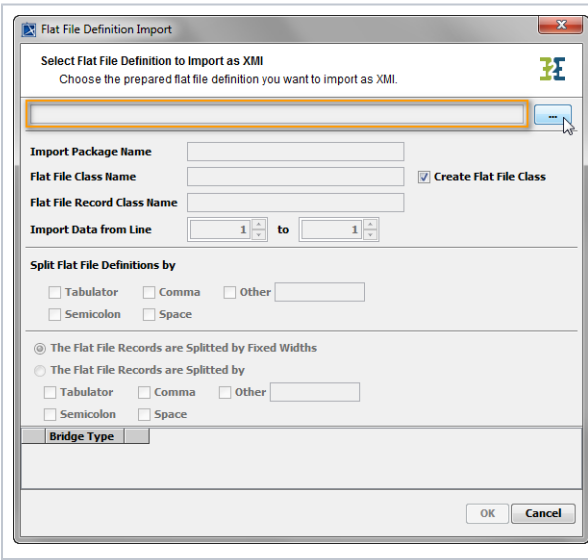
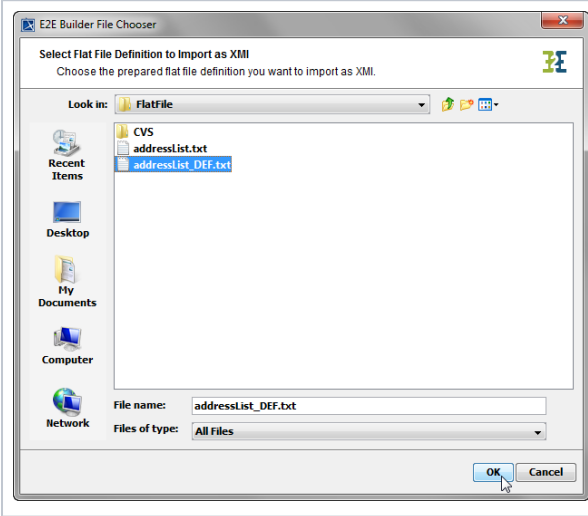


# Importing Flat File Definitions

The E2E Flat File Definition Importer allows to import flat file definitions enabling the parsing and composing of flat files with delimited or fixed width fields. The importer uses this existing documentation and generates all necessary classes in the UML model. The only requirement for these flat file definitions is that the records and its attributes are described in a table or column oriented text file. For more details on using these classes and the Flat File adapter refer to the description of the [Flat File Adapter](#).

Start the import of flat file definitions by selecting **Import > Flat File Definition** from the E2E Model Compiler menu. On the Flat File Importer dialog, select the appropriate settings for the import as described in the following sections.

## Flat File Definition Import Dialog

 <p>The 'Flat File Definition Import' dialog box is shown. It has a title bar with a close button. The main area contains several sections: 'Select Flat File Definition to Import as XML' with a text box and a button; 'Import Package Name' with a text box; 'Flat File Class Name' with a text box and a checked 'Create Flat File Class' checkbox; 'Flat File Record Class Name' with a text box; 'Import Data from Line' with two spin boxes set to 1; 'Split Flat File Definitions by' with radio buttons for 'Tabulator', 'Comma', 'Other', 'Semicolon', and 'Space'; and 'The Flat File Records are Splitted by' with radio buttons for 'Fixed Widths', 'Tabulator', 'Comma', 'Other', 'Semicolon', and 'Space'. At the bottom are 'OK' and 'Cancel' buttons.</p>	<p>First, select the flat file definition by clicking as displayed in the picture.</p>
 <p>The 'E2E Builder File Chooser' dialog box is shown. It has a title bar with a close button. The main area contains a 'Look in:' dropdown set to 'FlatFile', a list of files including 'CVS', 'addressList.txt', and 'addressList_DEF.txt', and a 'File name:' text box containing 'addressList_DEF.txt'. At the bottom are 'OK' and 'Cancel' buttons.</p>	<p>Navigate to the flat file definition and select it.</p>

