ORACLE

ASCII Delimited Format Plug-in User's Guide

Version 10g Release 3 (10.3)

ASCII DELIMITED **3**

CREATING AN ASCII DELIMITED MESSAGE **3**

ASCII DELIMITED EXTERNAL MESSAGE UI **5**

DEFINING AN ASCII DELIMITED MESSAGE FORMAT **6**

ASCII DELIMITED FORMAT OPTIONS 6
Delimiter *7*
Message Options *8*
Treat Entire Input/Output as a Single Message (Message Mode) 8
Treat Each Record as a Separate Message (Batch Mode) 9
Single Record Mode 9
Header/Trailer Option *10*
ADDING A NEW FIELD 11
SPECIFYING FIELD PROPERTIES 12
The *Required* Property 12
The Default Value Property 12
The *Format* Property 12
ARRANGING FIELDS 13
DELETING FIELDS 14

APPENDIX **14**

ASCII Delimited Format Specification 14

ASCII Delimited

Delimited ASCII files are a quick and succinct way of sending trading and account information over the wire. They are easy to parse with simple tokenizers. This format can be used in modeling simple messages in which fields of a record are separated by a delimiter character. It can be used to send/receive messages both in batch mode and in non-batch (message) mode.

See Also:

Creating an ASCII Delimited Message
ASCII Delimited External Message UI
Defining an ASCII Delimited Message Format
Appendix

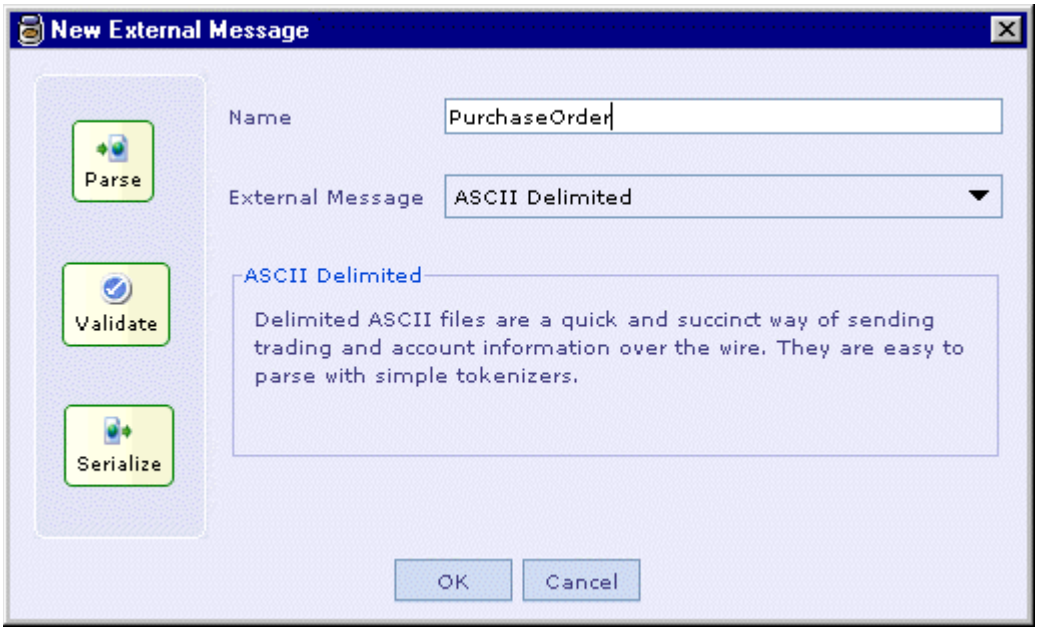
Creating an ASCII Delimited Message

Follow the steps given below to add an ASCII Delimited message node to the current cartridge.

1. Right-click the cartridge node or a Folder node.

2. Select the “Add Item” > “New External Message …” menu item from the popup menu that appears.

   The “New External Message” dialog will appear.



