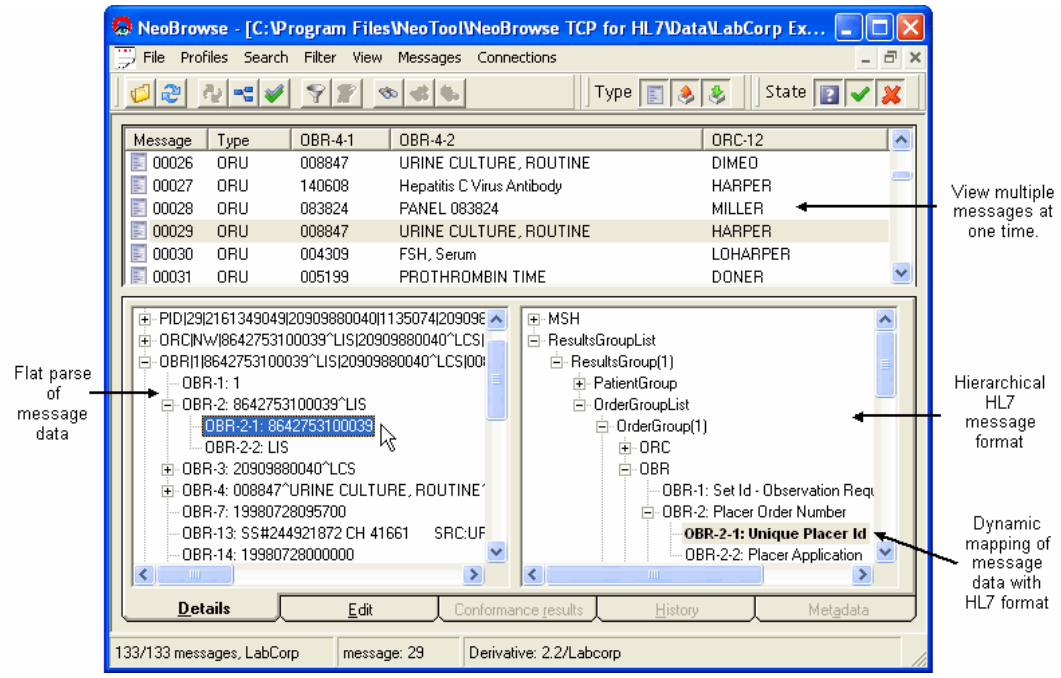
Detailed Features

HL7 Analyzer simplifies the viewing, editing, and testing of HL7 messages and related TCP/IP connections. By allowing quick and in-depth testing, HL7 Analyzer greatly improves an HL7 analyst's productivity and the quality of interfaces. The tool simplifies the reading, understanding, and preparation of HL7 messages, thereby accelerating the learning curve for either new or infrequent users of HL7.

HL7 Analyzer for HL7 provides an easy-to-use rendering of HL7 messages that makes them quick to read and understand. This ease of readability increases the productivity of both seasoned and novice HL7 analysts.

HL7 Analyzer provides:

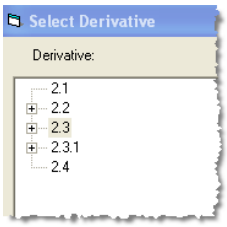
- Summary view of all the messages in a file or flowing over a live TCP/IP connection – allowing a user to quickly focus on the most critical parts of a message and quickly find the "needle in the haystack" when debugging HL7 issues
- Hierarchical view of the message using extensive, automatic, built-in knowledge of HL7 – allowing the user to quickly understand the contents of an HL7 message
- Flat parse view of the message – allowing for quick viewing of all the elements of the message
- Dynamic mapping of the flat parse and the hierarchical views – allowing easy navigation via point-and-click in either view
- User-defined summary columns in the message view – allowing the user to choose the data elements that are most critical to a given HL7 search



Corepoint HEALTH

Built-in Knowledge of HL7

HL7 Analyzer for HL7 contains all the commonly used versions of HL7 upon installation. This gives HL7 Analyzer the ability to accurately parse HL7 messages and associate them with the selected message format.