### On this Page:

- [Flat File Definition Import Dialog](#)
- [Composition of the Field Specification Table](#)
  - [Bridge Type](#)
  - [Column Specification](#)
- [Importing Flat File Definitions into an Existing UML Model](#)
- [Importing Flat File Definitions into a New UML Model](#)
- [Generated Classes of the Flat File Definition Importer](#)

### Related Pages:

- [Warnings during the Import of Flat File Definitions](#)
- [Flat File Adapter](#)

Flat File Definition Import	
Select Flat File Definition to Import as XML Choose the prepared flat file definition you want to import as XML.	
e:\e2e_services\Tests\InstallerTest\TestFiles_ImporterTest\FlatFile\addressList_DEF.txt	
Import Package Name	addressList_DEF
Flat File Class Name	addressList_DEF
Flat File Record Class Name	addressList_DEF_Record
Import Data from Line	1 to 5
Split Flat File Definitions by	
<input type="checkbox"/> Tabulator <input type="checkbox"/> Comma <input type="checkbox"/> Other <input type="text"/>	
<input type="checkbox"/> Semicolon <input type="checkbox"/> Space	
<input checked="" type="radio"/> The Flat File Records are Splitted by Fixed Widths	
<input type="radio"/> The Flat File Records are Splitted by	
<input type="checkbox"/> Tabulator <input type="checkbox"/> Comma <input type="checkbox"/> Other <input type="text"/>	
<input type="checkbox"/> Semicolon <input type="checkbox"/> Space	
Bridge Type	-
1String	name1;30;surname of the customer
2String	name2;30;christian name
3String	address;100;address
OK Cancel	

The importer reads the flat file definition and enables all options on the dialog to specify the format of the definitions and the records of the flat file that will be processed by the service.

The dialog window is split into four sections.

Import Package Name	addressList
Flat File Class Name	addressList
Flat File Record Class Name	addressList_Record
Import Data from Line	1 to 5
Split Flat File Definitions by	
<input type="checkbox"/> Tabulator <input type="checkbox"/> Comma <input type="checkbox"/> Other <input type="text"/>	
<input type="checkbox"/> Semicolon <input type="checkbox"/> Space	

The first section defines the name of the import package and the name of the class and the record class, which will represent flat file records. These classes and another class representing the flat file itself will be generated by the importer.
It is possible to select only a range of data lines of the flat file definitions to import different classes from the same definition file.

The second section <b>Split Flat File Definitions by</b> defines the column delimiter of the flat file definitions. After choosing the correct setting, the identified fields are shown in the table at the bottom of the dialog window. The values should be clearly separated in columns. Otherwise, choose another delimiter.
--

<input checked="" type="radio"/> The Flat File Records are Splitted by Fixed Widths <input type="radio"/> The Flat File Records are Splitted by <input type="checkbox"/> Tabulator <input type="checkbox"/> Comma <input type="checkbox"/> Other <input type="text"/> <input type="checkbox"/> Semicolon <input type="checkbox"/> Space	The third section defines the type of the flat file itself. Select, if it is a fixed width or separated file. If it is separated, the correct delimiter has to be chosen.												
<table border="1"> <thead> <tr> <th>Bridge Type</th><th>...</th></tr> </thead> <tbody> <tr> <td>1String</td><td>name1;30;surname of the customer</td></tr> <tr> <td>2String</td><td>name2;30;christian name</td></tr> <tr> <td>3String</td><td>address;100;adress</td></tr> <tr> <td>4String</td><td>phone;20;telephone number</td></tr> <tr> <td>5String</td><td>orderDate;8;date of the last order</td></tr> </tbody> </table>	Bridge Type	...	1String	name1;30;surname of the customer	2String	name2;30;christian name	3String	address;100;adress	4String	phone;20;telephone number	5String	orderDate;8;date of the last order	The fields identified in the flat file definitions are shown in the table at the bottom of the dialog window, the fourth section of the dialog window. The field specifications are separated by columns.
Bridge Type	...												
1String	name1;30;surname of the customer												
2String	name2;30;christian name												
3String	address;100;adress												
4String	phone;20;telephone number												
5String	orderDate;8;date of the last order												

## Composition of the Field Specification Table

The field specification table is composed as follows:

Element	Description
<b>Line Number</b>	The first column shows the line number of the flat file definition file.
<b>Bridge Type</b>	The <b>Bridge Type</b> can be selected for each field. The importer will assign the selected Bridge base type to each attribute of the generated flat file record class.
<b>Column Specification</b>	Assign some pre-defined E2E parameters to specify the content of the column.