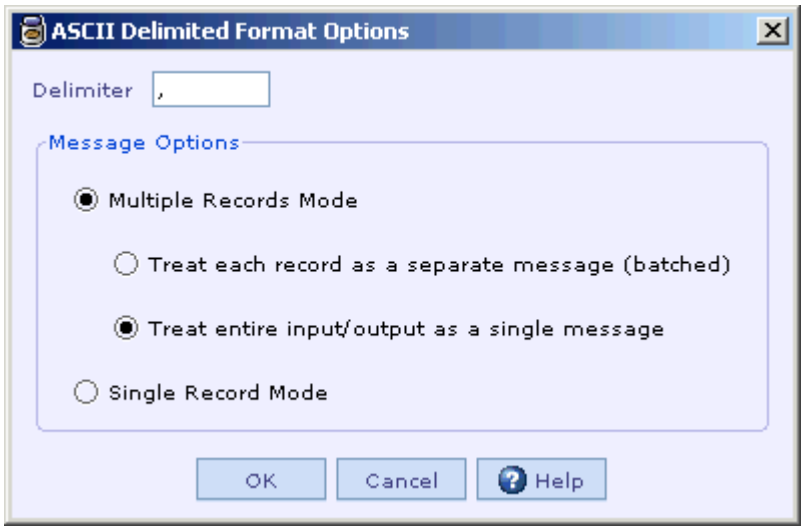
3. Select the “ASCII Delimited” item in the “External Message” drop down list.

4. Enter the name of the message in the “Name” text field.

5. Click on the OK button.

6. The “ASCII Delimited Format Options” dialog will appear.

   As can be seen, comma (,) is the default delimiter and “Treat entire input/output as a single message” is the default message option.



7. Change or leave the delimiter character as required.

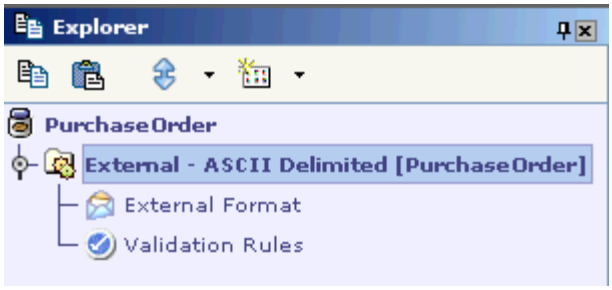
   See the Delimiter sub-section of the Specifying Format Options section for more information.

8. Change or leave the message option as required.

   See the Message Options sub-section of the Specifying Format Options section for more information.

9. Click on the OK button.

10. The external message node will be crated along with the “External Format” and “Validation Rules” child nodes.



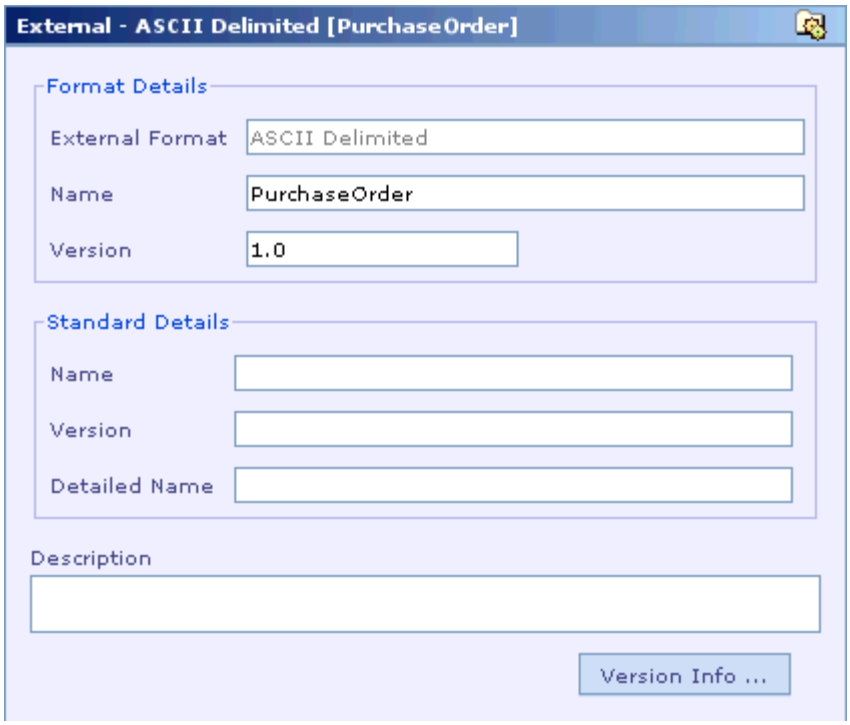
See Also:

[ASCII Delimited External Message UI]
[Defining an ASCII Delimited Message Format]
[Appendix]

ASCII Delimited External Message UI

In the External Message UI you can specify the following properties

Format Name. The name of the external format. This is a mandatory property.
Format Version. This is an optional property. This is a mandatory property.
Standard Name. The message name. This is an optional property.
Standard Version. This is an optional property.
Detailed Name. This is an optional property.
Description. This is an optional property.



See Also:

Creating an ASCII Delimited Message
Defining an ASCII Delimited Message Format

Defining an ASCII Delimited Message Format

The icons of the toolbar at the top of the ASCII Delimited External Format UI can be used for performing various operations involving the definition of the message format as explained in the following sections.

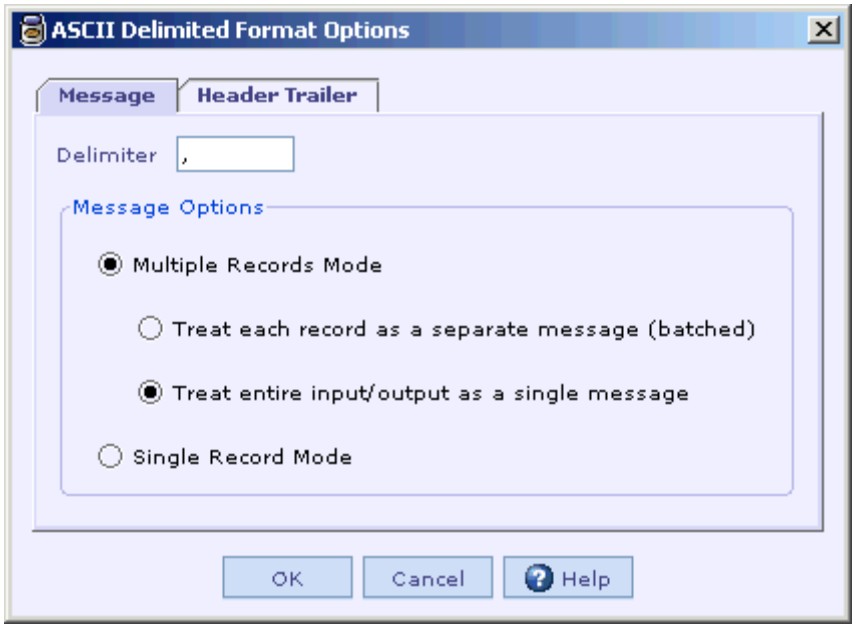
See Also:

ASCII Delimited Format Options
Adding a New Field
Specifying Field Properties
Arranging Fields
Deleting Fields
Creating an ASCII Delimited Message
Appendix

ASCII Delimited Format Options

The “ASCII Delimited Format Options” dialog shown when you click on the “Format Options” icon of the ASCII Delimited External Format UI toolbar allows you to specify,

- the delimiter character to be used in the message,
- the mode (single record/multi record/batched) in which the message will be used and
- whether the message consists of the Header/Trailer segements or not.



See Also:

Adding a New Field
Specifying Field Properties

Delimiter

The delimiter indicates the character that delimits the fields in the corresponding message.

Comma is the default delimiter and it can be changed to the required character by specifying it in the “Delimiter” text field of the “ASCII Delimited Format Options” dialog.

The following points should be noted while specifying the delimiter.

The delimiter must be a single character.

The delimiter cannot be letter or a digit.

A double quote (") character cannot be used as the delimiter. This is because the double quote character is used to delimit a quoted-field.