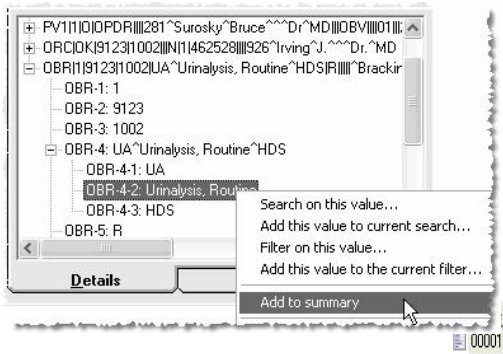


Left: HL7 Analyzer provides the ability to select from all HL7 standard and custom formats to view a message.

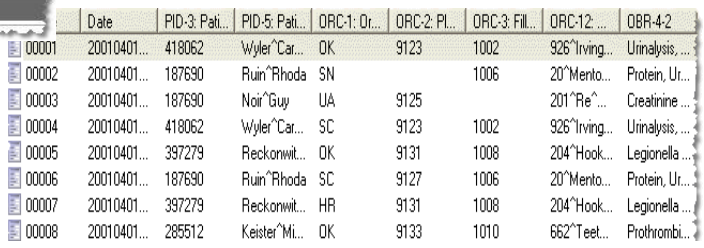
HL7 Analyzer for HL7 contains all the commonly-used versions of HL7 2.X as defined in the HL7 standard. This gives HL7 Analyzer the ability to accurately parse HL7 messages and automatically associate them with the selected message format. In addition, HL7 Analyzer allows you to build custom versions of HL7 that support unique vendor or site-specific message structures, including support for Z-segments.

Customizable Summary

HL7 Analyzer for HL7 builds a dynamic summary of all messages within a file or flowing over a TCP/IP connection. The summary allows a user to quickly view the most critical message elements across dozens or hundreds of messages. You may add and remove columns from the summary pane and store the summary configurations for later reuse.



Right: Adding a field to be displayed in the summary

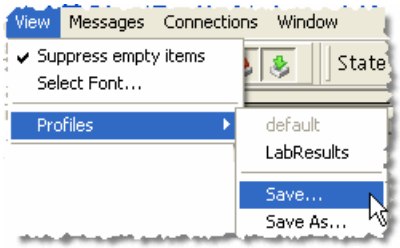


	Date	PID-3: Pati...	PID-5: Pati...	ORC-1: Or...	ORC-2: Pl...	ORC-3: Fill...	ORC-12: ...	OBR-4-2
00001	20010401...	418062	Wyler^Car...	OK	9123	1002	926^Irving...	Urinalysis, ...
00002	20010401...	187690	Ruin^Rhoda	SN		1006	20^Mento...	Protein, Ur...
00003	20010401...	187690	Noir^Guy	UA	9125		201^Re^...	Creatinine ...
00004	20010401...	418062	Wyler^Car...	SC	9123	1002	926^Irving...	Urinalysis, ...
00005	20010401...	397279	Reckonwit...	OK	9131	1008	204^Hook...	Legionella ...
00006	20010401...	187690	Ruin^Rhoda	SC	9127	1006	20^Mento...	Protein, Ur...
00007	20010401...	397279	Reckonwit...	HR	9131	1008	204^Hook...	Legionella ...
00008	20010401...	285512	Keister^Mi...	OK	9133	1010	662^Teet...	Prothrombi...

Above: The OBR 4-2 field has been added to the summary

Reusing Customized View

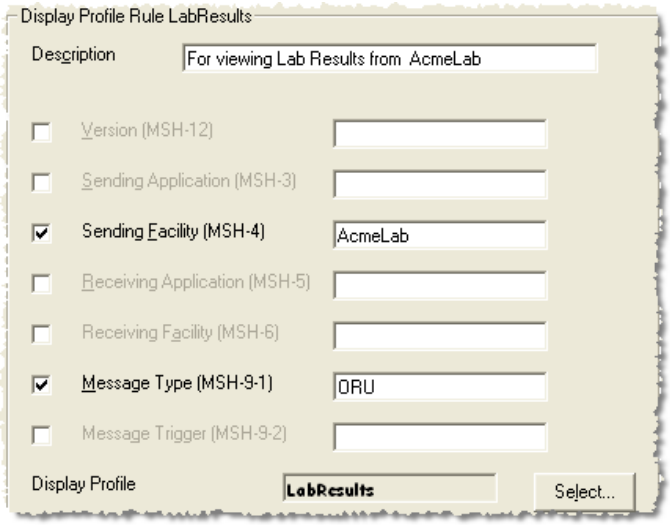
In addition, you can save the view so that it can be selected in the future when viewing different files.



