

CAPLIN

Caplin Trader 2.0

Grid Configuration XML Reference

November 2010

CONFIDENTIAL

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1 Preface

1.1 What this document contains

This reference document describes the XML-based configuration that defines the layout and functionality of grids displayed in Caplin Trader.

About Caplin document formats

This document is supplied in three formats:

- ◆ Portable document format (*.PDF* file), which you can read on-line using a suitable PDF reader such as Adobe Reader®. This version of the document is formatted as a printable manual; you can print it from the PDF reader.
- ◆ Web pages (*.HTML* files), which you can read on-line using a web browser. To read the web version of the document navigate to the *HTMLDoc_m_n* folder and open the file *index.html*.
- ◆ Microsoft HTML Help (*.CHM* file), which is an HTML format contained in a single file. To read a *.CHM* file just open it – no web browser is needed.

For the best reading experience

On the machine where your browser or PDF reader runs, install the following Microsoft Windows® fonts: Arial, Courier New, Times New Roman, Tahoma. You must have a suitable Microsoft license to use these fonts.

Restrictions on viewing .CHM files

You can only read *.CHM* files from Microsoft Windows.

Microsoft Windows security restrictions may prevent you from viewing the content of *.CHM* files that are located on network drives. To fix this either copy the file to a local hard drive on your PC (for example the Desktop), or ask your System Administrator to grant access to the file across the network. For more information see the Microsoft knowledge base article at <http://support.microsoft.com/kb/896054/>.

1.2 Who should read this document

This document is intended for System Administrators and Software Developers who need to configure grids for Caplin Trader.

1.3 Related documents

- ◆ **Caplin Trader Client: Customizing the Appearance**

This document describes how to modify the layout of the Caplin Trader Reference Implementation. It also explains how to change aspects of the look and feel of the Caplin Trader.

- ◆ **Caplin Trader Client: Composite Component Configuration XML Reference**

Describes the XML-based configuration that defines the layout and functionality of the composite display component in Caplin Trader. Composite display components can contain grids.

◆ **Caplin Trader: API Reference**

The API reference documentation provided with Caplin Trader. The classes and interfaces of this API allow you to extend the capabilities of Caplin Trader.

1.4 Typographical conventions

The following typographical conventions are used to identify particular elements within the text.

Type	Uses
/AFolder/Afile.txt	File names, folders and directories
Some code;	Program output and code examples
value	XML tag and attribute names
XYZ Product Overview	Document name
◆	Information bullet point
■	Action bullet point – an action you should perform

Note: Important Notes are enclosed within a box like this.
Please pay particular attention to these points to ensure proper configuration and operation of the solution.

Tip: Useful information is enclosed within a box like this.
Use these points to find out where to get more help on a topic.

1.5 Feedback

Customer feedback can only improve the quality of our product documentation, and we would welcome any comments, criticisms or suggestions you may have regarding this document.

Visit our feedback web page at <https://support.caplin.com/documentfeedback/>.

1.6 Technical assumptions and restrictions

XML

The XML markup defined in this document conforms to XML version 1.0 and the XML schema version defined at <http://www.w3.org/2001/XMLSchema>.

2 Introduction to grids

Caplin Trader can display data within panels in a grid format. A grid is a table of data where all of the rows of the table have a similar set of properties (fields), and the format of the data displayed under a particular column is identical for each of the rows.

Here is an example of a grid, as displayed by the reference implementation of Caplin Trader:



Currency	Rate
EURUSD	1.5622/1.5644
USDJPY	102.29/102.30
GBPUKD	1.9946/1.9949
USDCHF	1.0025/1.0027
AUDUSD	0.9189/0.9191
USDCAD	1.0010/1.0017
NZDUSD	0.7830/0.7833
EURJPY	159.69/159.96
EURGBP	0.7806/0.7819
EURCHF	1.5663/1.5692

Example grid display

This example is a grid that displays a list of major FX currency pairs. It is displayed within a rectangular display panel. The grid has a name (Major FX), which is displayed in the tab attached to the display panel. It has two columns, with headings Currency and Rate. Each table cell under the Currency column contains the name of a currency pair as simple text. Each cell under the Rate column contains the Bid and Ask prices for the currency, separated by a '/' character.

Grids are an ideal mechanism for displaying large quantities of summary data in tabular format. You can attach renderers to the headings and cells of a grid; these allow you to modify the appearance and behavior of particular cells and column headers. For example, rate values can be made into "links" (as shown in the example grid display), where clicking on a link will display a trade ticket for the associated currency pair.

Grids are optimized to handle large tables efficiently. Caplin Trader displays a scroll bar that represents all the available data in the grid, but it only registers for streaming data from the rows that are currently visible.

You can create simple grids using the XML configuration defined in this document. There is also a well defined API (see the **Caplin Trader: API Reference** documentation), with suitable extension points, that allows you to implement more complex grids with custom styling and behavior.

2.1 An example configuration file

An example XML file describing a simple grid configuration is shown below.

The [XML Reference information](#)^[12] section defines the XML tags and attributes you can use to define grid layouts in Caplin Trader pages. Also see the section [Ordering and nesting of tags](#)^[12].

XML for a simple grid configuration

```

<?xml version="1.0"?>
<gridDefinitions xmlns="http://www.caplin.com/CaplinTrader/grid">

    <dataProviderMappings>
        <dataProviderMapping id="rttpContainerGridDataProvider"
            className="caplin.grid.RttpContainerGridDataProvider" />
    </dataProviderMappings>

    <decoratorMappings>
        <decoratorMapping id="dragDecorator"
            className="caplin.grid.decorator.DragDecorator" />
    </decoratorMappings>

    <templates>
        <gridTemplate id="All">
            <decorators>
                <dragDecorator />
            </decorators>
        </gridTemplate>

        <gridTemplate id="FX" baseTemplate="All" displayedColumns="description,rate">
            <columnDefinitions>
                <column id="description"
                    fields="InstrumentDescription"
                    displayName="Currency" width="70"
                    mandatory="true"/>

                <column id="rate"
                    cellRenderer="fx-spread"
                    fields="BestBid,BestAsk"
                    displayName="Rate"
                    width="100"/>

                <column id="bestbid"
                    cellRenderer="fx-price"
                    fields="BestBid"
                    displayName="Best Bid"
                    width="100"/>

                <column id="bestask"
                    cellRenderer="fx-price"
                    fields="BestAsk"
                    displayName="Best Ask"
                    width="100"/>
            </columnDefinitions>
        </gridTemplate>
    </templates>

    <grids>
        <grid id="FX.Major" displayName="Major FX" baseTemplate="FX">
            <gridRowModel>
                <rttpContainerGridDataProvider container="/CONTAINER/FX/Major" />
            </gridRowModel>
        </grid>

        <grid id="FX.Minor" displayName="Minor FX" baseTemplate="FX">
            <columnDefinitions>
                <column id="description" headerRenderer="textFilter" />
            </columnDefinitions>
            <gridRowModel>
                <rttpContainerGridDataProvider container="/CONTAINER/FX/Minor" />
            </gridRowModel>
        </grid>
    </grids>