A line feed (\n) character cannot be used as the delimiter. This is because the line feed character is used as the Header/Data/Trailer delimiter. CRLF (carriage return and line feed) is the other Header/Data/Trailer delimiter.

Standard escape sequences other than \" and \n can be used as the delimiter. For example, the escape sequences \b, \f, \r, \t, \', \\ are valid delimiters.

Unicode literals (\uHHHH), hex literals (\#xHH) and octal literals (\ddd) can be used as the delimiter. For example, \u000C, \#x0C and \014 are valid delimiters.

See Also:

Message Options
Header/Trailer Option

Message Options

The ASCII Delimited format supports three types of messages and the message option indicates the type of the message.

The three message options supported by the ASCII Delimited format are given below.

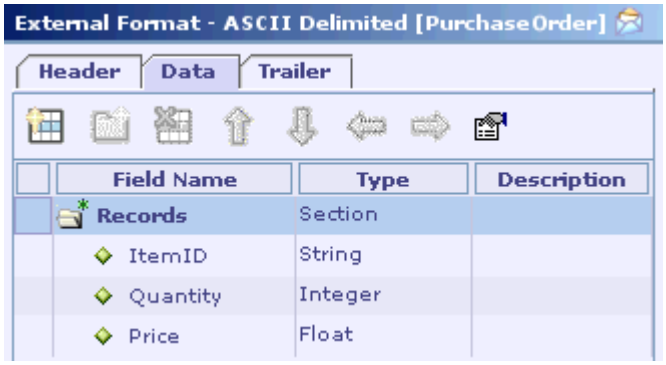
1. Treat each record as a separate message
2. Treat entire input/output as a single message
3. Single Record Mode

The user can specify the required message option by selecting the corresponding radio button in the “Message Options” section of the “ASCII Delimited Format Options” dialog.

Treat Entire Input/Output as a Single Message (Message Mode)

This option specifies that the message consists of multiple data records and all of them correspond to a single message (non-batch mode). This means that during parsing, the input message with N data records will result in a single parsed object.

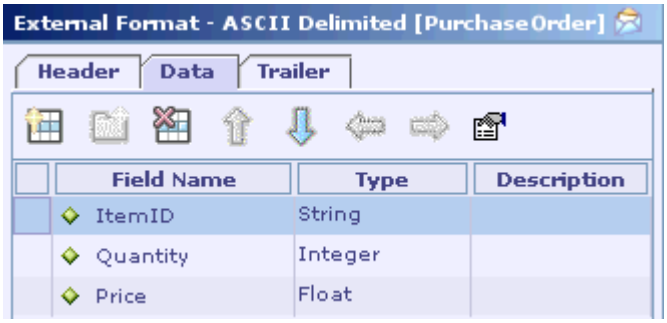
When this option is selected, a repeating section “Records” will appear at the top of the Data tab in the corresponding the External Format UI. It indicates that during parsing, the data records of the input message correspond to separate instances of this section under the same instance of the Data section and thus they correspond to a single message object.



Treat Each Record as a Separate Message (Batch Mode)

This option specifies that the message consists of multiple data records and each of them corresponds to a separate message. This means that during parsing, the input message with N data records will result in N parsed objects. Please note that if the input message consists of header/trailer, the same header/trailer is used for all message objects.

When this option is selected, the “Records” section will not be created at the top of the Data tab in the corresponding the External Format UI. This indicates that during parsing, each data record of the input message corresponds to a separate instance of the Data section and thus corresponds to a separate message object.

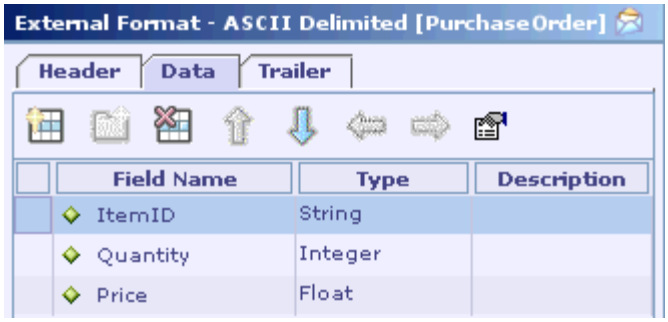


Single Record Mode

This option specifies that the message consists of exactly one data record and fields of the data record correspond to the fields defined in the Data section. This means that during parsing, the input message with one data record will result in a single parsed object.