### Bridge Type

In the third column, the **Bridge Type** can be selected for each field. The importer will assign the selected Bridge base type to each attribute of the generated flat file record class. By default, all attributes are defined as **String**. Choose one of the following base types by clicking the field for each data line:

Bridge Type	...
1String	name1;30;surname of the customer
2String	name2;30;christian name
3Integer	address;100;adress
4Float	phone;20;telephone number
5Boolean	orderDate;8;date of the last order
DateTime	
Blob	

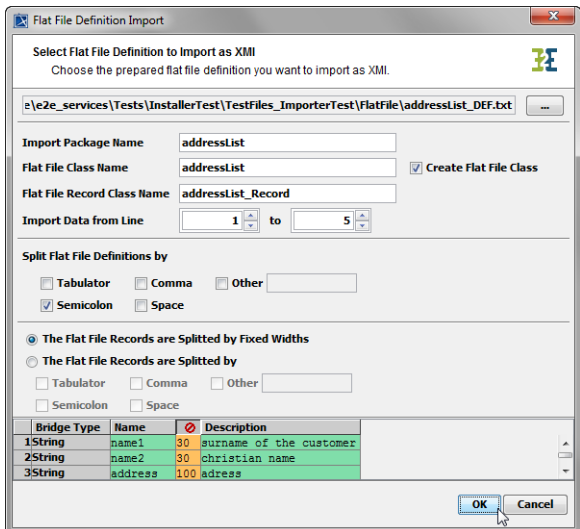
### Column Specification

In the next step, the content of the remaining columns needs to be assigned to some pre-defined E2E parameters defining the content of a column.

Bridge Type	...		
1String	name1	Name	customer
2String	name2	Length	
3String	address	Description	
4String	phone	Compose Macro	order
5String	order	Format	
		Padding	
		Parse Macro	
		Suppress Escaping	
		Additional Info	
		Ignore	

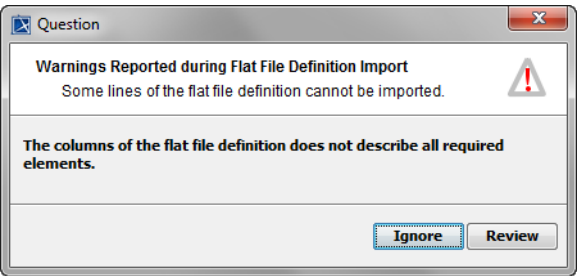
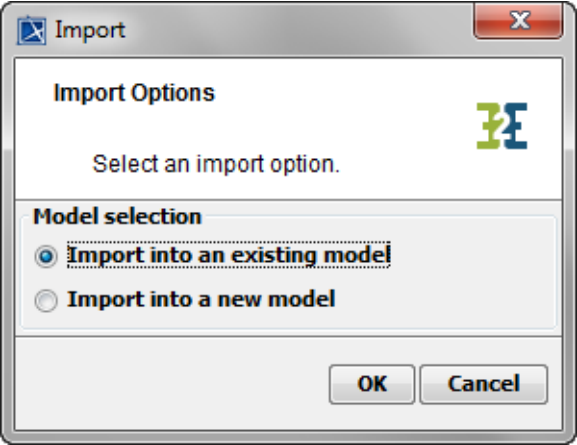
Clicking the header of each column with the right mouse button will open a context menu providing all possible parameters. Depending whether the flat file contains fixed width or delimited fields, the available parameters for each field can be selected as shown in the table below. Each parameter can only be selected once except for the parameters **Additional Info** and **Ignore**.