```

This configuration defines two grids that display FX information:

Major FX	
Currency	Rate
EURUSD	1.5622/1.5644
USDJPY	102.29/102.30
GBPUKD	1.9946/1.9949
USDCHE	1.0025/1.0027
AUDUSD	0.9189/0.9191
USDCAD	1.0010/1.0017
NZDUSD	0.7830/0.7833
EURJPY	159.69/159.96
EURGBP	0.7806/0.7819
EURCHF	1.5663/1.5692

Minor FX	
Currency	Rate
CADMXN	10.511/10.521
AUDZAR	7.1640/7.1708
CHFZAR	7.7703/7.7774
DKKZAR	1.6348/1.6363
EUREEK	15.693/15.701
EURISK	115.71/115.98
EURLTL	3.4251/3.4328
EURRON	3.6585/3.6719
EURSKK	32.523/32.642
EURZAR	12.169/12.195

```
<grid id="FX.Major"
displayName="Major FX" ...>
```

```
<grid id="FX.Minor"
displayName="Minor FX" ...>
```

An explanation of the example XML configuration

Here is an explanation of what the example XML configuration contains and how this relates to what the end-user sees on the screen:

- ◆ `<dataProviderMappings>` contains the definition of a single data provider that supplies the data to a grid:

```
<dataProviderMappings>
  <dataProviderMapping id="rttContainerGridDataProvider"
    className="caplin.grid.RttContainerGridDataProvider" />
</dataProviderMappings>
```

The `<dataProviderMapping>` tag defines the JavaScript class that implements the data provider. It maps this class to an id (`rttContainerGridDataProvider`) that the rest of the XML configuration can use as a tag (`<rttContainerGridDataProvider>`) which refers to this particular data provider.

- ◆ `<decoratorMappings>` contains the definition of a grid decorator called `dragDecorator`:

```
<decoratorMappings>
  <decoratorMapping id="dragDecorator"
    className="caplin.grid.decorator.DragDecorator" />
</decoratorMappings>
```

Decorators define various aspects of what the grid looks like and how it behaves. In this particular case the drag decorator is specified. A drag decorator allows an instrument to be dragged out of a grid, so it can be dropped into other screen component, such as a trade panel.

The `<decoratorMapping>` tag defines the JavaScript class that implements the drag decorator. It maps this class to an id (`dragDecorator`) that the rest of the XML configuration can use as a tag (`<dragDecorator>`) to refer to this particular decorator.

- ◆ `<templates>` contains the definitions of two grid templates (`<gridTemplate>`):

```
<templates>
  <gridTemplate id="All">
    <decorators>
      <dragDecorator />
    </decorators>
  </gridTemplate>

  <gridTemplate id="FX" baseTemplate="All" displayedColumns="description,rate">
    ...
  </gridTemplate>
</templates>
```

Grid templates allow grids to be defined in an inheritance hierarchy. In this example there is a basic grid template called “ALL”, which consists just of a drag decorator, so it allows instruments to be dragged out of it.

The grid template called “FX” inherits the characteristics of the “ALL” template (`baseTemplate="All"`), so it too can have instruments dragged out of it. The “FX” grid template additionally defines the columns of an FX grid:

```
<gridTemplate id="FX" baseTemplate="All" displayedColumns="description,rate">
  <columnDefinitions>
    <column id="description"
      fields="InstrumentDescription"
      displayName="Currency"
      width="70"
      mandatory="true"/>

    <column id="rate"
      cellRenderer="fx-spread"
      fields="BestBid,BestAsk"
      displayName="Rate"
      width="100"/>

    <column id="bestbid" .../>
    <column id="bestask" ... />
  </columnDefinitions>
</gridTemplate>
```

The `<column>` tags define four grid columns called “description”, “rate”, “bestbid”, and “besttask”.

Each `<column>` tag defines:

- The pixel width of the column (`width="70"`).
- The data field or fields to be displayed in each cell of that column (`fields="InstrumentDescription"`).
- The text to be displayed in the heading of the column (`displayName="Currency"`).
- An optional renderer that modifies the display format and behavior (if any) of the cells in the column (`cellRenderer="fx-spread"`).

The `mandatory` attribute of the “description” column (`mandatory="true"`) specifies that the end user cannot remove this column from a grid; the default is to allow end users to add and remove columns.

The `displayedColumns` attribute of the grid template (`displayedColumns="description, rate"`) specifies that when an FX grid is first displayed, only the description and rate columns are to be shown on the screen.

- ◆ `<grids>` defines the actual grids that can be added to layouts:

```
<grids>
  <grid id="FX.Major" displayName="Major FX" baseTemplate="FX">
    <gridRowModel>
      <rttpContainerGridDataProvider container="/CONTAINER/FX/Major" />
    </gridRowModel>
  </grid>

  <grid id="FX.Minor" displayName="Minor FX" baseTemplate="FX">
    <columnDefinitions>
      <column id="description" headerRenderer="textFilter" />
    </columnDefinitions>
    <gridRowModel>
      <rttpContainerGridDataProvider container="/CONTAINER/FX/Minor" />
    </gridRowModel>
  </grid>
</grids>
```

Each grid is defined in a `<grid>` tag. In this example there are two grids, “FX.Major” and “FX.Minor”, each of which inherits its characteristics from the “FX” grid template. So both grids display description and rate information in columns of the same widths. To change these aspects of the appearance of both these grids you only need to modify the definition of the parent “FX” grid template. Both grids also allow the end user to drag an instrument out of the grid; they inherit this behaviour from the top level “All” grid template.

The two grids use different row models, as defined in the `<gridRowModel>` tags. In this example the row model defines the data provider that fills the grid: a named RTTP container (`<rttpContainerGridDataProvider>`). Each grid obtains its data from a different container (`container="/CONTAINER/FX/Major"`, `container="/CONTAINER/FX/Minor"`), so the two grids display different sets of FX instruments.

The XML for the “FX.Minor” grid also includes an additional column definition:

```
<columnDefinitions>
  <column id="description" headerRenderer="textFilter" />
</columnDefinitions>
```

The “description” column has a header renderer (`headerRenderer="textFilter"`). The “textFilter” renderer is supplied with Caplin Trader. It provides a text box into which the end user can enter search criteria to select the rows displayed in the grid. In this particular case the text filter allows the user to select a subset of the minor currency pairs. For example, entering “EUR” will cause all the minor currency pairs starting with EUR to be displayed (EUREEK, EURISK, EURLTL, and so on).

The screenshot shows a grid titled "Minor FX" with two columns: "Currency" and "Rate". The "Currency" column header is highlighted with a red oval, and a red arrow points from the XML code below to this header. The "Rate" column header is also visible. The data rows show various currency pairs with their exchange rates.

