ESMobile Implementation & Customization Guide

Entersoft Business Suite® | Entersoft CRM® | Entersoft Mobile Suite®

Technical manual

Identity

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Introduction

The purpose of this document is to provide all the necessary technical information to experienced users who wish to modify the default functionalities of the iOS Entersoft Mobile Suite (ESMobile) application. In brief, the individual objectives are:

- To provide detailed implementation instructions for the individual screens of the ESMobile application. Note that the screens, that are either modified or fully implemented at an ESMobile application customization level, are considered custom and are automatically marked with an asterisk.
- To provide information about the extension possibilities concerning the functionality schema of the ESMobile application.

Requirements for using the ESMobile application and the present manual include:

- being familiar with the interface & use method for each mobile device.
- the knowledge of all the necessary actions to install and setup the IIS & Application server
- proper set-up of the required equipment

Note that

- The present manual applies to all ESMobile platforms (iOS, UWP, Android). The parts that, by way of exception, relate to a specific ESMobile platform, are marked accordingly.
- The individual examples of this manual are available for download at the mPortal tool.

Symbols

iOS platform

Universal Windows (UWP) platform

Android platform

Overview screen (ListForm)

The overview screen (ListForm) in its simplest form is used to display data in the form of a list. However, by means of a case-by-case "appendix", it is possible to extend the ListForm screen with the following features:

- Display of the list's numeric data in the form of a Graph.
- Redirection, by focusing a list entry, to the Dashboard screen. The Dashboard screen allows the user to expand the ListForm screen information and to directly perform a series of actions.

The elements required to implement a ListForm screen are:

Element	Comment
Command	Using a ListFormCreatorCommand command is required.
Form	In order to implement the display format in its simple form it is necessary to use an AdvancedList.xml file. The Graph screen appendix is implemented in a ChartParams.xml file, while the dashboard screen appendix in an ExtraLayoutParams.xml file.

Next up in this section, you will be provided with detailed implementation instructions for "ListForm" screens, using a specific example.

Screen Data

Example SampleListForm

Defining the ListForm screen data and the command-form link is possible by appropriately configuring the sub-properties of the command file. The command file should be in the Commands sub-folder of the ESConfig or CSConfig area. Attention: the command file name should match the name of the command in the file.

Example

Suppose that we wish to create a screen that displays customer addresses in the form of a list. This list must fulfill the following basic specifications:

- Include only active customers.
- Display information from the customer & their addresses.
- Be sorted alphabetically based on the "Name" column of a person.

Suppose also that the form of this screen is SampleListForm

```
<SampleListForm Assembly="Entersoft.Mobile.ESMobile"
                Type="Entersoft.Mobile.ESMobile.ListFormCreatorCommand">
   <Params>
      <FormID Type="System.String" Value="SampleListForm" />
      <Title Type="System.String" Value="Points of Sales" />
      <LoadDataOnOpenForm Type="System.Boolean" Value="true" />
      <Filter Type="System.String" Value="ta.Inactive=0" />
      <BaseSelect Type="System.String" Value="
            Select
            p.GID PersonGID, s.GID SiteGID, p.Name,
            s.Address, p.eMail eMail, s.Telephone1 Telephone,
            case when abc.ABCClass is null then 'D' else abc.ABCClass end ABCClass
            From ESFITradeAccount ta
            Inner Join ESGOPerson p on (ta.fPersonGID = p.GID)
            Inner Join ESGOSites s on (s.fPersonGID = ta.fPersonGID)
            Left Join ESTMABCClassificationResults abc on (abc.fObjectGID = ta.GID)"/>
      <OrderBy Type="System.String" Value="p.Name" />
   </Params>
</SampleListForm>
```

Property	Comment
FormID	The folder in ESForms or CSForms where the relevant AdvancedList file of the form can be found, namely SampleListform folder for this example.
Title	The label that appears as a screen ListForm title, in this example, the label "Points of Sales".
Filter	The “static” filtering criterion for the data, in this example, the ta.Inactive column.
BaseSelect	The “select query” that specifies the data to be displayed.
ESQueryID	The name of the independent definition file for the base select query. It is automatically filled-in only in the case where, for the purpose of re-using the select query, it’s meant to be defined in an independent file. In such a case, the BaseSelect property must be empty. Note that the independent select query file should be located in the Queries sub-folder of the ESConfig or CSConfig area.
SearchPanelFilter	The alternative search criteria.
SearchPanelID	The name of the independent definition file for the alternative search criteria. It is automatically filled-in only in the case where, for the purpose of re-using the search criteria, they’re meant to be defined in an independent file. In such a case, the SearchPanelFilter property must be empty. Note that the independent select criteria file should be located in the SearchPanels sub-folder of the ESConfig or CSConfig area.
LoadDataOnOpenForm	Right after the screen is called, it displays the data (true), or displays-updates the data after the user fills in the search criteria (false). In cases of a list with a big number of entries, it is recommended to set this property as False. This way, data will appear only after editing the filter criteria, while at the same time clearing the filter criteria will not cause the list to update.
CacheSearchPanel	Maintains the content of entry search criteria (true), or clears them the screen is closed (false).
OrderBy	The “static” sorting criterion for the data, in this example, the p.Name column.

Sorting

Example SampleListForm

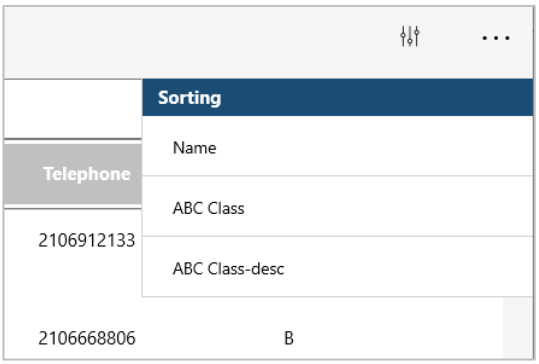
Specifying the alternative sorting criteria for an entry list is possible in the command file and by appropriately configuring the SortBy property. If there are alternative sorting criteria specified in the command, the -Sort button appears on the top right part of the screen. By pressing this button it is possible to switch between the available criteria. It is recommended that, in case the user has opted for implementing alternative sorting criteria, the static sorting criterion is also defined as one of them.

Regarding the definition method and the available properties for the alternative sorting criteria, the following apply:

Property	Comment
Caption	The label displayed as the criterion title.
ESCaptionID	Exclusively refers to the product translation process (Translation key).
Expression	The fields - sorting direction of the entries list.
Default	The criterion that has value True is the default sorting criterion of the entry list. This value overrides a possible OrderBy property of the command.

Example

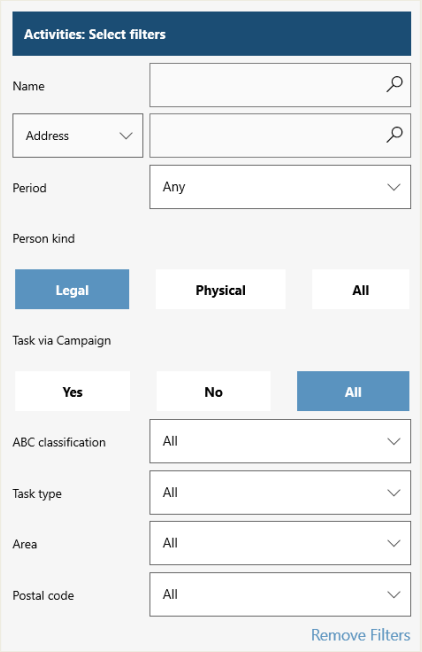
Suppose that we wish to extend our ListForm screen so that, in addition to the person's "Name" column sorting , there is also the possibility of ascending or descending sorting based on the "ABC class" customer column, while also maintaining the person's Name as a default criterion.




```
<SortBy Type="gr.entersoft.esmobile.SortBy">
  <Definition>
    <SortByField Caption="Name" Expression="p.Name"
                 Default="true"/>
    <SortByField Caption="ABC class" Expression="ABCClass"
                 Default="false"/>
    <SortByField Caption="ABC class-desc Expression="ABCClass desc"
                 Default="false"/>
  </Definition>
</SortBy>
```

Search

Example SampleSearchPanel



Specifying alternative criteria for searching an entry list is possible in the command file and by appropriately configuring the SearchPanelFilter property or the SearchPanelID property.

The definition method and search criterion characteristics vary depending on the column type to which the criterion will apply. The available criteria types are: ColumnNames, FieldChooser, DateField, DropDown, Autocomplete & Boolean. Note here that the "Remove filters" button is automatically added to the bottom-right of the alternative criteria screen. Pressing this button directly resets the content of the individual search criteria to their original value.

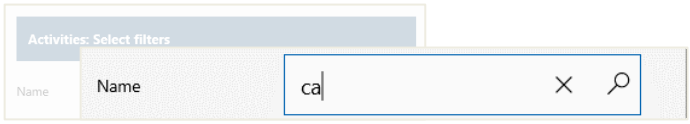
ColumnNames

Refers to a string-type column and the content is typed in by the user. Regarding the definition method and the available criteria properties, the following apply:

Property	Comment
ID	The criterion SEQ.NO should be unique.
minimumInput	The number of characters we wish to be required in order to directly refresh the entries list. By keeping this property empty, pressing the 🔍-Search button is also needed to refresh the entries list
title	The label displayed as the criterion title.
column	The command column on which the criterion is applied. The * character is used to indicate, on a case-by-case basis, the following: • xxx*, starting with • *xxx*, contains • *xxx, ends with
default	The default criterion value.
keyboard	For the alphanumeric keypad to appear focused on numbers, set value "num". Concerns the iOS platform only
soundex	Specifically, for the person's fields name-address code-item description & catalogue item, it is possible for the search result to be the same, regardless of whether the criteria is typed in uppercase-lowercase or Greek-Latin characters. To activate this feature, it is necessary to: • in the column property, specify the column that has undergone the Soundex conversion • in the soundex property, specify the SoundexEQUC value lastly, in the SoundexMappingsID property of the ListForm command, specify the SoundexConversion value

Example

Suppose that we wish to implement a search criterion for list entries, based on the person's "Name" column.




```
<element
    type="ColumnNames" minimumInput="2" id="1">
   <title>Name</title>
   <column>*p.NameEQUC*</column>
   <default></default>
   <keyboard></keyboard>
   <soundex>SoundexEQUC</soundex>
</element>
```

FieldChooser

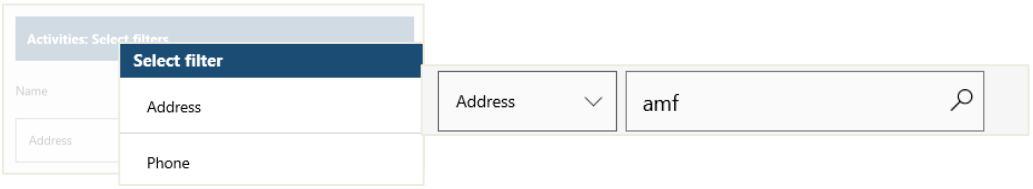
Refers to a string-type column and the content is typed in by the user. Used to aggregate multiple ColumnNames-type criteria into one criterion. Regarding the definition method and the available criteria properties, the following apply:

Property	Comment
ID	The criterion SEQ.NO should be unique.
minimumInput	The same applies as for the ColumnNames criterion. The property is relevant to all individual criteria.
title	The label displayed as the criterion title.
column	The same applies as for the ColumnNames criterion.
soundex	The same applies as for the ColumnNames criterion.

Example

Suppose that we wish to implement a search criterion for list entries, by selecting one of the person's “Address” or “Telephone” columns.

```
<element type="FieldChooser" minimumInput="2" id="2">
    <column name="*s.AddressEQUC*" title="Address" soundex="SoundexEQUC" />
    <column name="s.Telephone1*" title="Phone" />
</element>
```



DateField

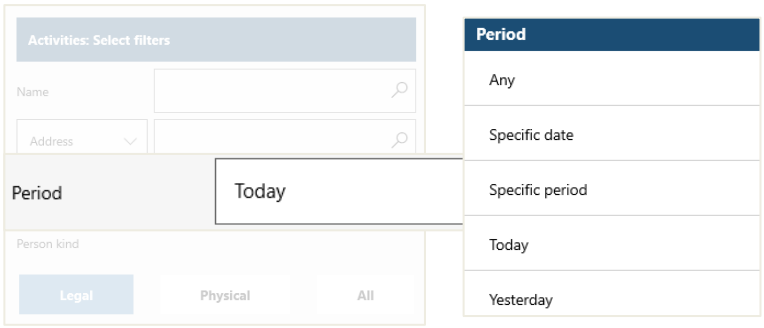
Refers to a date-type column, which allows the user to select a time period. Regarding the definition method and the available criteria properties, the following apply:

Property	Comment
ID	The criterion SEQ.NO should be unique.
title	The label displayed as the criterion title.
column	The command column on which the criterion is applied.
defaultselection	The default criterion value. The available options are: • 3-Today • 4-Yesterday • 5-Tomorrow • 6-Current week • 7-Previous week • 8-Next week

Example

Suppose that we wish to implement a search criterion for list entries, based on the task's "Start date" column. The criterion is set to 3-Today by default.

```
<element
   <element type="Datefield" id="3">
   <title>Period</title>
   <column>t.StartDate</column>
   <defaultselection>3</defaultselection>
</element>
```



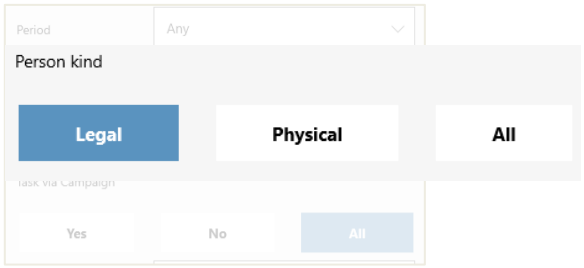
Boolean

Refers to an integer-type column that always refers to two values (true / false). Regarding the definition method and the available criteria properties, the following apply:

Property	Comment
ID	The criterion SEQ.NO should be unique.
title	The label displayed as the criterion title.
column	The command column on which the criterion is applied. Note that, if the column to which we wish the criterion to be applied is not by nature of the integer type, it must be converted accordingly into an integer.
truetext	The label that appears when the criterion condition is met.
truevalue	The column value when the criterion condition is met.
falsetext	The label that appears when the criterion condition is not being met.
falsevalue	The column value when the criterion condition is not being met.
nonetext	The label that appears if there is no specific value selected.
the room was a one-off room	The default criterion value.