Parameter	Description	Fixed Length (FIX) / Delimited (DEL)
Name	The data of this column contains the name of the attribute, which will be added to the flat file record class.	FIX / DEL
Description	The data of this column contains the description of the attribute, which will be added to the documentation field of the class attribute.	FIX / DEL
Additional Info	The data of this column will be appended to the documentation field of the class attribute. If defined more than once, each additional info will be shown in a separated line. This parameter can be selected several times.	FIX / DEL
Ignore	This column will not be imported. You may ignore more than one columns. Ignored columns are displayed in orange.	FIX / DEL
Offset	This column contains the position within a flat file record where the field begins. The position counting starts at position zero. This information is stored in the tagged value <b>offset</b> of each class attribute.	FIX
Length	This column contains the length of the field in number of characters. This information is stored in the tagged value <b>externalLength</b> of each class attribute.	FIX



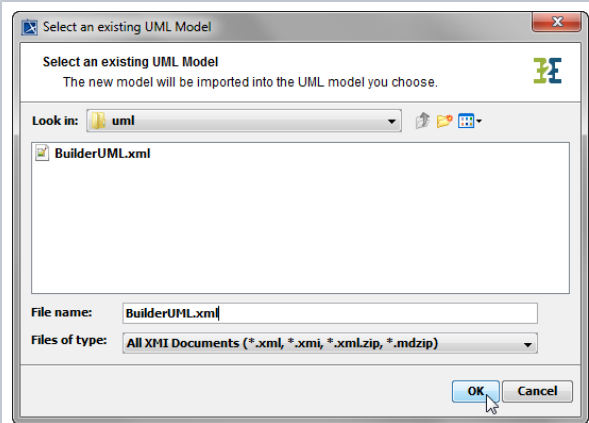
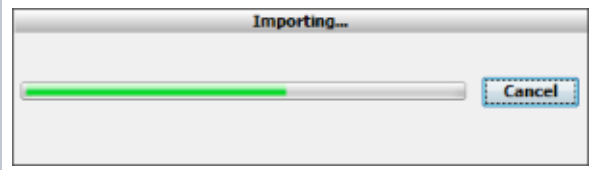
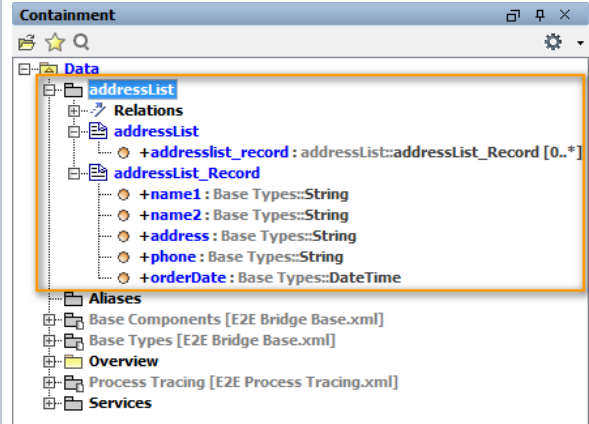
The dialog box 'Flat File Definition Import' is shown. It has a title bar with a close button. Inside, it says 'Select Flat File Definition to Import as XML' and 'Choose the prepared flat file definition you want to import as XML.' Below this is a text field with the path 'e:\e2e\_services\Tests\InstallerTest\TestFiles\_ImporterTest\FlatFile\addressList\_DEF.txt' and a browse button. There are three input fields: 'Import Package Name' (addressList), 'Flat File Class Name' (addressList), and 'Flat File Record Class Name' (addressList\_Record). A checkbox 'Create Flat File Class' is checked. Below these is 'Import Data from Line' with a range '1' to '5'. A section 'Split Flat File Definitions by' has radio buttons for 'Tabulator', 'Comma', 'Other', 'Semicolon', and 'Space'. The 'Semicolon' option is selected. Below this is a section 'The Flat File Records are Splitted by' with radio buttons for 'Fixed Widths', 'Tabulator', 'Comma', 'Other', 'Semicolon', and 'Space'. The 'Fixed Widths' option is selected. At the bottom is a table with columns 'Bridge Type', 'Name', and 'Description'. It contains three rows: '1String name1 30 surname of the customer', '2String name2 30 christian name', and '3String address 100 address'. At the bottom right are 'OK' and 'Cancel' buttons.