Left: The ability to save a profile or use a previously saved profile to view a file.

Dynamically Select Summary View

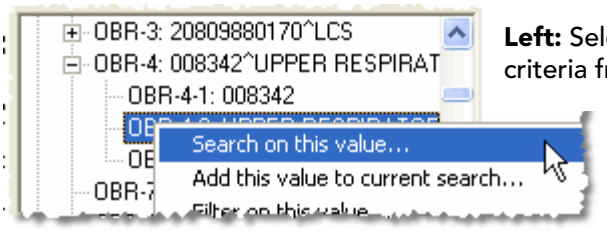
HL7 Analyzer can automatically select an existing summary view format based on user-defined rules such as the version of HL7, sending application or facility, receiving application or facility, message type, and message trigger.



Searching for Information within Messages

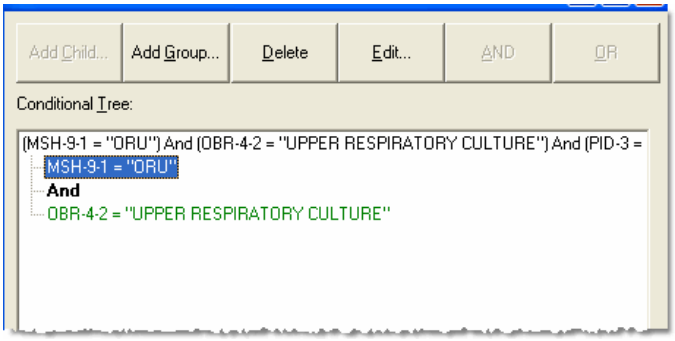
HL7 Analyzer provides an extremely powerful search function to quickly find all the messages that have user-specified values. You can perform a search for values located:

- Anywhere within the messages
- Within a specified field
- In a specified field within a specific segment or group



Left: Selecting the search criteria from the message

You can also combine search criteria into complex statements across multiple fields. The search can also be limited to fields within a specified segment or group. For example, finding an NTE attached to a certain type of OBX result.



Left: The selected item is added to the conditional statement for the search

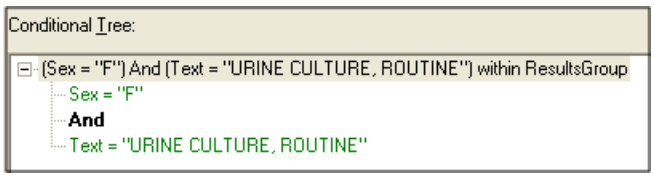
Filtering Messages

The same powerful tool used to search messages can be used to filter messages so you can view only messages which interest you.

The messages can be filtered by values:

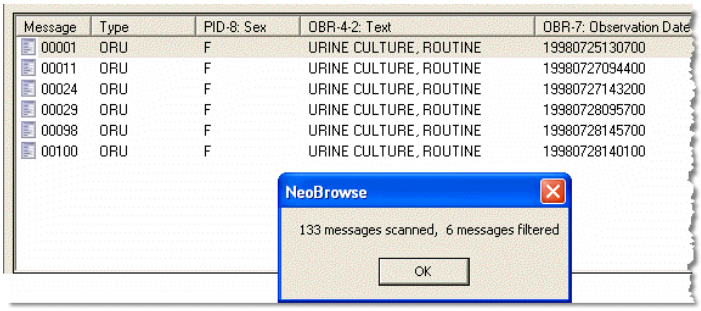
- Found anywhere in the message
- Found in a specified field
- Found in a specified field within a specified group

You can also combine filter criteria in order to filter for multiple values.



Left: Filter criteria used to only show messages pertaining to urine cultures done on female patients.

Right: The filter located 6 out of 133 messages that pertained to urine cultures performed on females.