Example-1

Suppose that we wish to implement a search criterion for list entries, based on the "Person type" column. We also want the criterion to allow the user to switch between Legal and Physical person and have value 0-Legal person as the default.




```
<element type="Boolean" id="4">
  <title>Person kind</title>
  <column>p.PersonKind</column>
  <truetext>Legal</truetext>
  <truevalue>0</truevalue>
  <falsetext>Physical</falsetext>
  <falsevalue>1</falsevalue>
  <nonetext>All</nonetext>
  <defaultvalue>0</defaultvalue>
</element>
```

Example-2

Suppose that we wish to implement a search criterion for list entries, based on the task's "Related campaign" column. We also want the criterion to allow the user to switch between tasks within and without the campaign and have no default value. Provided that the “related campaign” column is of GID type, the ViaCampaign column must be used, which has the following definition:

```
cast (
    case when t.fCampaignGID is null then 0 else 1 end as Int
) ViaCampaign
```

```
<element type="Boolean" id="5">
  <title>Task via Campaign</title>
  <column>ViaCampaign</column>
  <truetext>Yes</truetext>
  <truevalue>1</truevalue>
  <falsetext>No</falsetext>
  <falsevalue>0</falsevalue>
  <nonetext>All</nonetext>
  <defaultvalue></defaultvalue>
</element>
```

DropDown

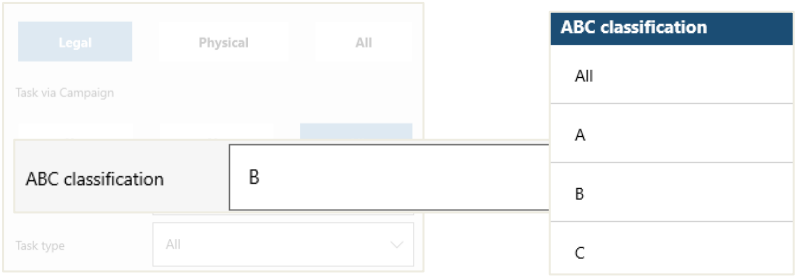
Refers to a string-type column, which allows the user to select from list of values. Regarding the definition method and the available criteria properties, the following apply:

Property	Comment
ID	The criterion SEQ.NO should be unique.
title	The label displayed as the criterion title.
column	The command column on which the criterion is applied.
default	The label that appears if there is no specific value selected from the list.
query	The “select query” that specifies the data to be displayed in the value selection list. The syntax should be of form: `<query>select ValueMember, DisplayMember1, DisplayMemder2 from...</query>` where • ValueMember is the value based on which the entries will be filtered. • DisplayMember1 & DisplayMember2 are the columns that will appear in the DropDown criterion. Filling them in is optional.
selectedvalue	The default criterion value. A fixed value can be specified, or alternatively, a select query. In this case, the syntax should look like this: `<selectedvalue>query: select ValueMember from...</selectedvalue>`
binding	Restrict the list of values of a criterion, based on the value selected in another criterion. The syntax should be of form: `<binding bindelement="" filter=""/>` where • bindelement, is the id of the criterion based on which the list of values will be restricted. • filter is the column based on which the list of values will be restricted.

Example-1

Suppose that we wish to implement a search criterion for list entries, based on the customer's "ABS class" column. We also want the criterion to display a selection list and have category B as its default value.

```
<element type="DropDown" id="4">
  <title>ABC classification</title>
  <column>abc.ABCClass</column>
  <default>All</default>
  <query>
     select distinct (ABCClass)
     from ESTMABCClassificationResults
     where ClassificationObject = 0 and ABCClass is not null
     order by ABCClass
  </query>
  <selectedvalue>B</selectedvalue>
</element
```



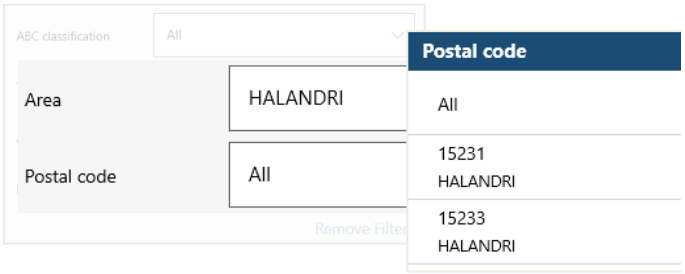
Example-2

Suppose that we wish to implement a search criterion for list entries, based on the "Task type" column. We also want the criterion to display a selection list and have task type ES.SAP as its default value.

```
<element type="DropDown" id="5">
  <title>Task type</title>
  <column>tt.InternationalID</column>
  <default>All</default>
  <query>
    select
      InternationalID,
      InternationalID, Code || '-' || TaskTypeDesc
    from ESTMTaskType
    order by InternationalID
  </query>
  <selectedvalue>
    query: select InternationalID from ESTMTaskType
    where InternationalID = 'ES.SAP'
  </selectedvalue>
</element>
```

Example-3

Suppose that we wish to implement a search criterion for list entries, based on columns "Area & “Zip code” of the person’s address. We also want the criteria to display a selection list and be able to restrict the list of values of criterion Zip code, based on the value selected for Area.




```
<element type="DropDown" id="8">
   <title>Area</title>
   <column>s.Area</column>
   <default>All</default>
   <query>
     Select distinct Area
     From ESGOSites
     Order by Area
   </query>
</element>
<element type="DropDown" id="9">
   <title>Postal code</title>
   <column>s.fPostalCode</column>
   <default>All</default>
   <query>
     Select distinct fPostalCode, fPostalCode, Area
     From ESGOSites
     Order by fPostalCode
   </query>
   <binding bindelement="8" filter="Area"/>
</element>
```

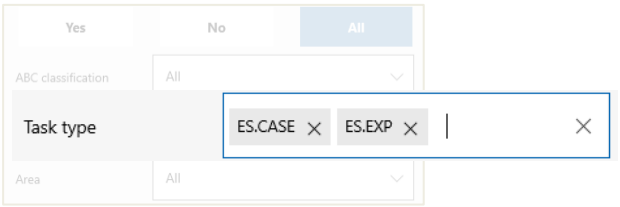
AutoComplete

Refers to a string-type column that allows the user to find a value by typing and select multiple values. Regarding the definition method and the available criteria properties, the following apply:

Property	Comment
ID	The criterion SEQ.NO should be unique.
title	The label displayed as the criterion title.
column	The command column on which the criterion is applied.
query	The “select query” that specifies the data to be displayed in the value selection list. The syntax should be of form: `<query>select ValueMember from...</query>` where ValueMember is the value based on which the entries will be filtered.
binding	The same applies as for the DropDown criterion.
multiselect	Multiple selection of values (true) or not (false).

Example

Suppose that we wish to implement a search criterion for list entries, based on the "Task type" column. We also want the criterion to display a selection list and allow the selection of multiple values.



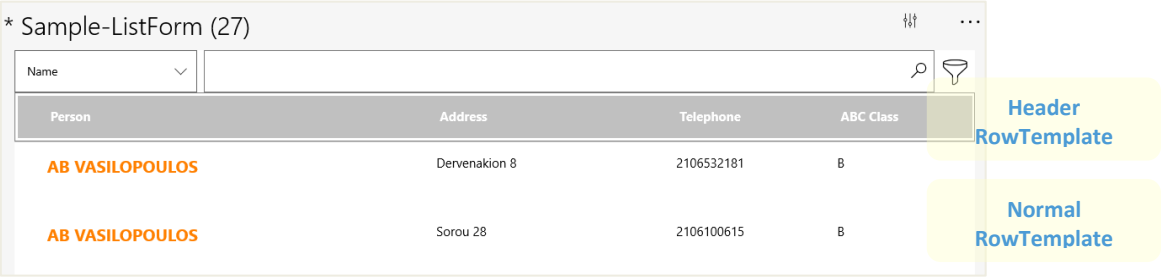

```
<element type="Autocomplete" id="7">
  <title>Task type</title>
  <column>tt.InternationalID</column>
  <query>
     select InternationalID
     from ESTMTaskType
     order by InternationalID
  </query>
  <multiselect>true</multiselect>
</element>
```

Display Format / List

Example SampleListForm

The displayed elements of the ListForm screen as a list can be set by appropriately configuring the individual properties of the form's AdvancedList file. Note that the ListForm screen consists of two main areas (RowTemplates), the data area (Normal RowTemplate) and the header area (Header RowTemplate). The design specifications differ per area.

Next up in this section, you will be provided with detailed design instructions for the ListForm areas.



Data area

Setting the data range (normal RowTemplate) is mandatory and always refers to the first RowTemplate of the form's AdvancedList file. Regarding the definition method and the properties available at an area level (RowTemplate) and element level (Cell), the following applies:

Property	Comment
RowTemplate	
Height	The area height.
Cell-Required	
Type	The ListForm in its simple form only supports TextCell-type elements.
Bounds	The display location of the element. The 4 sizes of this property determine x, y, width & height respectively, with 240 as the maximum screen width.
CellSource	The command column that corresponds to the element.
Cell-Optional	
Name	A name for informative purposes.
Visible	Display (true) or hide (false) the element.
Alignment	The alignment of the element's content with the following values available: Left, Right & Center.
FontSize	The font size.
FontStyle	The font style, with the following values available: Regular, Bold & Italic.
ForeColor	The font color, with the following values available: Black, Blue, Brown, Cyan, Gray, Darkgray, Green, Lightgray, Magenta, Orange, Purple, Red, White & Yellow.
BackColor	The background color, with the following values available: Black, Blue, Brown, Gray, Green, Orange, Red, White & Yellow.
FormatString	The display format of a numeric element. Some typical options are: Definition — Result {0:G} — 16325.62 {0:C} — 16,325.62 € {0:N} ή {0:#,#.00} — 16,325.62 {0:P} ή {0:0.00\%} — 163.26 % {0:#.0} — 16326

Example

Suppose that we wish to implement a ListForm screen that displays the following elements in the data area: Name, Address, Telephone & ABC class of the customer. Suppose also that we wish to implement a different display format for the Name element than that of the rest.

```
<AdvancedList>
  <RowTemplate comment="Normal">
  SEQ.NO: 0
  <Property Name="Name" Value="RowTemplate" />
    <Cell Type="Resco.Controls.AdvancedList.TextCell">
      <Property Name="Bounds" Value="3,4,97,8" />
      <Property Name="CellSource" Value="Name" />
      <Property Name="Name" Value="Name" />
      <Property Name="ForeColor" Value="Orange" />
      <Property Name="FontStyle" Value="Bold" />
      <Property Name="FontSize" Value="16" />
    </Cell>
    <Cell Type="Resco.Controls.">…</Cell>
    <Cell Type="Resco.Controls.">…</Cell>
    <Cell Type="Resco.Controls.">…</Cell>
    <Property Name="Height" Value="24" />
  </RowTemplate>
  <RowTemplate comment="Header">…</RowTemplate>
```

Note that

- Specifically for an iOS platform and for the ListForm screen to function properly, the form's AdvancedList file must have property SelectedTemplateIndex assigned. In this property should indicate the Normal RowTemplate SEQ.NO, namely SEQ.NO 0.
- Specifically for an iOS platform, it is possible to differentiate the elements and display format between Normal and Selected entry. The settings required are:
  - Define a second RowTemplate (Selected RowTemplate) in the form's AdvancedList file. The definition method and available properties are exactly the same as described for Normal RowTemplate.
  - Specify the Selected RowTemplate SEQ.NO in property SelectedTemplateIndex.

Header area

Defining the header area (Header RowTemplate) is optional and is done by indicating the RowTemplate SEQ.NO in the TemplateIndex property of section HeaderRow and by assigning property true to the ShowHeader property. Regarding the definition method and the properties available at an area level (RowTemplate) and element level (Cell) of the area, the following applies:

Property	Comment
RowTemplate	
Height	The area height.
BackColor	It must be specified by using an RGB color code and should be in format #0,0,0. Concerns UWP & Android platforms only.
Cell-Required	
Type	Header RowTemplate only supports TextCell-type items.
Bounds	The display location of the element. The 4 sizes of this property determine x, y, width & height respectively, with 240 as the maximum screen width.
CellSource	The label displayed as the title. It should be specified in format ""Title"" where label quot; indicates the quotation marks.
Name	Exclusively refers to the product translation process (Translation key).
Cell-Optional	
Visible	Display (true) or hide (false) the element.
Alignment	The alignment of the element's content with the following values available: Left, Right & Center.
FontSize	The font size
FontStyle	The font style, with the following values available: Regular, Bold & Italic.
ForeColor	The font color, with the following values available: Black, Blue, Brown, Cyan, Gray, Darkgray, Green, Lightgray, Magenta, Orange, Purple, Red, White & Yellow.
BackColor	The background color, with the following values available: Black, Blue, Brown, Gray, Green, Orange, Red, White & Yellow.

Example

Suppose that we want the ListForm screen of our example to also display the header area.

```
<AdvancedList>
  <RowTemplate comment="Normal">…</RowTemplate>
  <RowTemplate comment="Header">
  1
  <Property Name="Name" Value="Header" />
  <Cell Type="Resco.Controls.AdvancedList.TextCell">
    <Property Name="Bounds" Value="3,4,97,8" />
    <Property Name="CellSource" Value="&amp;quot;Person&amp;quot;" />
    <Property Name="Name" Value="Name" />
    <Property Name="ForeColor" Value="white" />
  </Cell>
  …
  <Property Name="Height" Value="15" />
  <Property Name="BackColor" Value="#192,192,192" />
  </RowTemplate>
  <Property Name="SelectedTemplateIndex" Value="0" />
  <Property Name="ShowHeader" Value="true" />
  <HeaderRow>
    <Property Name="TemplateIndex" Value="1" />
  </HeaderRow>
```

a/a: 0
SEQ.NO:

Display Format / Graph

Example SampleListFormChart

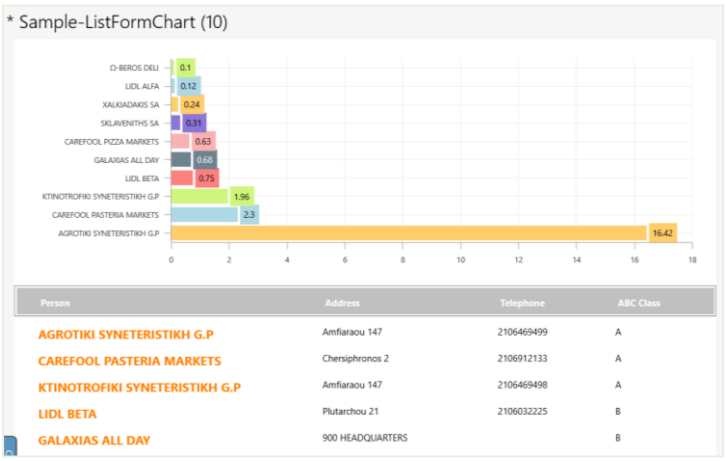
As mentioned above, adding a ChartParams.xml file to the ListForm screen as an “appendix” also enables the ability to display the data of a list as a graph. The available graph types are: Column, Bar, Pie, HalfPie & Doughnut.

Example

Suppose that we wish to implement a ListForm screen that displays the top 10 customers based on turnover. Suppose also that we want it to display them as a list, as well as a Bar-type graph.

In order to do this, a ChartParams.xml file must be added to the folder where the form's AdvancedList file is also located. In our example, that folder is SampleListFormChart.

```
<chartparameters>
  <type>Bar</type>
  <hidelist>false</hidelist>
  <height>1</height>
  <legend>false</legend>
  <explode>false</explode>
  <datamarker>true</datamarker>
  <namefield>Name</namefield>
  <namefieldalias></namefieldalias>
  <valuefield>Balance</valuefield>
  <valuefieldalias></valuefieldalias>
  <maxvalue>0</maxvalue>
</chartparameters>
```



Dashboard screen

Example SampleDashboardForm

As mentioned above, the Dashboard screen is an “appendix” to the ListForm screen, which allows the user, by focusing on a list entry, to expand the information of the ListForm screen, as well as directly perform a series of actions. Next up in this section, you will be provided with detailed implementation instructions for the Dashboard screen, using a specific example.