All columns need to be assigned to a parameter. Otherwise, the **OK** button of the dialog remains disabled. If all settings are done, click **OK** to start the import.

	<p>If your parameter definitions are violating constraints (e.g. if you're omitting the length parameter), you'll get a warning like the one on the left. You can <b>Ignore</b> the warning and continue with importing the flat file, accepting that some information will be lost during the import. To return to the flat file definition import dialog click <b>Review</b>.</p>
	<p>The flat file definitions can be imported into either an <b>existing</b> or a <b>new</b> UML model. See sections</p> <ul style="list-style-type: none"> <li>• Importing Flat File Definitions into an Existing UML Model and</li> <li>• Importing Flat File Definitions into a New UML Model.</li> </ul> <p>If the import process shows warnings, refer to <a href="#">Warnings during the Import of Flat File Definitions</a>. The import process may also be canceled clicking <b>Cancel</b>.</p>

## Importing Flat File Definitions into an Existing UML Model

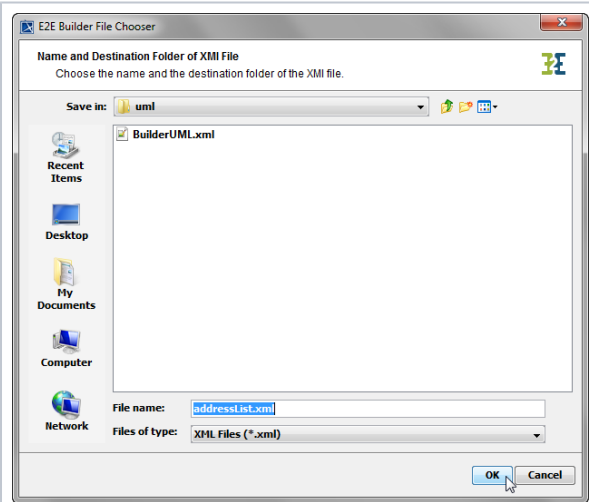
Wanting to import a flat file definition into an existing UML model, proceed as follows.

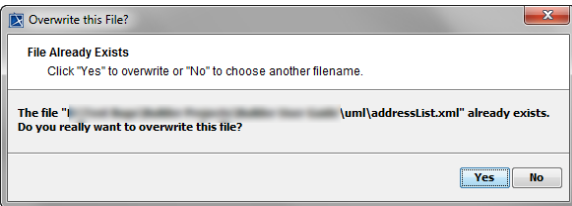
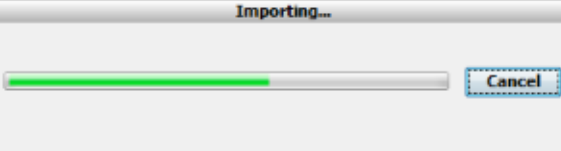
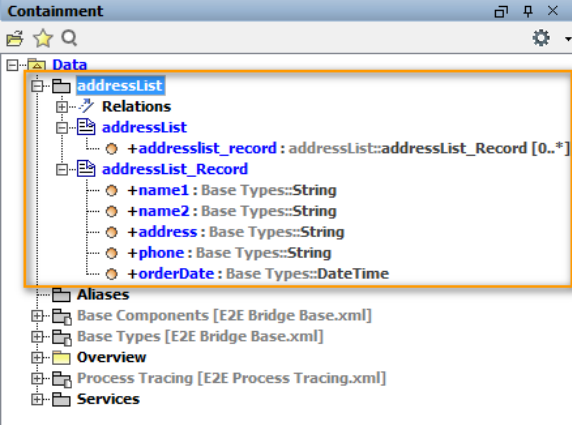
	<p>Select the UML model, in which the flat file definition should be imported. The <b>uml</b> source path of the current Builder project will be suggested. Select an XMI file and click <b>OK</b>.</p>
	<p>After a few seconds, the chosen target XMI file will be loaded.</p>
	<p>The imported types will be stored in the package <b>Data / &lt;Import Package Name&gt;</b>.</p>

You need to save the UML model to persist the imported entities and packages.