Currency	Rate
CADMXN	10.511/10.521
AUDZAR	7.1640/7.1708
CHFZAR	7.7703/7.7774
DKKZAR	1.6348/1.6363
EUREEK	15.693/15.701
EURISK	115.71/115.98
EURLTL	3.4251/3.4328
EURRON	3.6585/3.6719
EURSKK	32.523/32.642
EURZAR	12.169/12.195

Effect of applying the `textFilter` header renderer to the FX.Minor grid

The XML for the “FX.Major” grid does not specify a header renderer, so the default renderer is used; this just displays simple text in the header of every column.

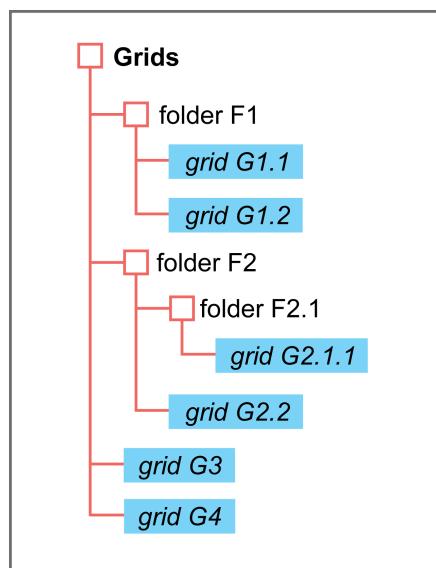
2.2 Folders

Grids can be organized into a nested hierarchy using folders. This is just like organizing files on a disk into a directory structure. The folder hierarchy can be made available to end users, for example when they select the menu option to insert a grid in a layout.

Example of XML that organizes grids into folders

```
<grids>
    <folder displayName="F1">
        <grid id="G1.1">
        </grid>
        <grid id="G1.2">
        </grid>
    </folder>
    <folder displayName="F2">
        <folder displayName="F2.1">
            <grid id="G2.1.1">
            </grid>
        </folder>
        <grid id="G2.2">
        </grid>
    </folder>
    <grid id="G3">
    </grid>
    <grid id="G4">
    </grid>
</grids>
```

The following diagram shows the folder hierarchy defined by this XML fragment.



Grids in a folder hierarchy

2.3 Grid filters

A grid row model can contain a filter expression. The filter expression allows you to restrict the number of rows that are displayed in the grid. For example, the filter expression "BidSize >= 1000" selects only those rows where the BidSize field contains a value greater than or equal to 1,000.

To specify a filter use the `<filterExpression>` tag and its child tags `<fieldFilter>`, `<and>`, and `<or>`.

Tip: The "<" symbol is an illegal character when placed inside an XML element, and all XML filter expressions must use the entity reference "<" to represent "<" (less than). To be consistent and to avoid errors, it is recommended that the ">" entity reference is also used to represent ">" (greater than), as shown in the examples in this document.

Here are some example filter expressions.

This XML fragment specifies the filter: BidSize >= 1000

```
<gridRowModel>
  ...
  <filterExpression>
    <fieldFilter field="BidSize" operator="&gt;=" value="1000" />
  </filterExpression>
</gridRowModel>
```

Filter expressions can specify multiple field criteria using logical OR and logical AND:

Filter: (BidSize >= 1000) AND (AskSize < 1015)

```
<gridRowModel>
  ...
  <filterExpression>
    <and>
      <fieldFilter field="BidSize" operator="&gt;=" value="1000" />
      <fieldFilter field="AskSize" operator="&lt;" value="1015" />
    </and>
  </filterExpression>
</gridRowModel>
```

The following example shows how to specify a filter expression comprising nested OR and AND conditions.

**Filter: (Description = “.*AUSTRIA.*”) AND (CpnRate >= 5)
AND ((BidYield >5.2) OR (AskYield <= 6.4))**

```
<gridRowModel>
  ...
  <filterExpression>
    <and>
      <fieldFilter field="Description" operator="#" value=".*AUSTRIA.*" />
      <fieldFilter field="CpnRate" operator=">=" value="5" />
    <or>
      <fieldFilter field="BidYield" operator=">" value="5.2" />
      <fieldFilter field="AskYield" operator="<=" value="6.4" />
    </or>
  </and>
</filterExpression>
</gridRowModel>
```

The value specified in a `<fieldFilter>` can be a regular expression. In example above, the filter for the `Description` field uses the regular expression `.*AUSTRIA.*`.

This regular expression specifies grid rows where the `Description` field contains the string "AUSTRIA" in any position within the field. The # operator specifies that the match should be case insensitive, so the filter selects descriptions containing, for example, "AUSTRIA", "austria", "Austria", or "ausTria".

3 XML Reference information

This is the XML reference information for the Grid Display Component.

3.1 Ordering and nesting of tags

Each top level tag is shown below, together with the child tags that it can typically contain (the children are in no particular order).

Tip: Advanced users may wish to consult the Relax NG Schemas (*gridDefinitions.rnc* and *gridDefinitions.rnc*) for definitive information on the ordering and nesting of tags.

For a description of each tag and its attributes, see [XML Tag Descriptions](#) .

<gridDefinitions>

This is the outermost tag.

```
<gridDefinitions>
    <dataProviderMappings></dataProviderMappings> (one only)
    <decoratorMappings></decoratorMappings> (zero or one)
    <templates></templates> (zero or one)
    <grids></grids> (one only)
</gridDefinitions>
```

<dataProviderMappings>

```
<dataProviderMappings>
    <dataProviderMapping /> (one or more)
</dataProviderMappings>
```

<decoratorMappings>

```
<decoratorMappings>
    <decoratorMapping /> (one or more)
</decoratorMappings>
```

<templates>

```
<templates>
    <gridTemplate></gridTemplate> (one or more)
</templates>
```

<grids>

```
<grids> (Must contain at least one of the following tags...)
  <folder></folder> (zero or more)
  <grid></grid> (zero or more)
  <legacyGrid /> (zero or more)
</grids>
```

<gridTemplate>

```
<gridTemplate> (The following tags can be in any order...)
  <decorators></decorators> (zero or one)
  <columnDefinitions></columnDefinitions> (zero or one)
  <gridRowModel></gridRowModel> (zero or one)
</gridTemplate>
```

<folder>

```
<folder>
  <folder></folder> (zero or more)
  <grid></grid> (zero or more)
</folder>
```

<grid>

```
<grid> (The following tags can be in any order...)
  <decorators></decorators> (zero or one)
  <columnDefinitions></columnDefinitions> (zero or one)
  <gridRowModel></gridRowModel> (zero or one)
</grid>
```

<decorators>

```
<decorators> (Must contain at least one of the following tags...)
  <chartCreationDecorator />
  <columnMenuDecorator />
  <columnReorderingDecorator />
  <columnResizingDecorator />
  <columnSortDecorator />
  <disconnectedDecorator />
  <dragDecorator />
  <dropdecorator />
  <exportGridDataToExcelDecorator />
  <groupHeaderDecorator />
  <hoverDecorator />
  <loadingDataDecorator />
  <noDataFoundDecorator />
  <openAjaxFiltersDecorator />
  <removeRowDecorator />
  <requestDataOnCurrencyChangeDecorator />
  <resetColumnsDecorator />
  <rightClickDecorator />
  <rowLoadingDecorator />
  <selectionDecorator />
  <scrollTipDecorator />
</decorators>
```