Example

Let say that we wish to implement a ListForm screen which, in addition to displaying customer addresses in a list, also provides direct access to the customer's additional information: VAT number, Occupation, Family, basic contact Information & basic Financial data.

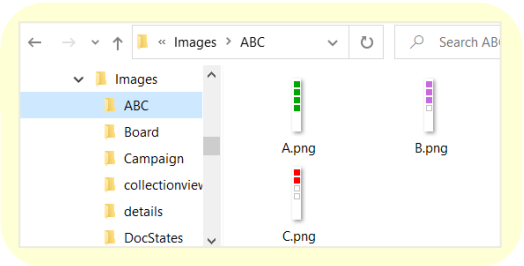
In order to do this, an ExtraLayoutParams.xml file must be added to the folder where the form's AdvancedList file is also located. In our example, that folder is SampleDashboardForm.

Entries list

The display format of the entries list follows a default template consisting of 1 image column and 2 data columns-rows. Therefore, the display format of the entries list is "redefined" and this can be done via the following properties of the form's ExtraLayoutParams file:

Property	Comment
imagecolumn	The command column that corresponds to the image file name.
imagefolder	The folder where the image file is located.
title	The command column that corresponds to element Column-1 & Row-1. This element displays in Bold.
formtitle	The command column that corresponds to the Dashboard screen title. Note that, if this property is empty or does not exist, the title of the Dashboard screen uses the title property.
titlewidth	The width of the title element (%).
subtitle	The command column that corresponds to element Column-1 & Row-2.
subtitlewidth	The width of the subtitle element (%).
info1	The command column that corresponds to element Column-2 & Row-1.
info1width	The width of the info1 element (%).
Info2	The command column that corresponds to element Column-2 & Row-2.
Info2width	The width of the info2 element (%).

```
<layoutparameters>
  <imagecolumn>ABCClass</imagecolumn>
  <imagefolder>Images/ABC</imagefolder>
  <title>Name</title>
  <titlewidth>70</titlewidth>
  <subtitle>FullAddress</subtitle>
  <subtitlewidth>70</subtitlewidth>
  <info1>eMail</info1>
  <info1width>30</info1width>
  <info2>Telephone</info2>
  <info2width>30</info2width>
  ...
</layoutparameters
```



Main area

The additional elements that our example requires are defined in section extraparamsof the form's ExtraLayoutParams file. For the ergonomic display of the elements, defining multiple extraparams sections is also possible. Regarding the definition method and the available area properties, the following apply:

Property	Comment
Area	
title	The label displayed as the area title.
ID	The area's SEQ.NO, which should be unique.
Element	
name	The command column that corresponds to the element.
caption	The label displayed as the element's caption.
type	The element type. Values email, facebook, location, mobile, skype, telephone, twitter & web automatically give the item the corresponding functionality (e.g. by assigning the location type to an element, pressing it redirects the user to the map).

```
<layoutparameters>
 <extraparams title="Identity" id="1">
  <extraparam>
   <name>TaxRegNumber</name>
   <caption>T.R.N.</caption>
   <type>text</type>
  </extraparam>
  <extraparam>
   <name>ActivityDescription</name>
   <caption>Activity</caption>
   <type>text</type>
  </extraparam>
  <extraparam>
   <name>FamilyDescr</name>
   <caption>Family</caption>
   <type>text</type>
  </extraparam>
  <extraparam>
   <name>ABCClass</name>
   <caption>ABC Class</caption>
   <type>text</type>
  </extraparam>
 </extraparams>
 <extraparams title = "Communication" id="2">…</extraparams>
 <extraparams title = "Commercial data" id="3">…</extraparams>
 …
</layoutparameters>
```

Other areas

The other areas that make up a Dashboard screen are its pages-segments and menu buttons. The information displayed in these areas require the appropriate definition, on a case-by-case basis, of the actions button.

Action buttons (ButtonCell)

The action buttons always refer to a command to be executed. The action buttons can be defined in the form's AdvancedList file and by using a ButtonCell-type element. Elements of this type can be defined in the RowTemplate of the data area.

Note that

Specifically for an iOS Platform, it is mandatory to specify ButtonCell-type elements in RowTemplate for the selected entry, i.e. The RowTemplate specified in property SelectedTemplateIndex.

Regarding the definition method and the available properties of a ButtonCell-type element, the following apply:

Property	Comment
Required	
Type	The element must be of type ButtonCell.
Text	The label displayed as the button title.
CellSource	The select query column of the ListForm screen with which the variable [CURRENT] or [PARENT] of the command to which the button refers.
Name	The command and the "specifications" of its execution. The required property configuration varies considerably, depending on the command type (prefix) of the button.

- A button for a **view**-type command of an entry or entries list,
  Edit#Command, is combined with variable **[CURRENT]**

- A button for adding a **new** entry type of command,
  New#Command, is combined with variable **[PARENT]**
  Note that, in special cases where there is a need for a second variable, it can **also** be combined with variable [**CURRENT**]. The column of variable [CURRENT] is specified as the button's **suffix**.

For a button of adding a new plan-based measurement (PARENT=CellSource) at a selected point of sales (CURRENT=suffix)

```
<Cell Type="Resco.Controls.AdvancedList.ButtonCell">
  <Property Name="Text" Value="Count" />
  <Property Name="CellSource" Value="CampaignGID" />
  <Property Name="Name" Value="New#AutoCreateMerchandising#SiteGID" />
  <Property Name="DesignName" Value="#82#89" />
</Cell>
```

- A button for adding a **new document**-type of command,
  Doc#Command#DocType, is combined with the **[PARENT]** variable, but also requires the document type to be specified as **suffix**.

To enter a new order (suffix=1) on a selected job (PARENT=Cellsource)

```
<Cell Type="Resco.Controls.AdvancedList.ButtonCell">
  <Property Name="Text" Value="Order" />
  <Property Name="CellSource" Value="TaskGID" />
  <Property Name="Name" Value="Doc#NewDocumentfromApp#1" />
  <Property Name="DesignName" Value="#82#89" />
</Cell>
```

- A button to **switch commands** based on a condition,
  CASE#Column#Value1#Command1#Column#Value2#Command2 is combined with variable **[CURRENT]**. Note that the Column should always refer to a column of the select query of the ListForm screen.

For a button where the screen to be displayed varies according to the type of selected, (CURRENT=CellSource)

```
<Cell Type="Resco.Controls.AdvancedList.ButtonCell">
  <Property Name="Text" Value="View" />
  <Property Name="CellSource" Value="TaskGID" />
  <Property Name="Name"Value="CASE#TaskIntID#es.stk#TodoEditForm#EditTask"/>
  <Property Name="DesignName" Value="#82#89" />
</Cell>
```

- A button to **switch command types** based on a condition,

  ESCASE[#]Column[#]Value1[#]Button1[#]Column[#]Value2[#]Button2 is dynamically combined, depending on the button type, with variable **[CURRENT]** (Edit-type command) or variable **[PARENT]** (New-type command). Note that the Column should always refer to a column of the select query of the ListForm screen.

In order to toggle between the new appointment button at a selected point (PARENT=CellSource) or a button to view an existing one (CURRENT=Cellsource), depending on the asTask column value.

```
<Cell Type="Resco.Controls.AdvancedList.ButtonCell">
  <Property Name="Text" Value="Appointment" />
  <Property Name="CellSource" Value="SiteGID" />
  <Property Name="Name" Value="
     ESCASE[#]asTask[#]1
     [#]New#AppointmentSiteNewFormTask
     [#]Edit#AppointmentEditForm" />
  <Property Name="DesignName" Value="#82#89" />
</Cell>
```

Note here that, in special cases where there is a need for more than one variable, the variables and their columns are specified as the button's **suffix**. In this case, the CellSource property must be empty.

```
<Cell Type="Resco.Controls.AdvancedList.ButtonCell">
  <Property Name="Text" Value="List" />
  <Property Name="CellSource" Value="" />
  <Property Name="Name" Value="
     ESCASE [#]isVisit[#]1
     [#]Edit#PersonAffiliationListForm#PersonGID@Current
     [#]Edit#TaskRecipientCollection#PersonGID@Current#TaskGID@Parent"/>
  <Property Name="DesignName" Value="#10242#10249" />
</Cell>
```

DesignName

The button's show or hide “specifications”. It consists of the following two parts:

- The button’s hide conditions (Not Applicable). The syntax should be of form:

  [NA]Column1=Value1;Column2=Value2[NA]. Note that the Column should always refer to a column of the select query of the ListForm screen.
- The applications-platforms where the button is available. The syntax should be of form:

  #AppIDPlatforfID1#AppIDPlatforfID2 where:

Application		Platform	
8	Merchandising	2	iOS
22	Field Service	3	Android
322	xVan	4	UWP
1024	Medical Representative	9	UWP & Android

To (a) hide the button for an C customer of ABC class and to (b) show the button on all platforms, but only in the Merchandising application.

```
<Property Name="DesignName" Value="[NA]ABCClass=C[NA]#82#89" />
```

Optional

ImageDefault

The image used as the button’s icon. Note that in the case of the Dashboard screen the property is inactive and therefore specifying an icon is unnecessary.

Visible

Show (true) or hide (false) the button. Specified only in case the user wants to hide the button, for all applications-platforms, from the Dashboard screen menu buttons -Actions, -Online, or -Information.

Pages-Segments

It is recommended that the ButtonCell-type elements related to information display should be included in the pages-sections area of the Dashboard screen, namely the Segments section of the form's ExtraLayoutparams file. Regarding the definition method and the available area properties, the following apply:

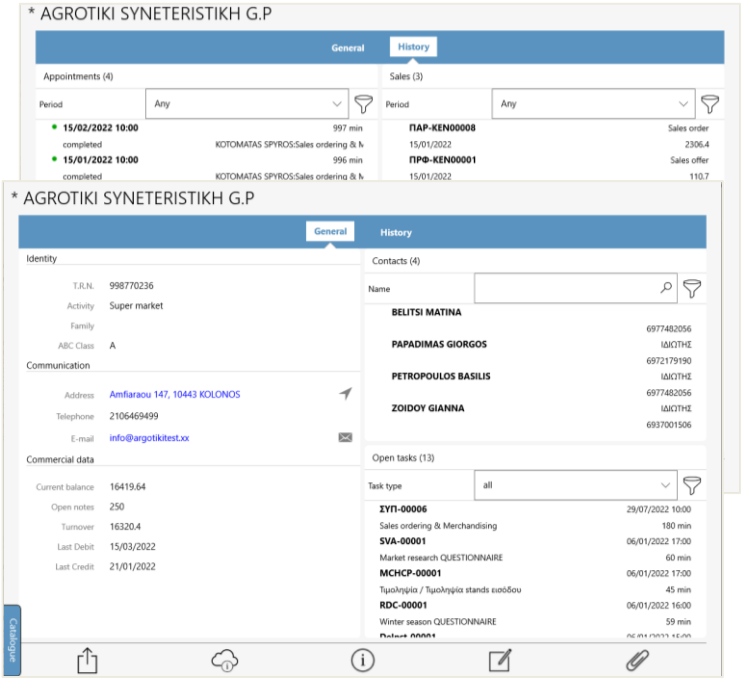
Property	Comment
Title	The label displayed as the tab title.
Position	The page's SEQ.NO, which should be unique.
Command	The ButtonCell that corresponds to the information to be displayed. This property's content should match the Name property content of the ButtonCell. Note that the maximum number of commands per page is 4, with the exception of the first page (Position 0) where it's 3 commands.
IsMainSegment	The first page (Position 0) has value true, while the other pages have value false.

Example

Suppose we wish to expand the Dashboard screen to have direct access to customer-related local database information, such as: Contacts, Open tasks, History of Appointments & Sales. Suppose also that we wish this information to appear in distinct segments of the Dashboard screen pages.

```
<layoutparameters>
  …
  <Segments>
    <segment>
      <Title>General</Title>
      <Position>0</Position>
      <Command1>Edit#PersonContactListForm</Command1>
      <Command2>Edit#PendingTaskListForm</Command2>
      <IsMainSegment>true</IsMainSegment>
    </segment>
  <segment>
    <Title>History</Title>
      <Position>1</Position>
      <Command1>Edit#SiteAppointmentListForm</Command1>
      <Command2>Edit#SiteDocListForm</Command2>

      <IsMainSegment>false</IsMainSegment>
    </segment>
  </Segments>
  …
</layoutparameters>
```



Note that

In case the design needs of the Dashboard screen are quite specialized, the specific elements that related to pages-segments can be defined using section ESTabs. Note here that, if the user chooses to use section ESTabs, section Segments is automatically rendered inactive. The configuration setup instructions for section ESTabs are provided below, in section Pages-Segments/ESTabs.

Menu buttons

It is recommended that ButtonCell-type elements that relate to direct execution of an action are included in the default buttons of the Dashboard screens. This is possible by using section negotiations of the form's ExtraLayoutParams file. Configuring section newactions is not mandatory, but is strongly recommended to facilitate user navigation around the Dashboard. The Dashboard default menu buttons and the settings required to add them, on a case-by-case basis, are:

Button	Setting	Comment

Actions	`<newaction>`
	`<command>ButtonCell-x</command>`
	`<subcommand>false</subcommand>`
	`<online>false</online>`
	`</newaction>`
		Adding buttons related to adding a new entry is recommended.

Online	`<newaction>`
	`<command>ButtonCell-x</command>`
	`<subcommand>false</subcommand>`
	`<online>true</online>`
	`</newaction>`
		It is recommended to add buttons that concern displays information at a direct connection with the server.

View	`<layoutparameters>`
	`…`
	`<detailcommand>ButtonCell-x</detailcommand>`
	`…`
	`</layoutparameters`
		It is recommended to add a button that redirects the user to the Data entry screen of the current entry.

Attachments	`<layoutparameters>`
	`…`
	`<attachmentcommand>ButtonCell-x</attachmentcommand>`
	`…`
	`</layoutparameters`
		It is recommended to add a button that redirects the user to the attachments management screen.

Dropbox	`<layoutparameters>`
	`…`
	`<dropboxcommand>ButtonCell-x</dropboxcommand>`
	`…`
	`</layoutparameters`
		It is recommended to add a button that redirects the user to the Dropbox application. Concerns the iOS platform only.

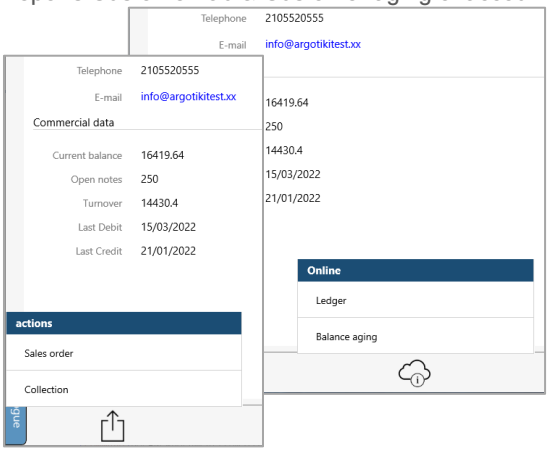
Information	It is automatically configured, by collecting all the buttons, from the form's AdvancedList file, that have not been added to another Dashboard segment or button. The order in which these actions are displayed depends on the order set in the form's AdvancedList file.	