## Importing Flat File Definitions into a New UML Model

Wanting to import a flat file definition into a new UML model, proceed as follows.

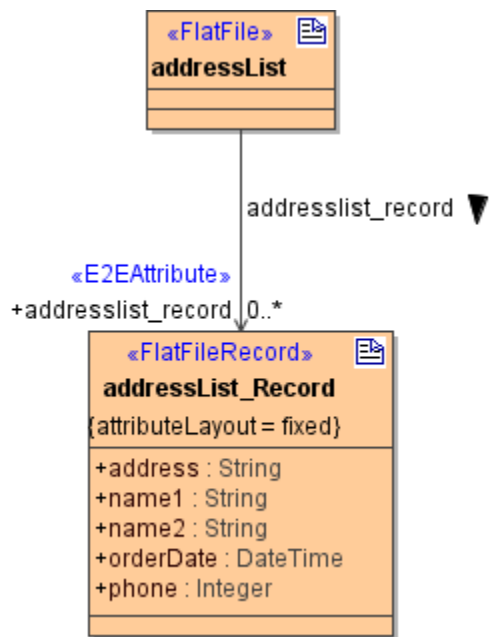
	<p>Choose the directory, in which the new XML file should be stored. The <b>uml</b> source path of the current Builder project will be suggested. Furthermore, a file name derived from the selected class name will be suggested in the <b>File Name</b> field. Modify the file name according your needs and and click <b>OK</b>.</p>
---	---

 <p>Overwrite this File?</p> <p>File Already Exists</p> <p>Click "Yes" to overwrite or "No" to choose another filename.</p> <p>The file "I:\UML\addressList.xml" already exists. Do you really want to overwrite this file?</p> <p>Yes No</p>	<p>If the file already exists, you will be asked whether you want to overwrite it.</p>
 <p>Importing...</p> <p>Cancel</p>	<p>After a few seconds, the new UML model will be opened in MagicDraw.</p>
 <p>Containment</p> <p>Data</p> <ul style="list-style-type: none"> <li>addressList <ul style="list-style-type: none"> <li>Relations <ul style="list-style-type: none"> <li>addressList <ul style="list-style-type: none"> <li>+addresslist_record : addressList::addressList_Record [0..*]</li> </ul> </li> <li>addressList_Record <ul style="list-style-type: none"> <li>+name1 : Base Types::String</li> <li>+name2 : Base Types::String</li> <li>+address : Base Types::String</li> <li>+phone : Base Types::String</li> <li>+orderDate : Base Types::DateTime</li> </ul> </li> </ul> </li> </ul> </li> <li>Aliases <ul style="list-style-type: none"> <li>Base Components [E2E Bridge Base.xml]</li> <li>Base Types [E2E Bridge Base.xml]</li> <li>Overview</li> <li>Process Tracing [E2E Process Tracing.xml]</li> <li>Services</li> </ul> </li> </ul>	<p>The imported types will be stored in the package <b>Data / &lt;Import Package Name&gt;</b>.</p>

New UML models that are created by the Importer are not based on the Bridge template and can be used as module. Alternatively, you may want to import such models into another UML model that is based on this template later.

## Generated Classes of the Flat File Definition Importer

The Importer generates two classes. One with the settings for the flat file, having the stereotype `<<Flat File>>`. The other class represents the flat file records and has the stereotype `<<Flat File Record>>`. Between these two classes, a directed association is generated by default. The association end belonging to the record definition is adorned with the stereotype `<<E2E Attribute>>` and a multiplicity. For more details, refer to the description of the [Flat File Adapter](#) in the Reference Guide.



The settings made in the Importer are cached. If you open the Importer again, all the settings of the last import are shown again. For importing an additional class from the same flat file definition file, change the name of the class in the first section of the dialog and define a divergent range of data lines.

If you want to overwrite an existing class by repeating the import with the same class name, delete the imported package in the containment tree of the UML model first. Otherwise, the attributes and tagged values of the new and the old class will be mixed.

The settings of the Importer are cached, as long MagicDraw is open.