<columnDefinitions>

```
<columnDefinitions>
    <column></column> (one or more)
</columnDefinitions>
```

<gridRowModel>

```
<gridRowModel>
    <rtpContainerGridDataProvider />
    OR
    <personalGridDataProvider></personalGridDataProvider>
    OR
    <webServiceGridDataProvider />
    OR
    <expandableRowGridDataProvider></expandableRowGridDataProvider>
    <sortRule /> (zero or one)
    <filterExpression></filterExpression> (zero or one)
</gridRowModel>
```

<personalGridDataProvider>

```
<personalGridDataProvider>
    <record /> (zero or more)
    <allowPrefix /> (zero or more)
    <denyPrefix /> (zero or more)
</personalGridDataProvider>
```

<expandableRowGridDataProvider>

```
<expandableRowGridDataProvider> (The following tags can be in any order...)
    <gridDataProvider />
    <childRowDataProvider />
</expandableRowGridDataProvider>
```

<filterExpression>

```
<filterExpression> (Must contain just one of the following tags...)
    <and></and>
    <or></or>
    <fieldFilter />
</filterExpression>
```

<column>

```
<column>
    <filter /> (zero or more)
    The <filter> tag is deprecated; use <filterExpression> inside a <gridRowModel> instead.
</column>
```

<and>

```
<and> (Must contain at least one of the following tags...)
    <fieldFilter /> (one or more)
    <or></or> (one or more)
</and>
```

<or>

<or> (Must contain at least one of the following tags...)
 <fieldFilter /> (one or more)
 <and></and> (one or more)
 </or>

3.2 XML Tag Descriptions

This section describes the XML tags that you can use to configure the Grid Display Component.

Default attribute values

In the tables that follow, if an attribute is not required (Req? = 'N') and there is a default value specified, then not supplying the attribute is equivalent to setting the attribute to this default value. If an attribute is not required and the default is '(none)', then not supplying the attribute can result in one of two behaviors, depending on the particular attribute – either the behavior is as specified in the description column of the table, or there is no effect on the appearance or behavior of the component.

<allowPrefix>

```
<allowPrefix>
```

Defines a <personalGridDataProvider> filter that restricts the instruments that can be added to a personal grid. The <allowPrefix> filter is applied in addition to any <dropDecorator> restrictions, and overrides all <denyPrefix> filters.

Attributes:

Name	Type	Default	Req?	Description
prefix	string	(none)	Y	Only instruments whose subject begins with this literal prefix can be added to the personal grid. For example, the prefix "/FX/" would allow "/FX/USDGBP" to be added, but not "/FI/GB15YT".

<and>

```
<and>
```

This tag represents the AND logical operator. It applies a logical AND operation to the tags that are its direct children. The children can be <fieldFilter> tags and <or> tags.

Attributes: This tag has no attributes.

<childRowDataProvider>

<childRowDataProvider>

The data provider that populates the child rows of an expandable grid (see <expandableRowGridDataProvider>).

Attributes:

Name	Type	Default	Req?	Description
anyAttribute	string	(none)	N	You can add attributes that are not part of this schema to the <childRowDataProvider> tag. These attributes are passed to the child row data provider when it is constructed, and can be used to configure a custom data provider that you write (see the 'class' attribute).
class	string	(none)	Y	The class of the child row data provider. Set this to "caplin.grid.dataprovider.expandable.ContainerChildRowDataProvider", or to the class of a custom child row data provider that you write. A custom child row data provider must implement the 'caplin.grid.dataprovider.expandable.ChildRowDataProvider' interface (see the Caplin Trader API Reference documentation).
config	string	(none)	N	When the 'class' attribute is set to "caplin.grid.dataprovider.expandable.ContainerChildRowDataProvider", set this attribute to a custom class that has methods that configure the child row data provider. The class 'caplinx.grid.dataprovider.expandable.ContainerChildRowConfig', provided with the Caplin Trader framework, is a template you can use to write a custom configuration class. If you write your own custom child row data provider, this attribute does not need to be set (see 'anyAttribute').

<column>

<column>

Defines a single column of a grid or grid template.

Attributes:

Name	Type	Default	Req?	Description
cellRenderer	string	'caplin.element.factory.DefaultRendererType'	N	Identifies the element renderer that renders data in the cells of this column. This attribute can either be set to the fully qualified name of a JavaScript class or the logical name of an element renderer. The logical name of an element renderer is defined by the <renderer> tag, which belongs to the XML schema described in Caplin Trader: Element Renderer Configuration XML Reference.
clear	boolean	false	N	Flag to indicate whether a column should clear the values it was displaying when the containing grid is re-shown after being hidden. When a grid is hidden (for example, when the tab for another grid in a panel is selected), the columns of the grid are not updated by the data provider until the grid is re-shown. Valid settings are "true" (clear previous values) and "false" (display previous values until they are updated by the data provider).
cssClass	string	(none)	N	The name of a CSS class that styles the column text. The style will cascade with other CSS styles applied to the column text.
displayName	string	Value of id attribute	N	The text to be displayed in the column header.
fields	string	Value of id attribute	N	The names of the fields to be sent to the control renderer for display in this column. This is a comma separated list. The first field in the list is known as the "primary field", and is the field that is used to sort or filter the column (either in the XML configuration or when the end user sorts or filters the column). Also see the 'primaryFieldType' and 'sortOrder' attributes.
fixed	boolean	false	N	Flag to indicate whether or not the position of the column is fixed (see <columnReorderingDecorator>). Fixed columns cannot be moved, and other columns cannot be moved to the left of a fixed column. Valid values are "true" (fixed) and "false" (not fixed).

Name	Type	Default	Req?	Description
headerRenderer	string	'default'	N	The logical name of the renderer for the header of the column. This is defined in a separate set of XML configuration for the renderers.
id	string	(none)	Y	An identifier for this column. This should be unique within the inheritance hierarchy of the grid, with the following exception. A child grid can use an id for one of its columns that is the same as an id used by one of its parents. In this situation, if the parent has defined a attribute of the column that the child has not defined, the child will inherit the attribute value from the parent.
mandatory	boolean	false	N	Flag to indicate whether or not a column must be present in a grid. Mandatory columns cannot be removed from a grid. Valid values are "true" (mandatory) and "false" (not mandatory).
primaryFieldType	string	number	N	The type of the primary field displayed by this column. A column can display more than one field, and the primary field is the first field in the comma separated list of fields defined by the 'fields' attribute. Valid values are "number", "text" and "tenor". If set to "number", then the column can be sorted by the numerical value of the primary field. If set to "text", then the column can be sorted by the alphabetical value of the primary field. If set to "tenor", then the column can be sorted by tenor (for example "1Y" has the same sort value as "12M"). If set to "tenor" and the primary field is not a tenor, then the column can be sorted numerically if the field value starts with a number, and alphabetically otherwise.
resizable	boolean	true	N	Flag to indicate whether or not the width of the column is fixed (see <columnResizingDecorator>). Valid values are "true" (fixed) and "false" (not fixed).
sortOrder	string	SORT_NONE	N	DEPRECATED: Use <sortRule> inside a <gridRowModel> instead. When the grid is initially rendered, sort the grid by the primary field of this column (see 'fields' attribute). Valid values are: SORT_ASC (sort ascending), SORT_DESC (sort descending), SORT_NONE (do not sort using this column). A grid can only be sorted by one column, so only one column in the grid can have this attribute set to "SORT_ASC" or "SORT_DESC". If the grid is sorted using this attribute, do not sort the grid using the <sortRule> tag of <gridRowModel>.