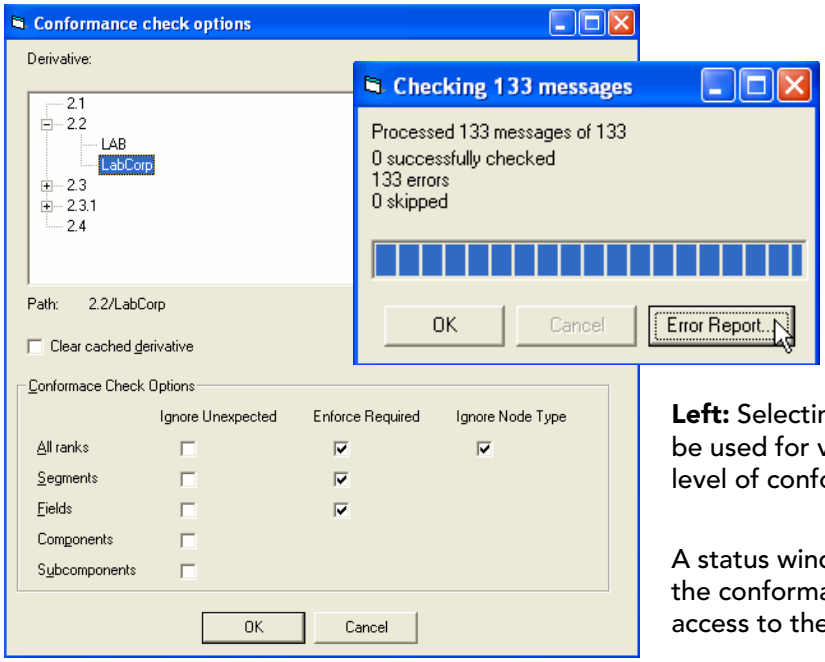


Editing Messages

HL7 Analyzer provides the ability to edit field values in messages for testing purposes. This reduces the dependence on a trading partner for sample messages. It also provides the ability to test for rare messages to ensure that the connections and message format appropriately handle all messages.

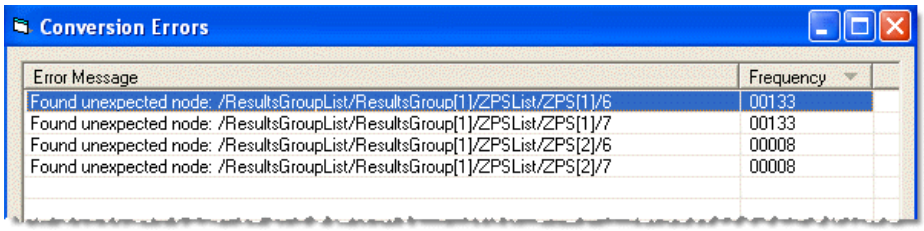
Conformance Checking

HL7 Analyzer provides validation of HL7 messages against the HL7 standard – this saves time by reducing message processing errors in target applications. Messages are checked for conformance and a validation error report provides a list of the differences between the message data and the expected message structure.



Left: Selecting the message format to be used for validation and the desired level of conformance check.

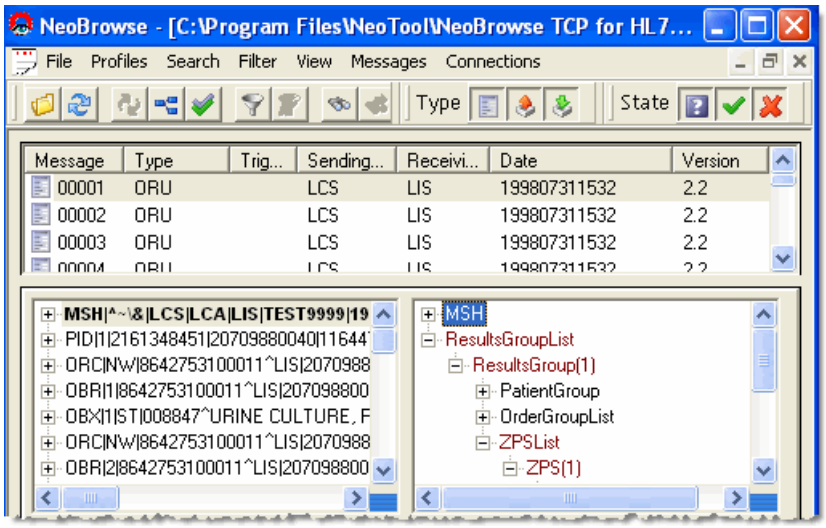
A status window shows the progress of the conformance check and provides access to the error report



Above: The validation error report shows each error found during the conformance check and how many times the error occurs in the file or message being checked. Use this information to adjust the expected message format or provide this data to your healthcare software vendor or external provider.