Example

Suppose that we wish to expand the Dashboard screen to meet the following needs:

- Allows the user to directly call actions for new Order & new Collection.
- Make it possible to display - in direct connection with the server- reports Customer tab & Customer aging of accounts.

```
<newactions>
  …
  <newaction>
     <command>Edit#HtmlCommand_CustomerLedger</command>
     <online>true</online>
  </newaction>
  <newaction>
     <command>Doc#NewDocumentfromSite#1</command>
     <subcommand>false</subcommand>
     <online>false</online>
     …
  </newaction>
</newactions>
```



Note that, specifically for menu button -Actions, it is possible to configure options displayed so that only the "popular" ones are displayed initially and, when pressing "…", all of them display. To enable this feature, the following settings are required:

- Add, to the form's AdvancedList file, a ButtonCell-type element, with value More in property Name.

```
<Cell Type="Resco.Controls.AdvancedList.ButtonCell">
   <Property Name="Text" Value="..." />
   <Property Name="Name" Value="More" />
   <Property Name="DesignName" Value="#82#89" />
</Cell>
```

- Add, to section newactions of the form's ExtraLayoutParams file an element with the following definition and activate the subcommon property in all the not popular options of the -Actions button

```
<newaction>
   <command>xxx</command>
   <online>false</online>
   <subcommand>true</subcommand>
</newaction>
   <newaction>
   <command>More</command>
</newaction>
```

Special settings

This section shall briefly, as well as by means of a specific example, present the form's ExtraLayoutParams file properties, that allow for further configuration of the behavior of a Dashboard screen.

Property	Comment
onclickcommand	By filling in this property, an action button allows the user, by focusing on a list entry, to override the display of the Dashboard screen and to directly display the screen that corresponds to the button. In case this functionality is selected, it is recommended to include the action button concerning the transition to the Data entry screen of the current entry.
AlertCommand	By filling in this property an action button allows the user, by focusing on a list entry, to display a notification message under conditions. Note here that the display condition and message content are set at the special type command Alert Command and by using the ShowMessage property of the command. Note also that, as with all action buttons, this one must also be specified in the AdvancedList file of the ListForm screen. Concerns the iOS platform only.
action1command	By filling in an action button in this property, this button is automatically added to the top-right of the screen Dashboard as an icon. Up to 3 buttons of this format can be set (properties: action1command, action2command & action3command). A classic example of using this functionality is the Calendar Dashboard screen that displays the Start, End, and Cancel appointment actions in icon format. Note here that each icon can be defined in the AdvancedList file of the form, in particular in the ImageDefault property of the action button.
primarykeycolumn	It is possible to automatically refresh, when running an SQLCommand-type of command, the data displayed on the Dashboard screen. To make use of this feature, it is necessary to:

To display a message when focusing on a "Competitors" list entry:

```
<SampleAlertCommand Assembly="Entersoft.Mobile.ESMobile"
          Type="Entersoft.Mobile.ESMobile.AlertCommand">
 <Params>
  <Title Type="System.String" Value="- AlertCommand" />
  <ShowMessage Type="System.String" Value="
              select 'Incomplete information....'
              from ESGOPerson
              where TaxRegNumber is null
              and GID ='[CURRENT]'" />
 </Params>
</SampleAlertCommand>
```

```
<layoutparameters>
  …
  <alertcommand>Edit#SampleAlertCommand</alertcommand>
</layoutparameters>
```

For the start appointment button of the Calendar Dashboard screen

```
<Cell Type="Resco.Controls.AdvancedList.ButtonCell">
 <Property Name="Text" Value="Start" />
 <Property Name="ImageDefault" Value="iVB..." />
 <Property Name="CellSource" Value="TaskGID" />
 <Property Name="Name" Value="Edit#SQLappColTodoStartDate" />
 <Property Name="DesignName" Value="#82#89" />
 <Property Name="Selectable" Value="true" />
</Cell>
```

```
<layoutparameters>
  <action1command>Edit#SQLappColTodoStartDate</action1command>
  …
</layoutparameters>
```

- Specify, in the primarykeykolumn property of the column that constitutes the unique identification key of an entry.
- Specify, in the primarykeyquerycolumn property of the table.field that constitutes the unique identification key of an entry. In case the unique identification key is composed by more than one field, their "composition" (e.g. c.GID || p.GID) should be specified.

Special attention should be paid, in order to include both the specified column and the table.field to the select query of the ListForm command.

Note here that enabling the auto-refresh functionality requires you to specify "true" in the RefreshParent property of command order to be executed.

To refresh the Calendar Dashboard screen after executing the "Finish" appointment action (command SQLAppComplete)

```
<SQLAppComplete Assembly="Entersoft.Mobile.ESMobile"
                Type="Entersoft.Mobile.ESMobile.SQLCommand">
  <Params>
    …
    <RefreshParent Type="System.Boolean" Value="True" />
  </Params>
</SQLAppComplete>
```

```
<layoutparameters>
    <primarykeycolumn>TaskGID</primarykeycolumn>
   <primarykeyquerycolumn>task.GID</primarykeyquerycolumn>
   …
</layoutparameters>
```

Advanced functionality

Configure a selected entry

Example SampleListForm

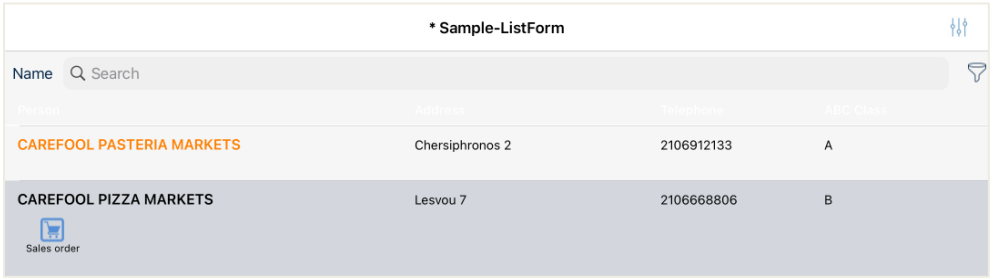
Especially on an iOS platform, and if, for any reason, we wish the ListForm screen not to be expanded with the Dashboard appendix, it is also possible to display a action button (ButtonCell) type of element, by simply focusing on a list entry. The following settings are required to enable this feature:

- Specify a ButtonCell-type of element in the AdvancedList file of the form. The way in which this type of element is defined and its available properties are exactly the same as those described in the corresponding section of the Dashboard screen, except that here it is also recommended to specify the icon with which the button becomes visible, in property ImageDefault.
- Do not add the ExtraLayoutParams.xml file to the ListForm folder.

Example

Suppose that we wish to enable the ListForm screen to directly call the New order action.

```
<AdvancedList>
  <RowTemplate comment="Normal">
    …
    <Cell Type="Resco.Controls.AdvancedList.ButtonCell">
      <Property Name="Text" Value="Sales order" />
      <Property Name="ImageDefault" Value="iVBO…"/>
      <Property Name="CellSource" Value="SiteGID"/>
      <Property Name="Name" Value="Doc#NewDocumentfromSite#1"/>
      <Property Name="DesignName" Value="#82" />
      <Property Name="Selectable" Value="true" />
    </Cell>
    <Property Name="Height" Value="24" />
  </RowTemplate>
  <RowTemplate comment="Header">…</RowTemplate>
  <Property Name="SelectedTemplateIndex" Value="0"/>
</AdvancedList>
```



Data bulk update

Example SampleListFormBulkUPD

A ListForm screen can be used as a data bulk update tool for all the selected entries in a list. The following settings are required to enable this feature:

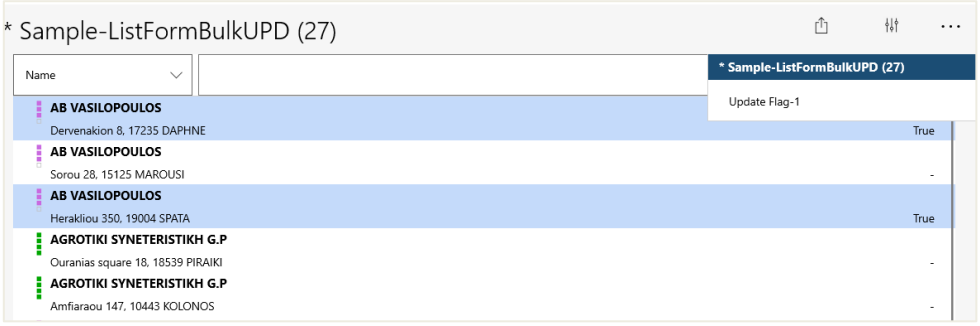
- Button configuration. The button that calls the action to be performed is configured using the special type of command InvPopCommand. The distinctive feature of this type of command is that it allows an update query to be called (BaseUpdate property).
- Button activation. Activating the button is possible by indicating the InPopCommand file in the RightButtonDefinition property of the ListForm command. The syntax of the property should be [POP]InvPopCommand. Filling in this property expands the ListForm screen with the default menu button -Actions. Please note here that for the screen to function properly, it is required that:
  - The first column of the ListForm command select query refers to the unique identification key of a list entry.
  - In the ListForm folder there is the ExtraLayoutParams.xml file.

Example

Suppose that we wish to implement a ListForm screen that will be used as a bulk update tool for the site's "Flag-1" field. Suppose also that the bulk update action has been implemented through the SampleListForBulkUPDAction command.

```
<SampleListFormBulkUPDAction Assembly="Entersoft.Mobile.ESMobile"
                             Type="Entersoft.Mobile.ESMobile.InvPopCommand">
  <Params>
    <Parent Type="System.String" Value="" />
    <Current Type="System.String" Value="" />
    <Title Type="System.String" Value="Action" />
    <BaseSelect Type="System.String" Value="select '', 'Update Flag-1'"/>
    <BaseUpdate Type="System.String" Value="
                Update ESGOSites
                set FlagField1 = case when FlagField1 = 1 then 0 else 1 end
                where GID in ([CURRENT])"/>
  </Params>
</SampleListFormBulkUPDAction>
```

```
<SampleListFormBulkUPD Assembly="Entersoft.Mobile.ESMobile"
                       Type="Entersoft.Mobile.ESMobile.ListFormCreatorCommand">
  <Params>
    <FormID Type="System.String" Value="SampleListFormBulkUPD" />
    <Title Type="System.String" Value="Sample-ListFormBulkUPD" />
    <LoadDataOnOpenForm Type="System.Boolean" Value="true" />
    <Filter Type="System.String" Value="ta.Inactive=0" />
    <BaseSelect Type="System.String" Value="
                            Select
                            s.GID SiteGID, p.GID PersonGID, p.Name...
                            From ESFITradeAccount ta
                            Inner Join ESGOPerson p on (ta.fPersonGID = p.GID)
                            Inner Join ESGOSites s on (s.fPersonGID = ta.fPersonGID)"/>
    <LeftButtonDefinition Type="System.String" Value="|" />
    <MiddleButtonDefinition Type="System.String" Value="|" />
    <RightButtonDefinition Type="System.String" Value="[POP]|SampleListFormBulkUPDAction"/>
  </Params>
</SampleListFormBulkUPD>
```



Pages-Segments / ESTabs

Example SampleESTabs

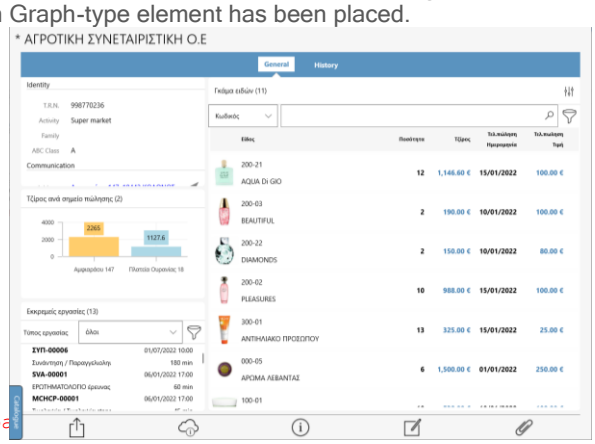
As mentioned above, the definition of the elements related to the pages-segments of a Dashboard screen (Segments section of the ExtraLayoutParams file) is subject to specific limitations in terms of the number-size and display location of the segments per page. If we wish to design a Dashboard that overrides these limitations, the tabs-segments can be defined in the ESTabs section of the ExtraLayoutParams file. At the same time, using the ESTabs section, it is possible to display the data either as a graph or as a percentage index.

Regarding the definition method and the properties available at a page level (ESTab) and a segment level (ESTabItem), the following applies:

Property	Comment
ESTab	
Caption	The label displayed as the tab title.
ESCaptionID	Exclusively refers to the product translation process (Translation key).
RowDefinitions	The number of rows on the page. At this stage, the Height property is inactive.
ColumnDefinitions	The number of columns on the page. At this stage, the Width property is inactive.
ESTabItem	
Command	The ButtonCell that corresponds to the information to be displayed. This property's content should match the Name property content of the ButtonCell.
Row, Column, RowSpan, ColumnSpan	These 4 sizes determine the segment's position-height-width, respectively.
IsMain	On the page that contains the main area of the Dashboard screen, value "true" is indicated, while "false" is indicated on the other pages.

Example

Suppose, that we wish to implement a Dashboard screen on the Point-of-sales list, where the "General" page has the format shown in the image, meaning 4 unequal segments, in one of which a Graph-type element has been placed.




```
<layoutparameters>
  …
  <ESTabs>
    <ESTab IsMain="true" ESCaptionID="" Caption="General">
        <Grid.RowDefinitions>
          <RowDefinition Height="*" />
          <RowDefinition Height="*" />
          <RowDefinition Height="*" />
        </Grid.RowDefinitions>
        <Grid.ColumnDefinitions>
          <ColumnDefinition Width="*" />
          <ColumnDefinition Width="*" />
          <ColumnDefinition Width="*" />
        </Grid.ColumnDefinitions>
          <ESTabItem Command=""
                     Row="0" Column="0" RowSpan="1" ColumnSpa
                     IsMain="true"/>
          <ESTabItem Command="Edit#CustomerSalesTurnoverPerSiteListForm"
                     Row="1" Column="0" RowSpan="1" ColumnSpan="1"/>
          <ESTabItem Command="Edit#PendingTaskListForm"
                     Row="2" Column="0" RowSpan="1" ColumnSpan="1"/>
          <ESTabItem Command="Edit#PersonRangeReport"
                     Row="0" Column="1" RowSpan="3" ColumnSpan="2"/>
    </ESTab>
    <ESTab IsMain="false" ESCaptionID="" Caption="History">…</ESTab>
  </ESTabs>
```

Photo gallery screen (SFListForm)

Example SampleSFListForm

The photo gallery screen (SFListForm) is typically used to display data as an image, while simultaneously providing, by focusing on an entry, the following features:

- Redirection to another screen for additional information.
- Immediate execution a series of actions.