Name	Type	Default	Req?	Description
sortable	boolean	true	N	Flag to indicate whether or not the grid can be sorted by this column (see <columnSortDecorator>). Valid values are "true" (can be sorted) and "false" (cannot be sorted).
toolTip	string	(none)	N	The text for the tooltip that is displayed when the mouse pointer hovers over the column header.
width	integer	100	N	The default width of the column in pixels.

<columnDefinitions>

<columnDefinitions>

Contains the column definitions (<column>) for either a grid or a grid template. A grid or template inherits all the column definitions from its inheritance hierarchy. When the grid is first displayed some of these columns may not be shown; the displayedColumns attribute of <gridTemplate> or <grid> defines which of the columns are displayed in the grid by default, and the order they should initially appear in.

Attributes: This tag has no attributes.

<columnMenuDecorator>

<columnMenuDecorator>

The column menu decorator adds a drop down menu to each column that allows new columns to be inserted to the right hand side of the selected column, or existing columns to be removed.

Attributes:

Name	Type	Default	Req?	Description
columnSorting	boolean	false	N	A flag that determines whether or not the option to sort columns is added to the drop down menu. Valid values are "true" (add the option) and "false" (do not add the option).

<columnReorderingDecorator>

<columnReorderingDecorator>

The column reordering decorator allows columns to be reordered by dragging a column header to the left or right of its existing position. Specify this decorator as an empty tag: <columnReorderingDecorator />.

Attributes: This tag has no attributes.

<columnResizingDecorator>

```
<columnResizingDecorator>
```

The column resizing decorator allows the width of a column to be changed by dragging the right-hand edge of the column header. Specify this decorator as an empty tag: <columnResizingDecorator />.

Attributes: This tag has no attributes.

<columnSortDecorator>

```
<columnSortDecorator>
```

The column sort decorator cycles the grid through three sort orders each time a column header is double clicked. The sort cycle is: sort ascending, sort descending, and remove sorting. When the sort order is ascending or descending, the grid is sorted by the primary field of the column that is double clicked. The primary field is the first field in the list of fields defined by the 'fields' attribute of the <column> tag. The sort cycle restarts each time a different column header is double clicked. Specify this decorator as an empty tag: <columnSortDecorator />.

Attributes: This tag has no attributes.

<dataProviderMapping>

```
<dataProviderMapping>
```

For each data provider (see <dataProviderMappings>), this maps the concrete name of the data provider class to a logical name. Only the logical names of data providers are serialized, not the concrete class names. This allows the class implementing a data provider to be swapped for a different one, without affecting the ability to restore previously saved grids using that particular data provider.

Attributes:

Name	Type	Default	Req?	Description
className	string	(none)	Y	The class that will be constructed each time the corresponding logical name is referred to.
id	string	(none)	Y	The logical name for the data provider. This is the name that is used for the data provider tag embedded in <gridRowModel> tags.

<dataProviderMappings>

```
<dataProviderMappings>
```

The list of data providers available within the application. Data providers allow disparate data sources to be made available within grids through a common JavaScript interface (caplin.grid.GridDataProvider).

Attributes: This tag has no attributes.

<decoratorMapping>

<decoratorMapping>

For each grid decorator (see <decoratorMappings>), this maps the concrete name of the grid decorator class to a logical name. Only the logical names of grid decorators are serialized, not the concrete class names. This allows the class implementing a grid decorator to be swapped for a different one, without affecting the ability to restore previously saved grids that use this decorator.

Attributes:

Name	Type	Default	Req?	Description
className	string	(none)	Y	The class that will be constructed each time the corresponding logical name is referred to.
id	string	(none)	Y	The logical name of the grid decorator. This is the name that is used for the decorator mapping tag embedded in the <decorators> tag.

<decoratorMappings>

<decoratorMappings>

The list of grid decorators available within the application. Grid decorators allow the functionality and/or look and feel of the grid to be augmented in some way. Use grid decorators to apply changes to appearance or behavior relating to the grid as a whole. You can also use element renderers to modify the appearance and behavior of particular cells and column headers within a grid; these are specified using the cellRenderer and headerRenderer attributes of the <column> tag.

Attributes: This tag has no attributes.

<decorators>

<decorators>

Specifies the decorators that will be applied to a particular template (<gridTemplate>) or grid (<grid>). For example, a grid or template may include a <dragDecorator>, a <dropDecorator> and a <columnMenuDecorator>. The name of a decorator tag (such as <dragDecorator>) is the logical name of the decorator as specified in the id attribute of a <decoratorMapping>.

Attributes: This tag has no attributes.

<denyPrefix>

```
<denyPrefix>
```

Defines a <personalGridDataProvider> filter that restricts the instruments that can be added to a personal grid. The <denyPrefix> filter is applied in addition to any <dropDecorator> restrictions, but is ignored if the <personalGridDataProvider> contains any <allowPrefix> filters.

Attributes:

Name	Type	Default	Req?	Description
prefix	string	(none)	Y	Only instruments whose subject does not begin with this literal prefix can be added to the personal grid. For example, the prefix "/FX/" would allow "/FI/GB15YT" to be added, but not "/FX/USDGBP".

<disconnectedDecorator>

```
<disconnectedDecorator>
```

The disconnected decorator displays a message to the end user if there is no connection to a data source when the grid initially opens.

Attributes:

Name	Type	Default	Req?	Description
message	string	Data unavailable at this time.	N	The message that is displayed if there is no connection to a data source.

<dragDecorator>

```
<dragDecorator>
```

The drag decorator allows instruments to be dragged out of the grid.

Attributes:

Name	Type	Default	Req?	Description
ddGroup	string	(none)	Y	Identifies the drag-drop group that instruments in the grid belong to. Instruments in the grid can only be dropped into components that accept instruments from this drag-drop group.

<dropDecorator>

```
<dropDecorator>
```

The drop decorator allows instruments to be dropped into the grid.

Attributes:

Name	Type	Default	Req?	Description
ddGroup	string	(none)	N	Only instruments that belong to this drag-drop group can be dropped into the grid. To specify multiple groups, use the 'ddGroups' attribute.
ddGroups	string	(none)	N	A comma separated list of drag-drop groups. Instruments that belong to any of these groups can be dropped into the grid.