Viewing HL7 Format Issues

In addition to the ability to perform conformance checks, HL7 Analyzer automatically shows the parts of the message that do not conform to the message format in the hierarchical message format pane.

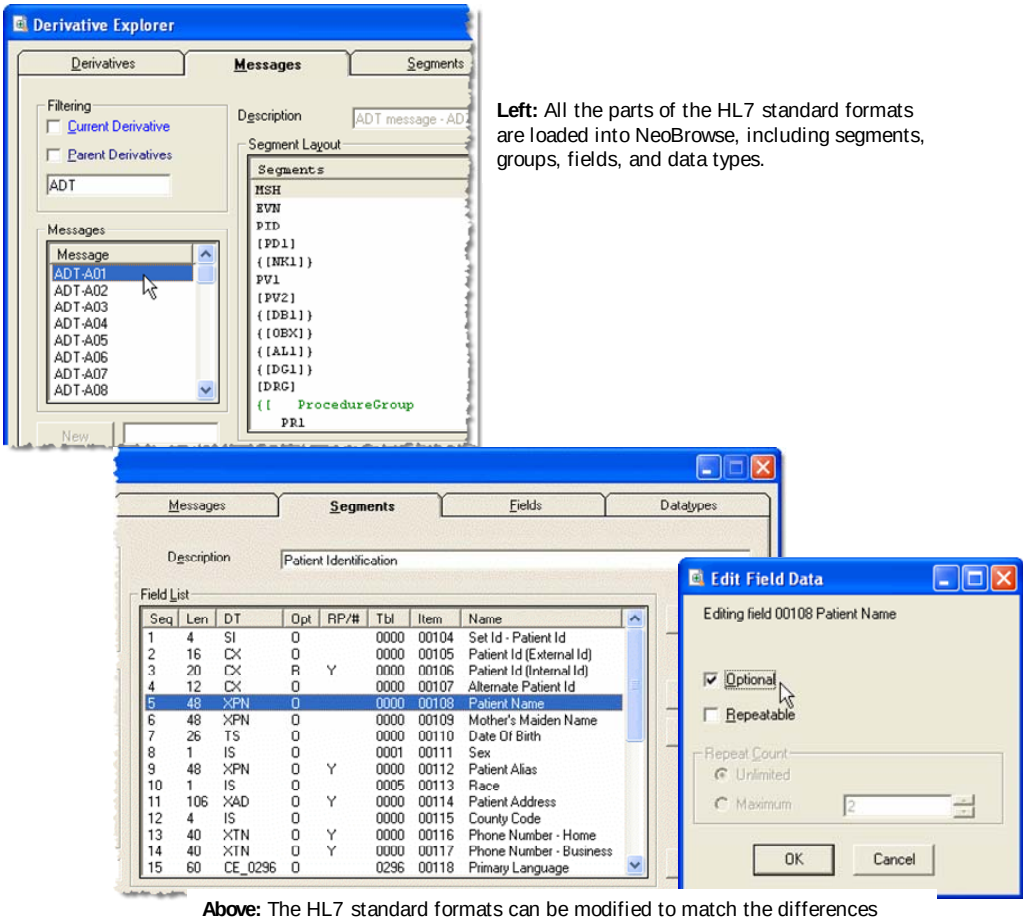


Left: The difference in the selected message format and the actual message is shown in red in the lower right-hand pane.

Customizable Message Formats

The HL7 messaging standard was designed with flexibility so that it could meet the unique requirements of the wide variety of healthcare facilities. This flexibility means that messages from different trading partners will most often have slightly different message formats.

HL7 Analyzer includes all the accepted HL7 message formats including the segments, groups, and fields. It provides the ability to create a custom format for a specific trading partner by easily modifying an existing standard. This custom format can then be used when testing and viewing messages from an external healthcare provider or application.