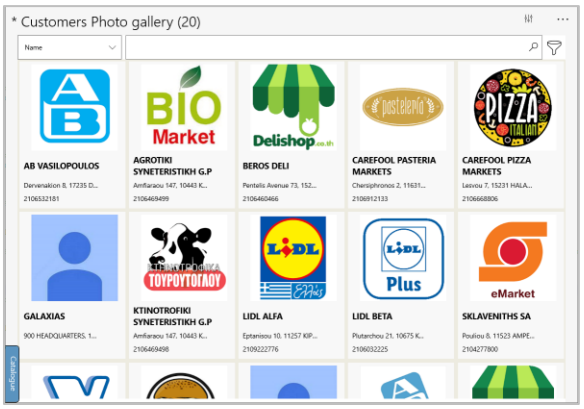
The elements required to implement a SFListForm-type screen are:

Element	Comment
Command	The user is required to use a ListFormCreatorCommand-type of command: Regarding the elements defined at a command level (data, sorting & searching), the exact same apply as described for a ListForm screen.
Form	In order to implement the screen's display format, it is necessary to use an AdvancedList.xml file. Regarding the definition method of the elements area and title area display, the same apply generally as described for a ListForm screen This section shall briefly, as well as by means of a specific example, present both of the points that differ and those that are distinctive features of a SFListForm-type screen.

Example

Suppose that we wish to implement a screen that displays our customer list but, instead of displaying it as a list, displays it as a photo gallery, using the company logo as a picture. Suppose also that we wish to display, apart from the logo, the customer name and the company's headquarters address-phone number.

```
<AdvancedList>
 <Property Name="version" Value="2" />
 <Property Name="ItemSpan" Value="5" />
 <Property Name="Rows" Value="21" />
 <Property Name="Columns" Value="24" />
 <Property Name="Margin" Value="1" />
 <Property Name="Size" Value="270" />
 <Property Name="Orientation" Value="verical" />
  <RowTemplate comment="Normal">
  <Property Name="Name" Value="RowTemplate" />
  <Cell Type="Resco.Controls.AdvancedList.ImageCell"
       Row="0" Column="1" RowSpan="14" ColumnSpan="23">
    <Property Name="CellSource" Value="Code" />
    <Property Name="Name" Value="" />
    <Property Name="Visible" Value="true" />
  </Cell>
  <Property Name="Height" Value="120" />
  <Property Name="BackColor" Value="F8F8F8" />
  </RowTemplate>
 <Property Name="MultiSelect" Value="true" />
 <Property Name="SelectedTemplateIndex" Value="0" />
 <Property Name="BackColor" Value="EEECE1" />
</AdvancedList>
```



Display format / Special settings

Data area

Regarding the definition method and available properties of the data area (Normal RowTemplate), combined with what applies for the ListForm screen, the following apply:

Element display location

On an SFListForm screen, the element display location is not defined by the Bounds property, but by a set of properties that determine the placement of the element into a grid. Regarding the configuration of the element display location, the following apply.

Property	Comment
Grid	
Version	In case a new screen is implemented, assigning value 2 is recommended. The improvements to this version, compared with the previous one, are: • The method of calculation for the height of a RowTemplate (Height property), where it is now also determined in relation to the screen size of the device. The calculation formula is RowTemplate.Height * Screen.Height /320. • The "useful" space in the data area has been increased, thanks to reducing the padding on all sides to 3.
Rows, Columns	These 2 sizes determine the number of rows-columns in the grid.
Size	The height of a list entry. This applies to all RowTemplates and is used only in case the Height property of individual the RowTemplates is empty.
Orientation	The direction of scrolling on the screen. The available options are: vertical & horizontal.
ItemSpan	It works in conjunction with the Orientation property and determines the number of entries in the screen per line (vertical orientation) or per column (horizontal orientation).
Cell	
Row, Column, RowSpan, ColumnSpan	These 4 sizes determine the element's position-height-width. Note here that particular attention should be paid so that these sizes keep the element within the grid limits.

Image column (ImageCell)

On an SFListForm-type screen, the image column is set using an ImageCell-type element. Regarding the definition method and the available properties of the element, the following apply:

Property	Comment
Type	The element must be of type ImageCell. Alternatively, it can also be defined as CarouselPopupCell, therefore, by focusing on the element, the image is zoomed and alternative images can be displayed.
CellSource	The command column that corresponds to the element must be designated.
ImageSource	The command column that we wish to use to associate a list entry with an image file name. Filled in only if we wish to set a column other than the one assigned to the CellSource property.
ImageFolder	The folder where the image files are located. It is only filled in case we wish to designate a folder other than the "default" one, ProductImages.
ImageCaption	The command column that we wish to display as a caption below the image. It is only filled in if we wish to display a caption.
Height, Width	The image dimensions. Filled in only if we wish the image to not occupy its full space based on the Row, Column, RowSpan & ColumnSpan properties.
Name	It is only filled in if we wish the element to behave as ButtonCell, meaning, to refer to a command to be executed. Regarding the definition method, the exact same apply as described for ButtonCell of the ListForm Display, we simply need to make sure that: • the element is set as ImageCell type, not CarouselPopupCell • in the CellSource property, the “feed” column of the order to be executed is assigned • in the ImageSource property, the association column for an entry with an image file is assigned

Example-1

Suppose that we wish the image column to simply display the company logo. Suppose also that the association column of an entry with an image file is the customer code.

```
<Cell Type="Resco.Controls.AdvancedList.ImageCell"
      Row="0" Column="1" RowSpan="14" ColumnSpan="23">
   <Property Name="CellSource" Value="Code" />
   <Property Name="Name" Value="" />
   <Property Name="DesignName" Value="" />
   <Property Name="ImageSource" Value="" />
   <Property Name="ImageFolder" Value="CSImages/Logo" />
   <Property Name="ImageCaption" Value="" />
   <Property Name="InputTransparent" Value="" />
   <Property Name="Visible" Value="true" />
</Cell>
```

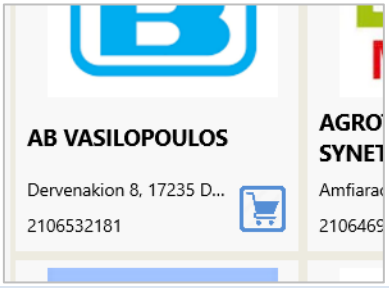
Example-2

Let’s say that we wish to extend the above element, in order to make it possible for the user to switch, by focusing on an image column, to a screen with the customer’s financial details.

```
<Cell Type="Resco.Controls.AdvancedList.ImageCell"
      Row="0" Column="1" RowSpan="14" ColumnSpan="23">
   <Property Name="CellSource" Value="TradeAccountGID" />
   <Property Name="Name" Value="Edit#TradeAccountEx1Form" />
   <Property Name="DesignName" Value="" />
   <Property Name="ImageSource" Value="Code" />
   <Property Name="ImageFolder" Value="CSImages/Logo" />
   <Property Name="ImageCaption" Value="" />
   <Property Name="InputTransparent" Value="" />
   <Property Name="Visible" Value="true" />
</Cell>
```

Action buttons (ButtonCell)

The action buttons always refer to a command to be executed. In order to define the rest of the action buttons on a SFListForm type of screen, the exact same applies as described in the corresponding section of the ListForm type of screen. The only difference is that, in the case of the an SFListForm type screen, the icon showing the button is also required to be set. Alternatively, the button can also be set using an ImageCell type of element. Regarding the icon setup, on a case-by-case basis, the following applies:



Property	Comment
ButtonCell	
Type	The element must be of type ButtonCell.
ImageDefault	To complete this property, the icon should be "converted" to encoding Base64. This conversion can be easily done by using tools such as www.browserling.com/tools/image-to-base64..
Height, Width	The button dimensions. These are only filled-in if we wish the button to not occupy its full space based on the Row, Column, RowSpan & ColumnSpan properties.
ImageCell	
Type	The element must be of type ImageCell.
ImageSource	First, under the command select query, there must be a column whose content corresponds to the name of the image file to be used on the button, and then, in the ImageSource property the name of this column must be specified.
ImageFolder	The folder where the image files are located must be set.

Example-1

Suppose that we wish to enable in the ListForm screen to directly call the new Order action. Suppose also, that we wish to use a ButtonCell type of element.

```
<Cell Type="Resco.Controls.AdvancedList.ButtonCell"
      Row="17" Column="18" RowSpan="4" ColumnSpan="6">
   <Property Name="Text" Value="Sales order" />
   <Property Name="ImageDefault" Value="iVBORw0KGgo..." />
   <Property Name="Height" Value="32" />
   <Property Name="Width" Value="32" />
   <Property Name="CellSource" Value="SiteGID" />
   <Property Name="Name" Value="Doc#NewDocumentfromSite#1" />
   <Property Name="DesignName" Value="#82#89" />
   <Property Name="Selectable" Value="true" />
</Cell>
```

Example-2

Suppose that we wish to enable in the ListForm screen to directly call the new Order action. Suppose also that we wish to use an ImageCell type of element and that the image file we wish to use is Sample_SalesOrder.png of the CSImages folder.

```
<SampleSFListForm Assembly="Entersoft.Mobile.ESMobile"
        Type="Entersoft.Mobile.ESMobile.SFListCreatorCommand">
  <Params>
  <BaseSelect Type="System.String" Value="
     Select p.GID PersonGID, s.GID SiteGID, p.Name, ta.Code,
     'Sample_SalesOrder' SalesOrderImage

     From ESFITradeAccount ta
     …"/>
  </Params>
</SampleSFListForm>
```

```
<Cell Type="Resco.Controls.AdvancedList.ImageCell"
      Row="17" Column="18" RowSpan="4" ColumnSpan="6">
   <Property Name="Text" Value="Sales order" />
   <Property Name="CellSource" Value="SiteGID" />
   <Property Name="Name" Value="Doc#NewDocumentfromSite#1" />
   <Property Name="DesignName" Value="#82#89" />
   <Property Name="ImageSource" Value="SalesOrderImage" />
   <Property Name="ImageFolder" Value="CSImages" />
   <Property Name="Selectable" Value="true" />
</Cell>
```

Configure a selected entry

On an SFListForm screen, two RowTemplates can be set for the data area. This feature covers the need to differentiate the elements and the display format between the Normal and Selected entry. The following settings are required:

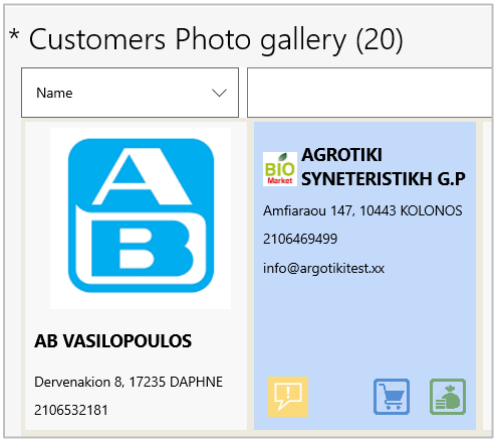
- Define a second RowTemplate (Selected RowTemplate) in the form's AdvancedList file. The definition method and available properties are exactly the same as described for Normal RowTemplate.
- Specify the Selected RowTemplate SEQ.NO in property SelectedTemplateIndex.

Note here that by assigning the SelectDeselect value at the AdvancedList file of form SelectionMode, the screen allows the user to select / de-select an entry, while by specifying true to the MultiSelect property, it also allows the user to select multiple entries.

Example

Suppose we wish to expand our SFListForm screen with additional action buttons. Suppose also we wish, for ergonomic purposes, that the action buttons are only displayed on a selected entry.

```
<AdvancedList>
  <Property Name="version" Value="2" />
  <Property Name="KeyNavigation" Value="true" />
  <Property Name="ScrollbarWidth" Value="5" />
  <Property Name="ItemSpan" Value="5" />
  <Property Name="Rows" Value="21" />
  <Property Name="Columns" Value="24" />
  <Property Name="Margin" Value="5" />
  <Property Name="Size" Value="270" />
  <Property Name="Orientation" Value="verical" />
  <RowTemplate comment="Normal">…</RowTemplate>          a/a: 0
  <RowTemplate comment="Selected">…</RowTemplate>        a/a: 1
  <Property Name="SelectionMode" Value="SelectDeselect" />
  <Property Name="MultiSelect" Value="false" />
  <Property Name="SelectedTemplateIndex" Value="1" />
  <Property Name="BackColor" Value="EEECE1" />
</AdvancedList>
```



Element format properties

On a SFListForm type of screen, it is now possible to adjust some of the properties that relate to the data area formatting. Specifically, the following:

- Color. Color-related properties (ForeColor, BackColor, etc.) can also be specified using a HEX color number.

  ```
  <Property Name="ForeColor" Value="6A5ACD" />
  ```

- Alignment. The values available for the Alignment property are: Left, UpperLeft, LowerLeft, Right, UpperRight, LowerRight & Center, UpperCenter, LowerCenter.
- Wrapping. The desired behavior is defined, in case the content of the element exceeds the limits of its position, in the LineBreakMode property. The available values are: 0-Do not wrap, 1-Wrap at word boundaries, 2- Wrap at character boundaries, 3-Truncate the head of text, 4-Truncate the tail of text & 5-Truncate the middle of text.

Format by condition (Binding)

On a SFListForm type of screen, it is possible to differentiate by condition (Binding) some of the properties related to the data area. The settings required to enable this feature are:

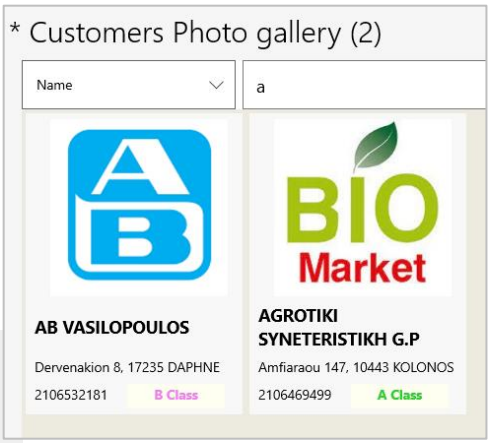
- Command. Definition, in the select query of the command, of a distinct column whose content describes the Binding condition.
- Form. Define this column as Value of the elements in the AdvancedList file of the form, to which we want the Binding condition to apply. This should happen in the form {Binding Column}, where Column is the column describing the Binding condition. The string type properties, where Binding can be used, are BackColor, ForeColor & BorderColor, while the boolean type properties are InputTransparent & Visible.

Note here that the design specifications of the screen require two elements to be displayed in the exact same position on it, which is the case in our second example, we must ensure that the InputTransparent property is adjusted in parallel with the Visible property. The Binding condition of this property should result in the opposite value to the one specified for Visible property.