<expandableRowDataProvider>

```
<expandableRowDataProvider>
```

Contains the data providers that populate the parent and child rows of an expandable grid (see <gridDataProvider> and <childRowDataProvider>).

Attributes:

Name	Type	Default	Req?	Description
childRowIdentifier	string	~	N	When Caplin Trader receives the data that populates the rows of a grid, it generates row identifiers and stores the data in memory. Parent row identifiers are generated using the parent subject, and child row identifiers by appending a childRowIdentifier string and numeric index to the parent subject. For example, if the parent row identifier is 'FX/EURUSD', the first child row identifier is 'FX/EURUSD~0', and the next is 'FX/EURUSD~1'. You must set this attribute if unique parent and child row identifiers would not be generated using the default value (~).

<exportGridDataToExcelDecorator>

<exportGridDataToExcelDecorator>

This specialized decorator exports grid data to a Microsoft Excel workbook file when an OpenAjax hub event is raised. The decorator is used by the Market Overview charting component, as described in the document "Caplin Trader Client: How To Create A Charting Component (Market Overview)". If you need further information about when and how to use this decorator, please contact Caplin Support.

Attributes:

Name	Type	Default	Req?	Description
eventName	string	(none)	Y	The name of the OpenAjax hub event that the decorator listens to.
eventNamespace	string	(none)	Y	The namespace of the OpenAjax hub event that the decorator listens to.
url	string	(none)	Y	The URL of the web service that converts the grid data to the Microsoft Excel format.

<fieldFilter>

```
<fieldFilter>
```

Defines an expression for filtering a single field; for example, "BidSize >= 1000", which selects only data where the value of the BidSize field is greater than or equal to 1000. Several <fieldFilter> tags can be combined with <or> and <and> tags to form filters containing logical expressions using "OR" and "AND"; see the <filterExpression> tag, the <and> tag, and the <or> tag. This type of filter is applied to the grid when the grid is initially rendered, and filters the grid in addition to any column filter defined using the <filter> tag.

Attributes:

Name	Type	Default	Req?	Description
field	string	(none)	Y	The name of the underlying field (within the grid row model) to which the field filter expression applies. When the grid row model is defined to use the data provider 'caplin.grid.RtpContainerDataProvider', the field is the name of an RTTP field.
operator	string	(none)	Y	The logical operator to apply to this field filter expression. The operators that can be used are: = (equals), != (not equal to), > (greater than), >= (greater than or equal to), < (less than), <= (less than or equal to), ~ (marks a regular expression as case sensitive), # (marks a regular expression as case insensitive).
value	string	(none)	Y	The filter value applying to this field filter expression.

<filter>

```
<filter>
```

DEPRECATED: Use <filterExpression> inside a <gridRowModel> instead.

Filters the grid by the primary field of the column when the grid is initially rendered (see the 'fields' attribute of the <column> tag for a description of the primary field). The filter is defined by specifying a filter type and value. Only rows that match this filter are displayed in the grid. This type of filter is applied in addition to any filters that are defined using the <fieldFilter> tag.

Attributes:

Name	Type	Default	Req?	Description
type	string	(none)	Y	The type of filter to apply. Valid values are: "LESS_THAN" (less than), "GREATER_THAN" (greater than), "EXACT_MATCH" (exact match), "PARTIAL_MATCH" (partial match), "WILDCARD" (match any case), "WILDCARD_CASE_SENSITIVE" (case sensitive), "REGULAR_EXPRESSION" (case sensitive), "REGULAR_EXPRESSION_CASE_INSENSITIVE" (match any case).
value	string	(none)	Y	The value of the primary field to be filtered. For example, to display only rows where the primary field of the column is greater than 5, set type to "GREATER_THAN" and value to "5".

<filterExpression>

<filterExpression>

Contains a logical filter expression (as a combination of <fieldFilter>, <and>, and <or> tags) that is applied to the grid row model. A filter expression allows you to restrict the number of rows that are displayed in the grid. For example, the filter expression "(BidSize >= 1000) AND (AskSize < 1015)" selects only those rows where the BidSize field has a value of 1000 or more and the AskSize field has a value below 1015.

The <filterExpression> tag can only contain one direct child tag; filter expressions containing multiple <fieldFilter> tags are defined by nesting the <fieldFilter> tags within <and> and <or> tags. See the examples shown earlier in this document. If a filter expression is defined in a parent <grid> or <gridTemplate>, any grids that inherit from this parent also inherit the filter expression. However, a filter expression that is defined in a child grid overrides filter expressions of the same name defined in grids and grid templates that it inherits from.

The data provider that populates a grid with data can be an RTTP container; that is, an instance of the JavaScript class 'caplin.grid.RtpContainerDataProvider' defined in a <dataProviderMapping>. In this case, the filter expression is converted to a request for a filtered RTTP container and is sent to Liberator. Liberator returns a container with the filtered data in it and Caplin Trader displays this data in the grid.

Attributes:

Name	Type	Default	Req?	Description
name	string	default	N	This attribute is required if more than one <filterExpression> is defined in XML, and must uniquely identify the filter expression from all other filter expressions that you define. The name is not used in any XML configuration, but can be used in JavaScript code to identify the filter expression. The way that JavaScript code refers to a filter expression is discussed in the Caplin Trader: API Reference documentation ('caplin.grid' package).

<folder>

<folder>

A folder contains a collection of grids (<grid>) and/or more internal folders.

Attributes:

Name	Type	Default	Req?	Description
name	string	(none)	Y	The name of the folder as displayed on the screen (for example, when the folder is shown in a dialog).

<grid>

<grid>

Defines a grid that can be included in a layout. Also see <gridTemplate>.

Attributes:

Name	Type	Default	Req?	Description
availableColumns	string	*	N	A list of columns the end user can add to the grid. Each column in the list must be defined by a <column> tag somewhere in the grid inheritance hierarchy (see <columnDefinitions>). If this attribute is not specified, the end user can add any defined column to the grid. The columns that are displayed by default (for example, when the grid first opens) are specified by the displayedColumns attribute.
baseGrid	string	(none)	N	The id of a grid, if there is one, that this grid inherits from. If a baseTemplate attribute is also present it will override the baseGrid setting.
baseTemplate	string	(none)	N	The id of a template, if there is one, that this grid inherits from. If a baseGrid attribute is also present the baseTemplate attribute will override it.
displayName	string	Value of id attribute	N	The name for the grid that appears in the Insert dialog when the end user chooses to insert the grid in a layout.
displayedColumns	string	Inherited from parent	N	The columns to display in the grid by default (for example, when the grid is first displayed), and the order they should initially appear in. The columns defined within the <columnDefinitions> tag specify all the available columns within a grid, but not the default set of columns initially presented to the end user. If a grid does not specify a displayedColumns attribute, it will inherit the value from its parent. A value must be specified somewhere in the inheritance hierarchy of the grid.
id	string	(none)	Y	The unique identifier for this grid. Grid identifiers must be unique across all grids and grid templates (the namespace of a grid is not distinguished by the folder it lives in). This allows grids to be moved, or folders to be renamed without breaking pre-existing serialization.