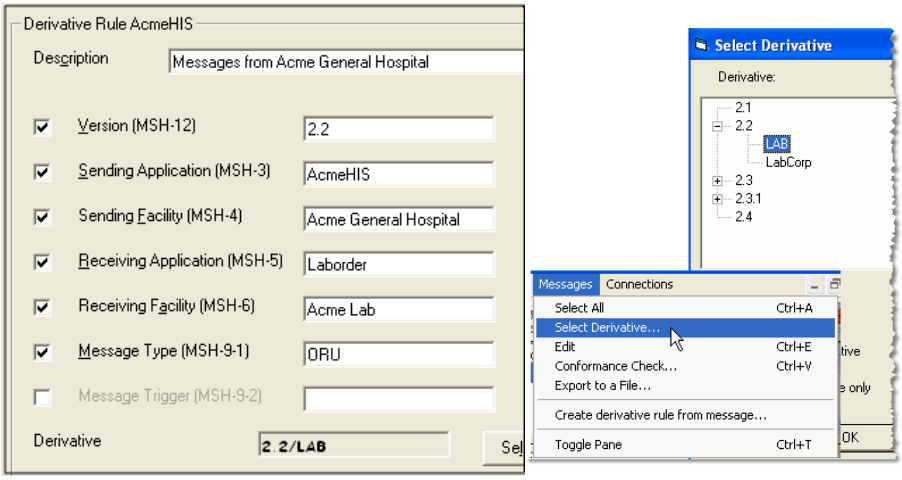


Left: All the parts of the HL7 standard formats are loaded into NeoBrowse, including segments, groups, fields, and data types.

Above: The HL7 standard formats can be modified to match the differences found in actual messages from external healthcare providers or applications.

Re-usable Message Formats

In addition to having the ability to define custom message formats, HL7 Analyzer saves the custom formats so they can be selected within HL7 Analyzer to use to view additional messages or files. Additionally, the message formats can be dynamically selected, by message, based upon user defined rules such as the HL7 version, the sending application and facility, receiving application and facility and the message type and trigger.

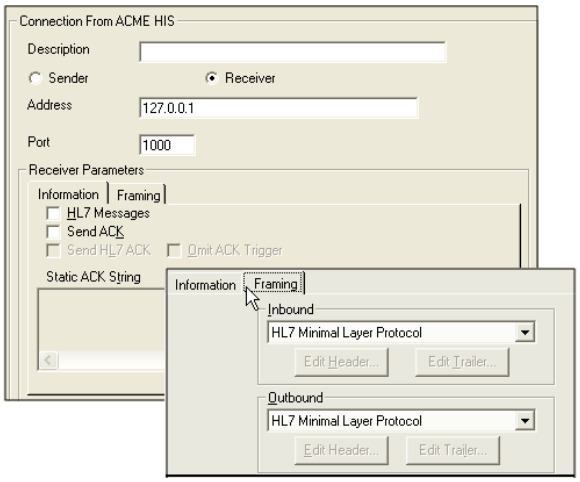


Right: HL7 Analyzer contains all the standard HL7 formats and custom formats you have created so you can select which format to use while viewing a specific file. HL7 Analyzer can be configured to dynamically open specific types of files using a specific message format.

Testing TCP/IP Connections

Using HL7 Analyzer, connections can be created within minutes including the type of connection (sender or receiver), the port number, the address and even acknowledgement (ACK) management. This provides complete assurance that the application will send and receive messages from your external healthcare providers or healthcare applications.

HL7 Analyzer provides deep TCP/IP support for HL7's Minimal Lower Layer Protocol (MLP or MLLP) and HL7's real time acknowledgement environment. HL7 Analyzer allows the user to select the dynamic behavior of each connection to control message resends, ACK types, etc.



Left: Receiver connection options in HL7 Analyzer

About Corepoint Health

Corepoint Health solutions deliver interoperability for healthcare organizations and simplify the complexities of healthcare data through practical software applications, consulting and training. Our innovative and proven software solutions leverage clinical data flow efficiently for a diverse group of healthcare entities including hospitals, imaging centers, laboratories, clinics and healthcare vendors. This next generation approach to healthcare data and streamlined workflow is where Corepoint Health specializes in helping customers discover the power of integration.
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