Example-1

Suppose we wish to expand our SFListForm screen to also display the customer ABC class information. Suppose also that we wish to differentiate the ForeColor property of this element, based on the class in which each customer is part.

```
<SampleSFListForm Assembly="Entersoft.Mobile.ESMobile"
    Type="Entersoft.Mobile.ESMobile.SFListCreatorCommand">
 <Params>
  <FormID Type="System.String" Value="SampleSFListForm" />
  <BaseSelect Type="System.String" Value="
   Select ...
    case
    when abc.ABCClass is null then 'FF0000'
    when abc.ABCClass = 'A' then '32CD32'
    when abc.ABCClass = 'B' then 'EE82EE'
    else 'FF0000' end ABCColor
   From ESFITradeAccount ta ...
   "/>
 </Params>
</SampleSFListForm>
```

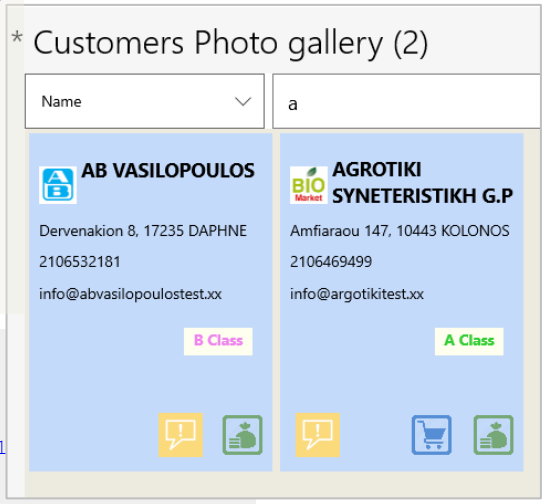



```
<Cell Type="Resco.Controls.AdvancedList.TextCell"
      Row="12" Column="16" RowSpan="2" ColumnSpan="6">
  <Property Name="CellSource" Value="ABCClass" />
  <Property Name="Name" Value="ABCClass" />
  <Property Name="Alignment" Value="UpperRight" />
  <Property Name="ForeColor" Value="{Binding ABCColor}" />
  <Property Name="FontStyle" Value="Bold" />
  <Property Name="FontSize" Value="11" />
  <Property Name="BackColor" Value="FFFFF0" />
  <Property Name="LineBreakMode" Value="4" />
</Cell>
```

Example-2

Suppose we wish to expand our SFListForm screen so that the new Order action is only available to Class A customers. For customers of classes, a screen with the customer's financial information appears in lieu of this action.

```
<SampleSFListForm Assembly="Entersoft.Mobile.ESMobile"
    Type="Entersoft.Mobile.ESMobile.SFListCreatorCommand">
  <Params>
   <FormID Type="System.String" Value="SampleSFListForm" />
   <BaseSelect Type="System.String" Value="
    Select ...
     case
     when abc.ABCClass = 'A' then 1
     else 0 end Order_Visible,
     case
     when abc.ABCClass = 'A' then 0
     else 1 end Order_Transparent, …
    From ESFITradeAccount ta ...
    "/>
  </Params>
</SampleSFListForm>
```




```
<Cell Type="Resco.Controls.AdvancedList.ButtonCell"
     Row="17" Column="12" RowSpan="4" ColumnSpan="6">
  <Property Name="Text" Value="Sales order" />
  <Property Name="CellSource" Value="SiteGID" />
  <Property Name="Name" Value="Doc#NewDocumentfromSite#1
  <Property Name="DesignName" Value="#82#89" />
  <Property Name="ImageDefault" Value="iVBOR..." />
  <Property Name="Height" Value="32" />
  <Property Name="Width" Value="32" />
  <Property Name="Visible" Value="{Binding Order_Vis}ible" />
  <Property Name="InputTransparent" Value="{Binding Info_Transparent" />
</Cell>
```

Header area

In screens of SFListForm type it is also possible to display a header area (Header RowTemplate). Defining this area is optional, while it can be activated by indicating the relevant RowTemplate SEQ.NO in the HeaderTemplateIndex property of the form's AdvancedList file.

For the definition mode and available properties of the area the exactly same applies as described in the corresponding section of the ListForm screen, except for adjusting the element display location, where it is also necessary to place the element within a grid.

Grouping area

Example SampleSFListGrouping

In screens of SFListForm type it is also possible to display a data grouping area. To enable this feature simply specify the column of the command select query which is the grouping criterion, to the GroupField property of the AdvancedList file of the form.

Especially in the case of a SFListform screen that refers to the Item or Client entity, it is also possible to centrally specify the grouping criterion. In order to set up this behavior, the following are required.

- Specify mobile parameters SFList_GroupFieldItem & SFList_GroupFieldICustomer of the desired criterion, for the Item & the Customer respectively, based on which we wish the grouping to take place. Of course, the user must make sure that this criterion is included in the select query columns of each command.
- Specify, in the GroupField property of the form's AdvancedList file, the corresponding mobile parameter. This should be in the form of ##SFList_GroupFieldItem or ##SFList_GroupFieldICustomer, respectively.

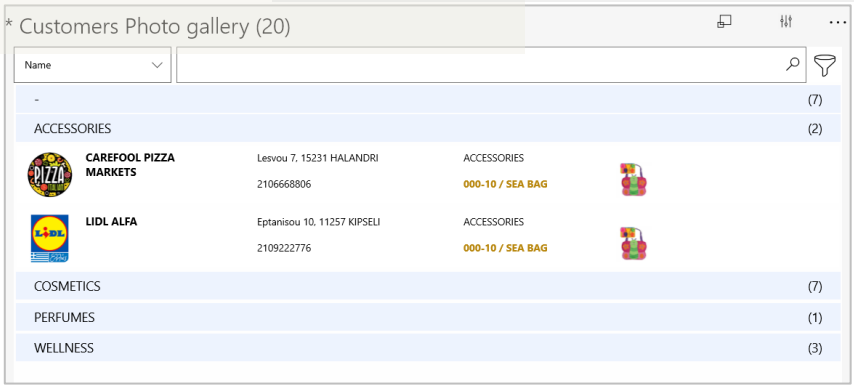
In any case, by focusing on the area of a group, this group is expanded-collapsed, while by pressing the -Collapse button all groups are expanded-collapsed. If, for any reason, we want to hide the button, value True should be specified in property HideExpandButton of the SFListForm command.

Example-1

Suppose that we wish to implement a ListForm screen that displays the top item for turnover per customer. Suppose also that we want the screen data to be grouped based on mobile parameter SFList_GroupFieldItem, to which the ItemGroup value is specified.

```
<SampleSFListGrouping Assembly="Entersoft.Mobile.ESMobile"
                      Type="Entersoft.Mobile.ESMobile.SFListCreatorCommand">
  <Params>
    <FormID Type="System.String" Value="SampleSFListGrouping" />
    <Title Type="System.String" Value="Customers Photo gallery" />
    <BaseSelect Type="System.String" Value="
      Select
          p.GID PersonGID, s.GID SiteGID, p.Name,
          case when i.fItemGroupCode is null then '-'
          else i.fItemGroupCode end ItemGroup,
          …
      From ESFITradeAccount ta …
    "/>
  </Params>
</SampleSFListGrouping>
```

```
<AdvancedList>
  …
  <Property Name="Orientation" Value="verical" />
  <Property Name="GroupField" Value="##SFList_GroupFieldItem" />
  <RowTemplate comment="Normal">..</RowTemplate>
  <Property Name="SelectedTemplateIndex" Value="0" />
  <Property Name="BackColor" Value="FFFFFF" />
</AdvancedList>
```



Example-2

Suppose that we wish to change our SFListForm screen, so that the data grouping takes places based on the ABCClass column.

```
<SampleSFListGrouping Assembly="Entersoft.Mobile.ESMobile"
                      Type="Entersoft.Mobile.ESMobile.SFListCreatorCommand">
  <Params>
    <FormID Type="System.String" Value="SampleSFListGrouping" />
    <Title Type="System.String" Value="Customers Photo gallery" />
    <BaseSelect Type="System.String" Value="
      Select
          p.GID PersonGID, s.GID SiteGID, p.Name,
          case when abc.ABCClass is null then 'D'
          else abc.ABCClass end ABCClass,
          …
      From ESFITradeAccount ta …
    "/>
  </Params>
</SampleSFListGrouping>
```

```
<AdvancedList>
  …
  <Property Name="Orientation" Value="verical" />
  <Property Name="GroupField" Value="ABCClas" />
  <RowTemplate comment="Normal">..</RowTemplate>
  <Property Name="SelectedTemplateIndex" Value="0" />
  <Property Name="BackColor" Value="FFFFFF" />
</AdvancedList>
```

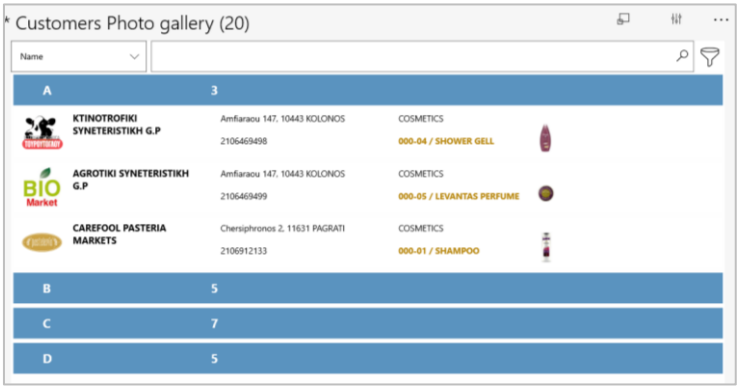
Note here that regarding the display format of the area, the background color is on default and the available information is the grouping criterion & the count of entries in the group. For any kind of differentiation in the display format, it is necessary to specify, in the AdvancedList file of the form, a special RowTemplate (sectionHeader RowTemplate). Regarding the definition method and the available properties of the area, the following apply:

Property	Comment
RowTemplate	
Name	The sectionheader label is mandatory.
Height	The area height. To hide the area, specify value 0.
BackColor	The area's background color. It can also be defined by using a HEX color number.
Cell	
Type	The element must be of type TextCell.
CellSource	The grouping criterion requires the GroupField label, while the entries count required the Count label.

Example-3

Suppose that, we want to keep our existing ABCClass-based SFListForm data grouping, but we also want to change the display format of the grouping area.

```
<AdvancedList>
 <Property Name="GroupField" Value="ABCClass" />
 …
 <RowTemplate comment="Group">
  <Property Name="Name" Value="sectionheader" />
  <Cell Type="Resco.Controls.AdvancedList.TextCell"
        Row="0" Column="1" RowSpan="4" ColumnSpan="3">
   <Property Name="CellSource" Value="GroupField" />
   …
  </Cell>
  <Cell Type="Resco.Controls.AdvancedList.TextCell"
        Row="0" Column="4" RowSpan="4" ColumnSpan="3">
  <Property Name="CellSource" Value="Count" />
  …
  </Cell>
  <Property Name="Height" Value="20" />
  <Property Name="BackColor" Value="5A93BF" />
 </RowTemplate>
</AdvancedList>
```

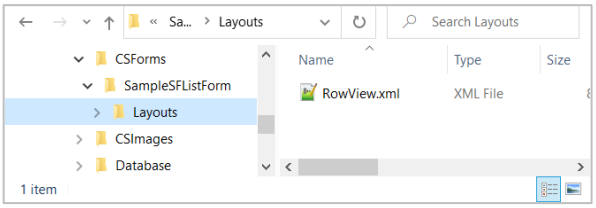


Alternative layouts

Example SampleSFListForm

In a SFListForm screen, using the alternative layouts, it is possible to dynamically change the display format of the screen. The following applies regarding the necessary settings.

- Layout configuration. The layout can be configured using an AdvancedList.xml file. As for how to define the individual elements of the AdvancedList file, the exact same applies as described for the "default" layout of the SFListForm screen.
- Layouts location. The alternative layout files can have any name other than “AdvancedList.xml” and should be placed in the Layouts sub-folder of the area that contains the “default” layout of the SFListForm screen.

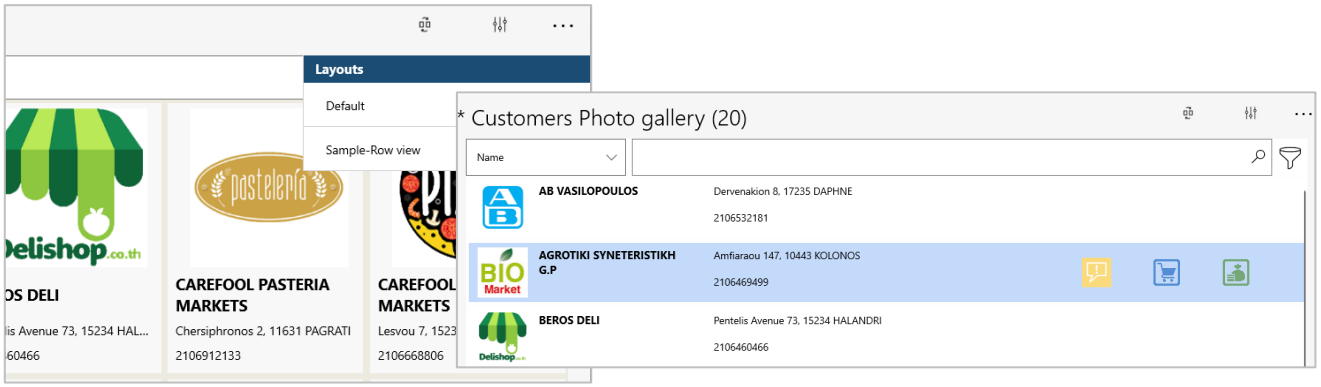


- Layout call button. Alternative layouts can be called using the - Layouts button of the screen SFListForm. To display this button, it is necessary to define the available layouts in the Layouts section of the SFListForm command. The link between a button and a layout file is created by specifying the layout file name in the FormID property

Example

Suppose that we wish to expand our SFListForm screen with a layout that also displays the customer list in the form of an entry list. Suppose also that this layout file is named RowView.xml.

```
<SampleSFListForm Assembly="Entersoft.Mobile.ESMobile"
                  Type="Entersoft.Mobile.ESMobile.SFListCreatorCommand">
  <Params>
    <FormID Type="System.String" Value="SampleSFListForm" />
    <Title Type="System.String" Value="Customers Photo gallery" />
    …
    <Layouts Type="gr.entersoft.esmobile.Layouts">
      <Definition>
        <ESLayout Caption="Sample-Row view" FormID="RowView"/>
      </Definition>
    </Layouts>
    …
  </Params>
</SampleSFListForm>
```



Selection list screens

Selection screens are not stand-alone screens. They are always called through the interface of a Data entry screen. They display data as a list and they're used as an "update" tool for entities, by either assigning a value to a field, or by importing an entry. Their functionality varies somewhat, depending on what part of the application the screen is called from.