<gridDataProvider>

<gridDataProvider>

The data provider that populates the parent rows of an expandable grid (see <expandableRowGridDataProvider>).

Attributes:

Name	Type	Default	Req?	Description
anyAttribute	string	(none)	N	You can add attributes that are not part of this schema to the <gridDataProvider> tag. These attributes are passed to the grid data provider when it is constructed, and can be used to configure a custom data provider that you write (see the 'type' attribute).
container	string	(none)	N	When the 'type' attribute is set to "rtpContainerGridDataProvider", set this attribute to the container that is requested from Liberator (for example, container= "/CONTAINER/ExpandableItems"). If you write your own custom data provider, this attribute does not need to be set (see 'anyAttribute').
type	string	(none)	Y	The logical name of the grid data provider. Set this to "rtpContainerGridDataProvider", or to the logical name of a custom data provider that you write. The logical name must be mapped to a class name using the <dataProviderMapping> tag.

<gridDefinitions>

<gridDefinitions>

The outermost tag of the grid definition XML.

Attributes: This tag has no attributes.

<gridRowModel>

<gridRowModel>

Contains information about the type of row model and data provider that populates the grid. The grid data provider is specified using one of the <rtpContainerGridDataProvider>, <personalGridDataProvider>, or <webServiceDataProvider> tags. A grid must have a <gridRowModel> defined for it, either in its <grid> tag, or in a <grid> or <gridTemplate> from which it inherits.

Attributes:

Name	Type	Default	Req?	Description
groupBy	string	(none)	N	To group rows of the grid when the grid is initially displayed, specify the field that you want to group the rows by. For row grouping to render correctly, the rows must also be ordered by the same field that they will be grouped on. Rows can either be ordered at the DataSource, or by specifying a <sortRule> tag in the grid XML configuration. Rows in the grid will have a blank row at the head of each group unless a group header decorator is included in the XML configuration. A group header is specified using the <groupHeaderDecorator> tag. If the value of this attribute is set to 'none' then the rows of the grid will not be grouped, even if 'groupBy' attributes are inherited from other grids or grid templates.
serializeFilters	boolean	true	N	A flag that determines whether filters applied by the end user are serialized when the grid is serialized. A grid is serialized when the end user saves the layout containing the grid. Valid values are "true" (serialize user applied filters) and "false" (do not serialize user applied filters).
transformMode	string	snapshot	N	If a grid has been sorted or filtered, the transformMode determines whether or not a row is displayed in its new position when the values in the sorted or filtered column change. Valid values are "live" (move the row to its new position in the grid), and "snapshot" (keep the row in its present position). This does not affect the values that are displayed in the rows of the grid, only the position and visibility of these rows.

<grids>

<grids>

Contains the definitions of the grids users can add to their layouts. Grids can be defined within a hierarchical folder structure so users can more easily find them (see <folder>).

Attributes: This tag has no attributes.

<gridTemplate>

```
<gridTemplate>
```

A grid template is an abstract grid definition. Multiple physical grids (`<grid>`) can be defined using the same template; the physical grids inherit the characteristics of the template. This allows various aspects of the physical grids, such as the default displayed columns, column names, and column widths, to be reconfigured simply by modifying the template(s) associated with the grid. A grid template can be based on (inherit from) another grid template. Grid templates do not appear in the list of available grids when the user chooses to insert a new grid into their layout.

Attributes:

Name	Type	Default	Req?	Description
baseTemplate	string	(none)	N	The <code><gridTemplate></code> , if there is one, that this template inherits from.
displayedColumns	string	Inherited from parent	N	The columns to display in the grid by default (for example, when the grid is first displayed), and the order they should initially appear in. The columns defined within the <code><columnDefinitions></code> tag specify all the available columns within a grid, but not the default set of columns initially presented to the end user. If a <code><gridTemplate></code> does not specify a <code>displayedColumns</code> attribute, it will inherit the value from its parent, unless the template has no parent, in which case the attribute is undefined. Note that a value for <code>displayedColumns</code> must be explicitly specified somewhere in the inheritance hierarchy of a grid.
id	string	(none)	Y	The identifier of this grid template. The identifier must be unique across all grids (<code><grid></code>) and grid Templates.

<groupHeaderDecorator>

```
<groupHeaderDecorator>
```

The group header decorator inserts a header row before each set of grouped rows when the rows in a grid are grouped by field name (see the 'groupBy' attribute of the `<gridRowModel>` tag). Only use this decorator if the rows in a grid are grouped.

Attributes:

Name	Type	Default	Req?	Description
headerTextField	string	SubHeaderText	N	The name of the field containing the group header text.

<hoverDecorator>

```
<hoverDecorator>
```

The hover decorator changes the appearance of a row when the end user hovers over the row with their mouse. The styling that is applied by the hover decorator is defined in CSS (not discussed in this document). Specify a hover decorator as an empty tag: <hoverDecorator />.

Attributes: This tag has no attributes.

<legacyGrid>

```
<legacyGrid>
```

Identifies a legacy grid that can be inserted in a layout. Legacy grids are defined using a serialized format rather than XML.

Attributes:

Name	Type	Default	Req?	Description
displayName	string	(none)	Y	The name of the grid that appears in the Insert dialog when the end user chooses to insert the grid in a layout.
src	string	(none)	Y	The URL that returns the serialized grid definition.

<loadingDataDecorator>

```
<loadingDataDecorator>
```

The loading data decorator displays a spinning wait icon while the grid waits for data to display from the grid data provider.

Attributes:

Name	Type	Default	Req?	Description
showInitialLoad	boolean	true	N	A flag that determines whether the spinning icon will be displayed the first time the grid is rendered. Valid values are "true" and "false". Displaying the spinning icon will slow down the time it takes to initially display pages that contain grids.

<noDataFoundBubble>

<noDataFoundBubble>

The no data found bubble decorator displays a two part message to the end user when a grid contains no data (for example, if the end user filters the grid and there is no matching data).

Attributes:

Name	Type	Default	Req?	Description
bodyText	string	'Please adjust your search criteria.'	N	The body text of the two part message when there is no data to display, but there are one or more filters being applied that may account for this.
classname	string	(none)	N	A CSS class that styles the HTML <div> element containing the two part message. The style will cascade with other CSS classes applied to the <div> element.
connectionLostBodyText	string	'No data has been received.'	N	The body text of the two part message when there is no data to display and no connection to Liberator.
connectionLostHeaderText	string	'Data unavailable at this time.'	N	The header text of the two part message when there is no data to display and no connection to Liberator.
headerText	string	'No matching products found.'	N	The header text of the two part message when there is no data to display, but there are one or more filters being applied that may account for this.
noRowsFoundBodyText	string	'Please adjust your search criteria.'	N	The body text of the two part message when there is no data to display, but there are no filters being applied that may account for this.
noRowsFoundHeaderText	string	'No matching products found.'	N	The header text of the two part message when there is no data to display, but there are no filters being applied that may account for this.