When this option is selected, the “Records” section will not be created at the top of the Data tab in the corresponding the External Format UI. This indicates that during parsing, the data record of the input message corresponds to a separate instance of

the Data section. As there can be only one data record in the input message, there will be only one message object.

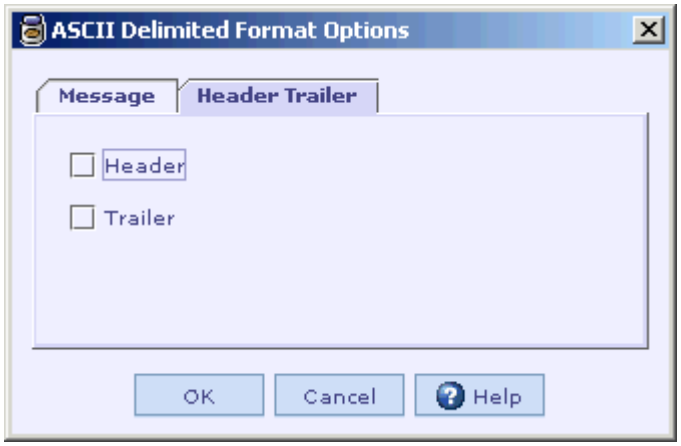


See Also:

Delimiter
Header/Trailer Option

Header/Trailer Option

An ASCII Delimited message can consist of Header, Data and Trailer segments. While the Data segment is mandatory, the Header and Trailer segments are optional. This means that you can define an ASCII Delimited message format consisting of only the Data segment. The 'Header Trailer' tab in the 'ASCII Delimited Format Options' dialog allows you to specify whether the message consists of the Header/Trailer segments.



When an ASCII Delimited message format is created, the Header and Trailer check boxes are deselected by default. This means that the message format and hence the message consists only of the Data segment. You need to select the corresponding check box to include the Header/Trailer segments.

See Also:

Delimiter
Message Options

Adding a New Field

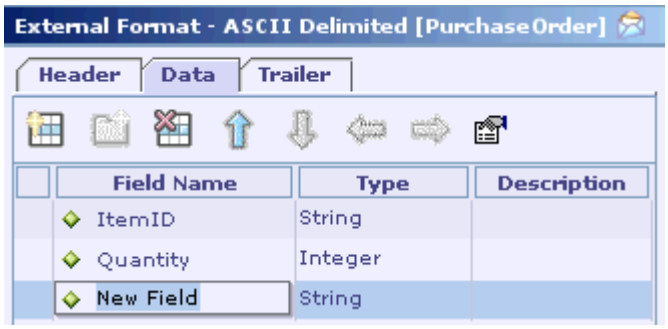
Follow the steps given below to add a new field to the message format.

1. Select the **External Format** node.

   The External Format UI is shown in the Design Element UI pane.

2. Click on the “Add New Field” icon in the toolbar at the top of the External Format UI.

   A new row appears in the message format table and its “Field Name” column is selected by default. If you have selected a row before clicking on the “Add New Field” icon, the new row is inserted immediately after the selected row.



3. Enter a name for the new field.

4. Enter the alias name of the new field in the “Alias” column, if required.

   The “Alias” column is hidden by default. To display that column, select the “Alias” menu item from the popup menu that appears when you right-click on the header row of the message format table.

5. Select the data type of the new field from the list of supported data types (BigDecimal, BigInteger, Binary, Boolean, Character, DateOnly, DateTime, Double, Float, ISODate, ISODateTime, ISOTime, Integer, Long, String and TimeOnly) that appears in the “Type” column.