Standard selection list (InvForm)

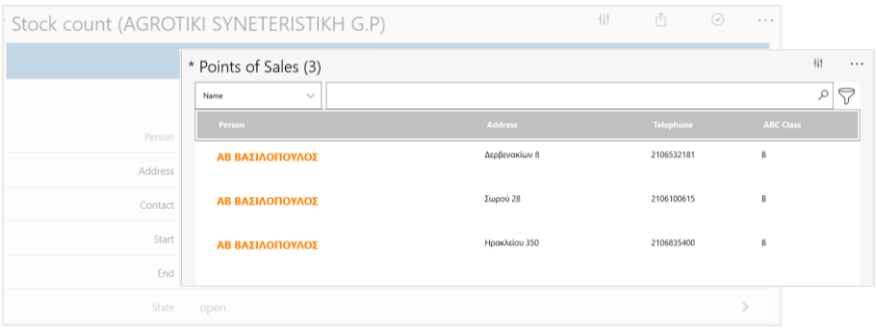
Example SampleListForm

The standard selection list (InvForm) is called by focusing on a specific field of a Data entry screen and is used as a tool to search & select an entry in order to assign it to a field of the screen from which it is called. The elements required to implement an InvForm-type screen are:

Element	Comment
Command	The user is required to use an InvFormCreatorCommand type of command Regarding the elements defined at a command level (data, sorting & searching), overall the same applies as described for a ListForm type of screen. This section shall briefly, as well as by means of a specific example, present both of the points that differ and therefore require special attention when implementing an InvForm type of screen.
Form	In order to implement the screen's display format, using an AdvancedList.xml file is required. Regarding the definition method of the elements display area, the exact same apply as described for a ListForm type of screen.

Example

Suppose that we wish to implement a screen that will be used as an address selection list in the Data entry screen of a ES.MCH-Measurement type of task. Let's also assume that the specifications for the data and the layout display of this screen are fully identical to those in example SampleListForm.




```
<SampleInvForm Assembly="Entersoft.Mobile.ESMobile"
                    Type="Entersoft.Mobile.ESMobile.InvFormCreatorCommand">
  <Params>
    <FormID Type="System.String" Value="SampleListForm" />
    <Title Type="System.String" Value="Points of Sales" />
    <LoadDataOnOpenForm Type="System.Boolean" Value="true" />
    <Filter Type="System.String" Value="ta.Inactive=0" />
    <FilterBy Type="System.String" Value="PersonGID#=#fPersonGID" />
    <BaseSelect Type="System.String" Value="
          Select
          p.GID PersonGID, s.GID SiteGID, p.Name,
          s.Address, p.eMail eMail, s.Telephone1 Telephone,
          case when abc.ABCClass is null then 'D'
          else abc.ABCClass end ABCClass,
          s.GID GID
          From ESFITradeAccount ta
          …"/>
  </Params>
</SampleInvorm>
```

Data / Special settings

Regarding settings at a command level, in conjunction with those applicable to a ListForm-type screen, the following apply as well.

- Type. An Invform CreatorCommand type of command must be used.
- Data. A column must be present in the select query, which will constitute the unique identification key of a list entry, named GID. For our example, a column named GID should be present in the select query, referring to the GID field of the ESGOSites table.
- Command properties. The FilterBy property should exist even with empty content. This property enables dynamic filtering of the list data, based on the value of other fields of the Data entry screen. For our example, this property will be used to filter the address list, based on the person to whom our Data entry screen refers. The syntax of the property should be in the following form:

```
<FilterBy Type="System.String"
          Value=" Column1#=#DataMember1,Column2#=#DataMember2,…" />
```

  - Column is the select query column, on which the filtering will be applied.
  - DataMember is the Data entry screen element, based on which the filtering will take place.

Add lines list (AddLineForm)

Example SampleAddLineForm

The AddLineForm-type screen is called by an appropriately configured button of the task-document Data entry screen and used as a tool to search and select entries, in order to insert them to the task-document lines. The AddLineForm screen automatically acquires the following additional features, in relation to the InvForm screen:

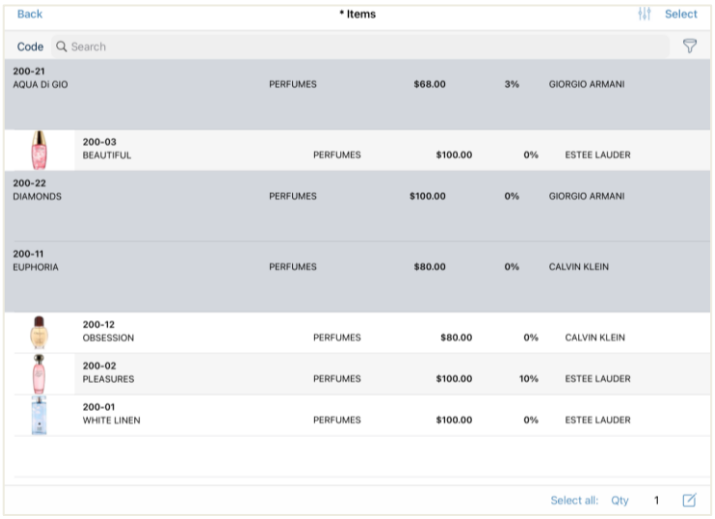
- Ability to select multiple entries.
- Add column that enables the display of an image related to the list entries.
- Ability to assign a value to an element of the task-document lines.

The elements required to implement an AddLineForm-type screen are:

Element	Comment
Command	The user is required to use an InvFormCreatorCommand type of command Regarding the elements defined at a command level (data, sorting & searching), overall the same applies as described for a ListForm type of screen. This section shall briefly, as well as by means of a specific example, present both of the points that differ and therefore require special attention when implementing an AddLineForm type of screen.
Form	In order to implement the screen's display format, it is necessary to use an AdvancedList.xml file. Regarding the definition method of thedisplay elements in the data area, the exact same apply as described for a ListForm type of screen.

Example

Let's assume that we wish to implement a screen that will be used as an add line list in the Data entry screen of a 1-Order type of document. Let's also assume that we want this list to show some of the main item information (code, description, price, etc.). Let's also assume that the form of this screen is SampleAddLineForm.




```
<SampleAddLineForm Assembly="Entersoft.Mobile.ESMobile"
                   Type="Entersoft.Mobile.ESMobile.InvFormCreatorCommand">
  <Params>
    <FormID Type="System.String" Value="SampleAddLineForm" />
    <Title Type="System.String" Value="Items" />
    <Filter Type="System.String" Value="ItemType=0 and Inactive=0" />
    <LoadDataOnOpenForm Type="System.Boolean" Value="true" />
    <BaseSelect Type="System.String" Value="
         Select
           GID,Code,Description,fItemGroupCode,Manufacturer,
           Price, Discount, 1.0 Qty
         From ESFIItem i " />
  …
  </Params>
</SampleAddLineForm>
```

Data / Special settings

Regarding settings at a command level, in conjunction with those applicable to a ListForm-type screen, the following apply as well.

- Type. An InvForm CreatorCommand type of command must be used.
- Data. In the select query
  - there should be a column, named GID, that constitutes the unique identification key of a list entry. For our example, a column named GID should be present in the select query, referring to the GID field of the ESFIItem table.

    In case the unique identification key of a list entry is composed by more than one column, the GID column should derive from the composition of said columns.

    
    For an add competition lines list, where the same item can be provided by multiple competitors

```
<Params>
…
 <BaseSelect Type="System.String" Value="
 select
   c.GID fCatalogueItemGID, p.GID fPersonGID,
   c.GID || '' || p.GID GID,c.Code Code,
   c.Description Description, p.Name Competitor
 from ESMMCatalogueItem c
 left join ESMMPersonItem pi on (pi.fCatalogueItemGID = c.GID)
 left join ESGOPerson p on (p.GID = pi.fPersonGID) " />
 …
</Params>
```

  - there should be a column named Qty, with the constant 1.0.
  - there should be a column named Code, even with empty content. This column is used to link a list entry with an image file name. Note here that, by means of appropriate configuration, it is possible to differentiate this behavior.
  - there should be the following two columns, fMUCode & fItemMUGID, even with empty content. These columns are used to enable the selection of a measurement unit. For the Task entity in particular, it is recommended that a column exists for assigning a base measurement unit of the item, in the corresponding element of the task line.
  - there should be a column named ItemMUDecimals, if we wish to check the allowed decimals in the quantity, by measurement unit.
- Command properties. Property SelectaAllEnabled should be activated, if we wish to be able to bulk enter quantity for the total of selected entries.

Assign value to element (Assign_CellSource)

As mentioned above, one of the special features of AddLineForm is the ability to assign a value to an element of the task-document lines. To use this feature, simply define, in the select query the command, a distinct column of the format ValueMember Assign_CellSource, where

- ValueMember is the value to be assigned, which can be a constant, the content of a field, or even an expression.
- CellSource is the element of the task-document line where the assignment will take place. Note that any store or non store field of the line can be defined as an element to be assigned.

Example

Let's assume that we want the "Manufacturer" column of our AddLineForm to be assigned to the "Text-1" element on the document line.

```
<Params>
  …
  <BaseSelect Type="System.String" Value="
    Select …
    i.Manufacturer Assign_StringField1,…
    From ESFIItem i " />
  …
</Params>
```

Note that

In case the scenario of assigning a value to an element is sufficiently specific, it is also possible to define the assign condition through the use of the Business Rules tool.

Display format / Special settings

Regarding the definition method and available properties of the data area, combined with what applies for the ListForm screen, the following apply:

Image column

As mentioned above, one of the AddLineForm special features is the ability to assign a value to add an image column related to the list entries. To automatically enable this feature, it is necessary that:

- In the ProductImages folder of the device, there are image files whose name is the matches the content of the select query Code column of the command and their type matches the content of mobile parameter ImageFileExextension.
- The device parameter Item_ShowThumbs should be set to value 1-Yes.

At the same time and through an appropriate adjustment of the AddLineForm command, it is possible to differentiate the default "standards" of image display. The following settings are required:

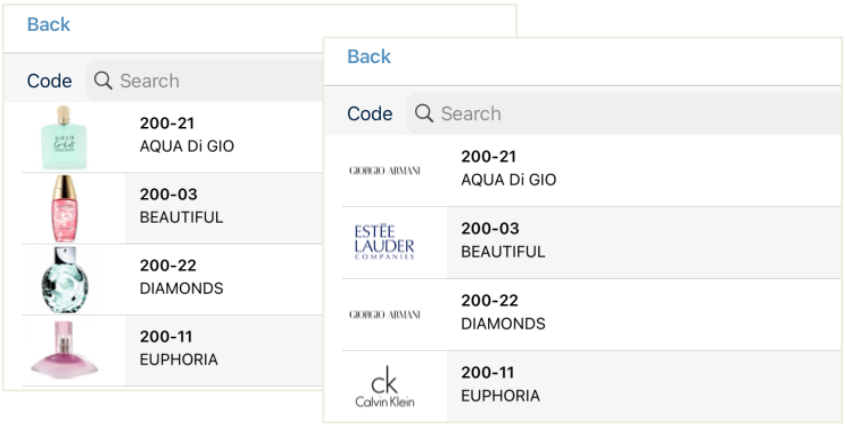
Property	Comment
ImageColumn	The select query column that we wish to use to associate a list entry with an image file name.
ImageDirectory	The folder where the image files are located.
ImageExtension	The type of image files.

Note that by focusing on the image, it is automatically magnified and the it is possible to display an item's detailed screen, as well as send the image via E-mail.

Example

Let's assume that we want the image column of our AddLineForm screen to display the logo of the item manufacturer, instead of the item image. Let's also assume that the image files are type png and are located in the CSImages/Logo folder.

```
<Params>
  …
  <BaseSelect Type="System.String" Value="
    Select …
    Manufacturer,…
    From ESFIItem i " />
  <ImageColumn Type="System.String" Value="Manufacturer" />
  <ImageDirectory Type="System.String" Value="CSImages/Logo" />
  <ImageExtension Type="System.String" Value="png" />
  …
</Params>
```



Standard action buttons

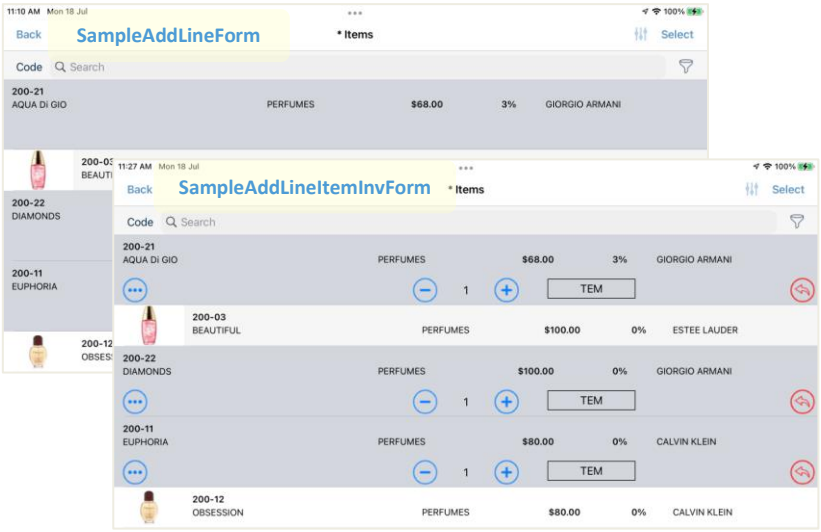
Especially on the iOS Platform, simply changing the name of the form to contain the label ItemInvForm, causes the AddLineForm screen to be automatically enhanced, by focusing on an entry, with the following standard action buttons.

Button	Comments
	Increase the selected entry's quantity.
	Decrease the selected entry's quantity.
	Displays an analysis screen of the quantity in item dimensions. This button is available in documents only.
	When focusing, the pop up numeric keypad appears, for directly set a quantity.
	Displays a measurement unit selection screen. This button is available in documents only.
	Displays a comment input screen on the selected entry.
	De-select an entry.

The info specified by these buttons in the AddLineForm screen are transferred as is into the corresponding fields in the task-document line.

Example

Suppose we choose to change the form name of our example from SampleAddLineform to SampleAddLineItemInvForm



Add lines list (AddLineSFForm)

Example SampleAddLineSFForm

The AddLineForm type of screen is called by an appropriately configured button of the task-document Data entry screen and used as a tool to search and select entries, in order to insert them to the task-document lines. This AddLineSFForm is available only on UWP & Android platforms.

Note that

An AddLineForm screen built on an iOS platform can be used exactly as is on the UWP & Android platform. An AddLineSFform screen implementation is only required if the screen needs to be enhanced with the standard action buttons.

The data required to implement an AddLineForm-type screen are:

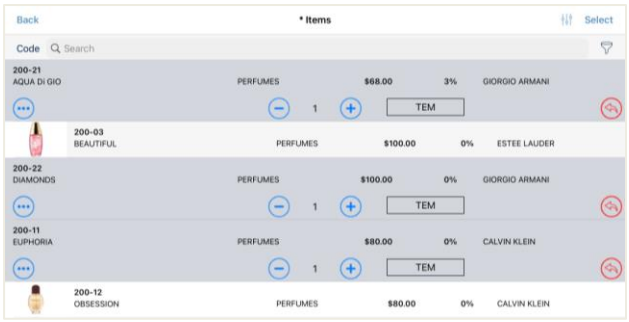
Element	Comment
Command	The user is required to use an SFInvFormCreatorCommand type of command Regarding the elements defined at a command level (data, sorting & searching), overall the same applies as described for a ListForm type of screen. This section shall briefly, as well as by means of a specific example, present both of the points that differ and therefore require special attention when implementing an AddLineSFForm type of screen.
Form	In order to implement the screen's display format, it is necessary to use an AdvancedList.xml file. Regarding the definition method of the data display area, the exact same applies as described for a SFListForm type of screen. This section shall only present the settings required so that AddLineSFForm screen fully simulates the corresponding AddLineForm screen.