<noDataFoundDecorator>

<noDataFoundDecorator>

The no data found decorator displays a message to the end user when a grid contains no data (for example, if the end user filters the grid and there is no data to display).

Attributes:

Name	Type	Default	Req?	Description
message	string	'No data available'	N	The message that will be displayed when the grid contains no data.

<openAjaxFiltersDecorator>

<openAjaxFiltersDecorator>

This specialized decorator listens for the OpenAjax hub events 'subjectAdded' and 'subjectRemoved'. The decorator adds an instrument to the grid when the 'subjectAdded' event is raised, and removes an instrument from the grid when the 'subjectRemoved' event is raised. The decorator is used by the Rich Cheap Curve charting component, as described in the document "Caplin Trader Client: How To Create A Charting Component (Rich Cheap Curve)". If you need further information about when and how to use this decorator, please contact Caplin Support.

Attributes: This tag has no attributes.

<or>

<or>

This tag represents the OR logical operator. It applies a logical OR operation to the tags that are its direct children. The children can be <fieldFilter> tags and <and> tags.

Attributes: This tag has no attributes.

<personalGridDataProvider>

<personalGridDataProvider>

Defines a data provider that populates a personal grid. When a personal grid initially opens, it can either be empty or populated with instruments defined by one or more <record> tags. The end user can also populate a personal grid with instruments of their choice (for example, by dragging and dropping instruments from other grids). Instruments that are added to a personal grid can also be deleted from the grid. The personal grid data provider creates an RTTP container to hold the instruments that are currently in the grid. This data provider uses the 'rttpContainerGridDataProvider' to communicate with a Liberator server (see <rttpContainerGridDataProvider>). The <allowPrefix> and <denyPrefix> filters restrict the instruments that can be added to a personal grid.

Attributes: This tag has no attributes.

<record>

```
<record>
```

Adds an instrument to a personal grid when the grid initially opens.

Attributes:

Name	Type	Default	Req?	Description
instrument	string	(none)	Y	The RTTP subject name of the instrument.

<removeRowDecorator>

```
<removeRowDecorator>
```

The remove row decorator displays the message "deleting..." to indicate that a row is being deleted from a personal grid. The message replaces the row data. When the end user deletes a row from a personal grid, the grid data provider sends a request to the Liberator server to remove the row from the RTTP container. The message "deleting..." is only displayed until the row has been removed from this container. The remove row decorator does not need to be specified in order to enable the deletion of rows; it merely improves the responsiveness of the grid during the removal operation. Specify a remove row decorator as an empty tag: <removeRowDecorator />.

Attributes: This tag has no attributes.

<requestDataOnCurrencyChangeDecorator>

```
<requestDataOnCurrencyChangeDecorator>
```

This specialized decorator repopulates the grid with new data when the OpenAjax hub event 'currencyChanged' is raised. The decorator is used by the Market Overview charting component, as described in the document "Caplin Trader Client: How To Create A Charting Component (Market Overview)". If you need further information about when and how to use this decorator, please contact Caplin Support.

Attributes:

Name	Type	Default	Req?	Description
subject	string	(none)	Y	The subject of the RTTP message that requests the data that populates the grid when the grid is initially rendered. For example, subject="USD (US Dollar)".

<resetColumnsDecorator>

```
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```

The reset columns decorator places a button at the right hand side of the rightmost column header. When this button is clicked, every column filter currently applied to the grid is removed. Specify this decorator as an empty tag: <resetColumnsDecorator />.

Attributes: This tag has no attributes.

<rowLoadingDecorator>

<rowLoadingDecorator>

The row loading decorator displays a 'loading' image instead of row data while the row waits for data to display from the grid data provider. An example of when the 'loading' image is displayed is when the end user scrolls through the rows of a large grid.

Attributes:

Name	Type	Default	Req?	Description
imagePath	string	(none)	Y	The path to the 'loading' image. This can be the full path or the path relative to the installation directory of Caplin Trader.

<rttpContainerGridDataProvider>

<rttpContainerGridDataProvider>

Defines a data provider that fills a grid with the data from a named RTTP container. (The RTTP container receives the data from a Liberator server, via a streaming RTTP connection established through StreamLink.)

Attributes:

Name	Type	Default	Req?	Description
container	string	(none)	Y	The RTTP container that will be requested. For example, container="/CONTAINER/FX/Major".

<scrollTipDecorator>

<scrollTipDecorator>

The scroll tip decorator provides a visual indication about the number of rows that a user has scrolled through. When scrolling through a large grid, only some of the available rows can be displayed. The scroll indicator is placed at the bottom right hand side of the grid and shows the number of the row that is currently at the bottom of the grid, followed by the total number of available rows. Specify a scroll tip decorator as an empty tag: <scrollTipDecorator />.

Attributes: This tag has no attributes.

<selectionDecorator>

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<selectionDecorator>
```

The selection decorator allows the end user to select one or more rows in a grid.

Attributes:

Name	Type	Default	Req?	Description
persistSelection	boolean	false	N	A flag that determines whether or not a selected row remains selected when a row in another grid is selected. Valid values are "true" (row remains selected), and "false" (row does not remain selected).
singleSelection	boolean	false	N	A flag that determines whether the end user can select one row or multiple rows in a grid. Valid values are "true" (only one row at a time can be selected), and "false" (multiple rows can be selected).

<sortRule>

```
<sortRule>
```

Sorts the grid in ascending or descending order when the grid is initially rendered.

Attributes:

Name	Type	Default	Req?	Description
field	string	(none)	Y	The name of the field that will be used to sort the grid. The field can be any field returned by the data provider of the grid row model (see <gridRowModel>), and does not need to be a field in a column (see the 'fields' attribute of the <column> tag).
order	string	ascending	N	The order in which the grid will be sorted. Valid values are "ascending" and "descending".
type	string	number	N	The type of field to be sorted. Valid values are "number", "text" and "tenor". Fields of type "number" are sorted numerically, and fields of type "text" are sorted alphabetically. Fields of type "tenor" are sorted as tenors (for example "1Y" has the same sort value as "12M") if the field value is a valid tenor. Fields of type "tenor" that are not valid tenors are sorted numerically if the field value starts with a number, otherwise they are sorted alphabetically. Fields containing prices or ISO formatted dates must be set to "number".

<templates>

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<templates>
```

Contains a list of grid templates (<gridTemplate>).

Attributes: This tag has no attributes.

<webServiceGridDataProvider>

```
<webServiceGridDataProvider>
```

Defines a data provider that fills a grid with data from a web service.

Attributes:

Name	Type	Default	Req?	Description
format	string	(none)	Y	The format of the data delivered by the web service. At present, this must be set to "json".
url	string	(none)	Y	The URL of the web service. For example, url="/services/static-data/historicalSnapshotJson.jsp".

Contact Us

Caplin Systems Ltd
Cutlers Court
115 Houndsditch
London EC3A 7BR
Telephone: +44 20 7826 9600
Fax: +44 20 7826 9610
www.caplin.com

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