6. Enter the description of the new field in the “Description” column, if required.

7. Specify the properties of the new field in the “Field Properties” panel that appears at the bottom the External Format UI. See the Specifying Field Properties section for information on the supported field properties.

See Also:

Specifying Field Properties
Arranging Fields
Deleting Fields

Specifying Field Properties

The *Required* Property

Set the required property of a field by selecting/deselecting the “Required” check box in the “Field Properties” panel. If a required field value is missing, an error is generated indicating the failure of the not null check. Designer indicates an optional field by displaying the ? indicator symbol besides the field icon. No indicator symbol is displayed in case of mandatory fields.

The *Default Value* Property

A default value for an optional field can be specified in the “Default Value” text field of the “Field Properties” panel. The default value is assigned to that field only if the corresponding field value is missing.

The following points should be noted while assigning a default value for a field.

The data type of the value should match the data type of the field.

The default value for a date/time field should match the specified format.

While specifying the default value for a **String** type field, the string value should not be enclosed in double quotes.

An expression can not be used to specify a default value.

The *Format* Property

If the selected field is of type Date, an additional property namely Format of the date can be specified in the **Format** combo box that is displayed as shown in the following picture. This property is mandatory.

Apart from the formats provided, the user can specify custom formats based on the following patterns. It should be noted that the date/time format to be specified is case-sensitive and the valid usage is as under:

yyyy or yy	Year
MM	Month
dd	Days
HH	Hour
mm	Minutes
ss	Seconds
SSS	milli-seconds

See Also:

Adding a New Field
Arranging Fields
Deleting Fields

Arranging Fields

The icons with arrow images in the External Format UI toolbar can be used to rearrange the position of the fields of a message format.

Once the required fields are selected, the user can click on these icons to arrange the position of these fields within the message format. Use the selection column (the empty column at the left) to select a field. To select a set of continuous fields, select the first field in the set and then SHIFT-click on the last field. Use CTRL-clicking to select a non-continuous field. CTRL-clicking on a selected field deselects it.

The following table describes the icons used to arrange the fields of an ASCII Delimited message format:

Icon	Purpose	Description

	Move Selection Up (Ctrl+Shift+Up)	This moves the selected field(s) up by one position. This icon is disabled when the top of the message format table is reached.
	Move Selection Down (Ctrl+Shift+Down)	This moves the selected field(s) down by one position. This icon is disabled when the bottom of the message format table is reached.
	Move Selection Left	Always disabled.
	Move Selection Right	Always disabled.

See Also:

Deleting Fields

Deleting Fields

Follow the steps given below to remove a set of fields from the internal message format at once.

1. Select the fields/sections to be removed.

   SHIFT-click in the selection column to select a set of continuous fields and CTRL-click in the selection column to select any non-continuous field without affecting the current selection.

2. Click on the Remove Selected Field(s) icon .

Note

If a section is removed, all of its constituent fields are also removed.

See Also:

Adding a New Field
Arranging Fields

Appendix

ASCII Delimited Format Specification

The specification for ASCII Delimited format is as given below:

1. Fields are separated by the given field delimiter character.

2. A field may be enclosed in double-quote characters "...".

3. A quoted-field may contain the delimiter character as part of it, but it cannot contain new lines.

4. A quoted-field may contain a double-quote character (") as part of it, represented by two successive double-quote characters ("").

5. Field containing only white space characters or no character is treated as a null field.

6. A zero length quoted string ("") is treated as a value and not as a null field.

7. Leading and trailing white space within a quoted-field is preserved.

8. In an unquoted field, leading and trailing white space is not preserved.

9. In case of a quoted-field, the opening quote must immediately follow the field delimiter. Similarly the closing quote must be immediately followed by the field delimiter.

   ### Clarification:

   There should not be any white space character between the field delimiter and the opening quote of a quoted-field. Likewise, there should not be any white space character between the closing quote of the quoted-field and the next field delimiter.

10. Header/Data/Trailer segments are delimited by either CRLF (\r\n) or LF (\n).

See Also:

Creating an ASCII Delimited Message
Defining an ASCII Delimited Message Format