Example

Let assume that we want to implement, on UWP or Android, an add lines list screen that fully simulates the SampleAddLineForm screen, in appearance and functionality.

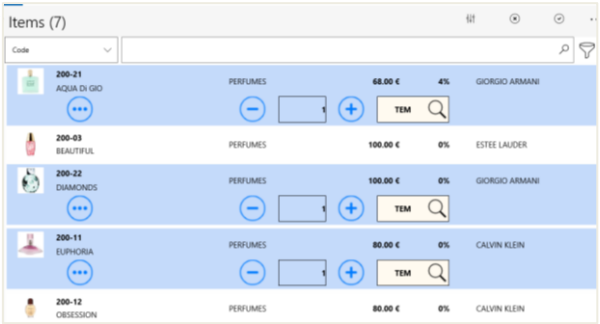
```
<SampleAddLineForm Assembly="Entersoft.Mobile.ESMobile"
        Type="Entersoft.Mobile.ESMobile.InvFormCreatorCommand">
  <Params>
   <FormID Type="System.String" Value="SampleAddLineItemInvForm"
   />
   <Title Type="System.String" Value="Items" />
   <LoadDataOnOpenForm Type="System.Boolean" Value="true" />
   <SelectaAllEnabled Type="System.Boolean" Value="true" />
   <BaseSelect Type="System.String" Value="
      Select
       GID,Code,Description,fItemGroupCode,Manufacturer,
       Manufacturer Assign_Reasoning,
       Price, Discount, 1.0 Qty, '' fMUCode, '' fItemMUGID
      From ESFIItem i " />
  …
  </Params>
</SampleAddLineForm>
```

iOS platform




```
<SampleAddLineSFForm Assembly="Entersoft.Mobile.ESMobile"
        Type="Entersoft.Mobile.ESMobile.SFInvFormCreatorCommand
        ">
  <Params>
   <FormID Type="System.String" Value="SampleAddLineSFForm" />
   <Title Type="System.String" Value="Items" />
   <LoadDataOnOpenForm Type="System.Boolean" Value="true" />
   <SelectAllQtyEnabled Type="System.Boolean" Value="true" />
   <BaseSelect Type="System.String" Value="
      Select
       GID,Code,Description,fItemGroupCode,Manufacturer,
       Manufacturer Assign_Reasoning,
       Price, Discount, 1.0 Qty, '' fMUCode, '' fItemMUGID
      From ESFIItem i " />
  …
  </Params>
</SampleAddLineSFForm>
```

UWP & Android



Data / Special settings

Regarding settings at a command level, in conjunction with those applicable to a ListForm-type screen, the following apply as well.

- Type. An SFInvForm CreatorCommand type of command must be used.
- Data. In the select query
  - there should be a column, named GID, that constitutes the unique identification key of a list entry. For our example, a column named GID should be present in the select query, referring to the GID field of the ESFIItem table. As mentioned above, in the AddLineForm screen section, in case the unique identification key of a list entry is composed by more than one column, the GID column should derive from the composition of said columns.
  - there should be a column named Qty, with the constant 1.0.
  - there should be columns named fMUCode & fItemMUGID, even with empty content. These columns are used to enable the selection of a measurement unit.
  - there should be a column named ItemMUDecimals, if we wish to check the allowed decimals in the quantity, by measurement unit.
- Command properties. Property SelectaAllQtyEnabled should be activated, in order to be able to bulk enter quantity for the total of selected entries.

Assign value to element (Assign_CellSource)

On an AddLineSFForm type of screen, in order to utilize the ability to assign a value to a task-document line element, the exact same applies as described in the corresponding section the AddLineForm screen.

Display format / Special settings

Regarding the definition method and available properties of the data area, combined with what applies for the ListForm & SFListForm screen, the following apply:

Element display location

As mentioned above, in UWP & Android the Bounds property is completely ignored, which leads to the sub-elements not having a specific display, but instead be “proportionally” allocated in the available space of the screen. In case this display format is not satisfactory, it is recommended to extend the AdvancedList file of the form with the properties regarding placing an element into a grid. In this case, regarding the adjustment of the element display location the exact same applies as described in the corresponding section of the SFListForm screen.

Image column (ImageCell)

On an AddLineSFForm type screen, the image column is specified at the RowTemplate of the data area, using an ImageCell-type element. Regarding the definition method and available properties of the image column, the exact same applies as described in the corresponding SFListform screen section.

Standard action buttons

On an AddLineSFForm type screen, the standard action buttons are specified at the RowTemplate of the data area, using TextCell & ButtonCell type elements. Let's also assume that we wish, for ergonomic purposes, that the standard action buttons are only displayed on a selected entry. Adding the standard action buttons to the AddLineSFForm screen requires to define the element using the following, per button, properties.

Button	Property	Property value
Increase quantity	Type	ButtonCell
	CellSource	Qty
	Name	PlusButton
Decrease quantity	Type	ButtonCell
	CellSource	Qty
	Name	MinusButton
Item dimensions	Type	ButtonCell
	CellSource	Qty
	Name	AnalysisButton
Quantity	Type	TextCell
	CellSource	Qty
	Name	Qty
Measurement unit	Type	TextCell
	CellSource	fMUCode
	Name	MMButton
	DesignName	zoom=MMButton
Line comment	Type	ButtonCell
	CellSource	Assign_Reasoning
	Name	ReasoningButton

For the increase quantity button

```
<Cell Type="Resco.Controls.AdvancedList.ButtonCell"
      Row="2" Column="13" RowSpan="2" ColumnSpan="2">
  <Property Name="CellSource" Value="Qty" />
  <Property Name="Name" Value="PlusButton" />
  <Property Name="DesignName" Value="" />
  <Property Name="ImageDefault" Value="iVBORw0..." />
  <Property Name="Height" Value="42" />
  <Property Name="Width" Value="42" />
  <Property Name="Selectable" Value="true" />
  <Property Name="Visible" Value="true" />
  <Property Name="InputTransparent" Value="false" />
</Cell>
```

Configure a selected entry

In an AddLineSFForm type of screen, it is possible to differentiate the elements and display format between Normal and Selected entry. Regarding the definition method and available properties of the area, the exact same applies as described in the corresponding SFListForm screen section. However, special attention should be paid to the following properties.

Property	Comment
SelectedTemplateIndex	The RowTemplate SEQ.NO relating to a selected entry (Selected RowTemplate) must be declared.
SelectionMode	The SelectDeselect value must be declared, in order to allow the user to select / de-select an entry.
MultiSelect	Value "true" must be assigned, to enable the selection of multiple entries.
AlternateRowColor	Value "true" must be assigned, to be able to differentiate the BackColor of entries that correspond to already saved task-document lines. This property should be assigned to the RowTemplate concerning a normal entry (Normal RowTemplate).

Grouping area

Contrary to the AddLineForm screen, the AddLineSFForm screen also allows the user to display a grouping area of data. Regarding the definition method and available properties of the area, the exact same applies as described in the corresponding SFListForm screen section.

Data entry screens

The Data entry screens are usually called up with an action button on a selected entry of a list and used to create a new entry or manage an existing one. Both the display format and the functionality of the Data entry screen varies considerably, depending on the entity it is currently handling.

Master entity (EditForm)

Example SampleEditFormMaster

The Data entry screen of a master entity (EditForm) is used to manage the entry details that refers to one of the core entities of the ESMobile application. These are:

- Person, Customer & Address. For these entities, it is possible to both create a new entry, as well as view-modify an already existing one.
- Item. For this entity, it is only possible to view an existing entry.

The data required to implement an EditForm-type screen are:

Element	Comment
Command	The user must use a command of type NewFormCreatorCommand or EditFormCreatorCommand, to create or manage an entry, respectively.
Form	In order to implement the screen's display format, it is necessary to use a DetailView.xml file.

Next up in this section, detailed implementation instructions for EditForm type of screens will be given, using a specific example.

Attention

To ensure a smooth update of the ESMobile app, it is necessary that the screen's command file is custom, in case the screen DetailView file is custom. This rule applies even if no intervention is necessary in the command file.

Screen Data

Defining the EditForm screen data, as well as the command-form link, is possible by appropriately configuring the individual properties of the command file. The command file should be in the Commands sub-folder of the ESConfig or CSConfig area. Attention: the command file name should match the name of the command in the file.

Example

Let's assume that we wish to implement a Data entry screen that can be used to view an entry of the "Competitors" list. This screen is simply intended to display some basic data of the person, but without allowing the user to make changes. Let's also assume that the form of this screen is SampleEditFormMaster.

```
<SampleEditFormMaster Assembly="Entersoft.Mobile.ESMobile"
                      Type="Entersoft.Mobile.ESMobile.EditFormCreatorCommand">
  <Params>
    <FormID Type="System.String" Value="SampleEditFormMaster" />
    <Title Type="System.String" Value="Edit Competitor" />
    <Filter Type="System.String" Value="PersonGID = '[CURRENT]'" />
    <BaseSelect Type="System.String" Value="
                Select
                  p.GID PersonGID, p.Name Name,
                  p.TaxRegNumber TaxRegNumber,
                  p.fTaxOfficeCode, p.eMail eMail,
                  p.WEBSite WEBSite
                From ESGOPerson p
                "/>
    <Editable Type="System.Boolean" Value="false" />
  </Params>
</SampleEditFormMaster>
```

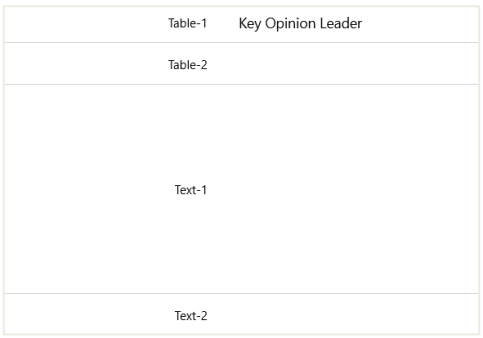
Property	Comment
FormID	The folder in ESForms or CSForms, where the relevant AdvancedList file of the form can be found. For this example, it is the SampleEditFormMaster folder.
Title	The label that appears as a screen EditForm title. In this example it is label "Edit Competitor".
Filter	The "link" column of the data list with the EditForm screen to be displayed. In this example, it is column PersonGID. Keep in mind that the [CURRENT] variable comes from the CellSource property of the Data entry screen call key.
BaseSelect	The "select query" that specifies the data to be displayed. It must contain all columns referring to the DetailView file of the form.
BaseInsert	The insert query that specifies the data to be inserted. It should be entered only in case the EditForm screen refers to an entity for which it is possible to create a new entry.
BaseUpdate	The update query that specifies the data to be modified. It should be entered only in case the EditForm screen refers to an entity for which entry modification it is possible.
Editable	Allow (true) or do not allow (false) interventions to the details of the screen entries. Note that, when there is a column named RecordState in the command's select query, the value of property Editable is fully ignored and the intervention check is transferred to a selected entry level. If the entry's RecordState column has a value of 1, intervening to its details is not allowed.

Display format

Specifying the display data of the EditForm screen is possible by appropriately configuring the individual properties of the form's DetailView file. Note here that the properties to be configured vary according to the type of data (Item) displayed. Regarding the definition method and the available properties per data type, the following apply:

Property	Comment
Tab page	
Type	Specify ItemPageBreak. Used to define the screen page.
Text	The label displayed as the tab title.
Name	Exclusively refers to the product translation process (Translation key).
Item-All types	
Label	The label displayed as the element's caption.
DataMember	The command column that corresponds to the element. Note that it is not possible to assign the same column in more than one element.
Name	Exclusively refers to the product translation process (Translation key).
Enabled	Allow (true) or do not allow (false) interventions to the element. The value of this property is only taken into account if the ability to intervene at an order level has not been removed.
Visible	Display (true) or hide (false) the element.
Item-String	
Type	Specify TextBox. By focusing on the element, the alphanumeric keypad is displayed.
Tag	Especially in case we wish the alphanumeric keypad to be displayed focused on the numbers, specify value KL:num. Concerns the iOS platform only.
MultiLine	Display the element on multiple rows (true) or only one (false).
	To display Text-1 on multiple lines,
DisableKeyboard	Remove the ability to fill-in this detail via keyboard (true) or not (false). Concerns the iOS platform only.
DisablePaste	Remove the ability to fill-in by pasting (true) or not (false). Concerns the iOS platform only.
Item-Numeric	
Type	Specify ItemNumeric. By focusing on the element, the alphanumeric keypad pops up.
Item-Date	
Type	Specify one of the values that belongs to: • ItemDateTime. A date & time selection screen appears by focusing on the element. • ItemDate. A date selection screen appears by focusing on the element. • ItemTime. A time selection screen appears by focusing on the element.
Item-Boolean	
Type	Specify ItemCheckBox. The element takes the form of selection (value 1) / de-selection (value 0).
Item-Enumerated	

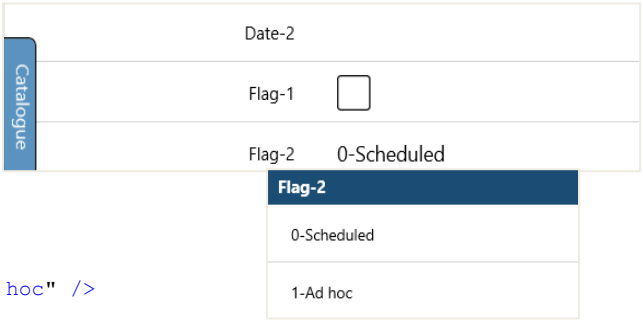
```
<Item Type="Resco.Controls.DetailView.ItemTextBox">
  <Property Name="Label" Value="Text-1" />
  <Property Name="DataMember" Value="StringField1" />
  <Property Name="Name" Value="StringField1" />
  <Property Name="MultiLine" Value="true" />
</Item>
```



Type	Specify ItemComboBox. By focusing on the element, a screen with a default list of labels appears, the value of each corresponds to a specific number.
StringData	Specify, in the form of a comma-separated list, the labels for possible list values. The order in which the labels are specified also indicates the option number, always starting with the number 0.

To display Flag-1 as boolean and flag-2 as enumerated,

```
<Item Type="Resco.Controls.DetailView.ItemCheckBox">
  <Property Name="Label" Value="Flag-1" />
  <Property Name="DataMember" Value="FlagField1" />
  <Property Name="Name" Value="FlagField1" />
</Item>
<Item Type="Resco.Controls.DetailView.ItemComboBox">
  <Property Name="Label" Value="Flag-2" />
  <Property Name="DataMember" Value="FlagField2" />
  <Property Name="Name" Value="FlagField2" />
  <Property Name="StringData" Value="0-Scheduled,1-Ad hoc" />
</Item>
```



Item-Drop down

Type	Specify ItemLink. By focusing on the element, an entry list screen appears
Tag	The display “specifications” of the entry list. The required property configuration varies considerably depending on the number of entries or the amount of information that we want the list to display, but also on whether we want the EditForm screen element to be active or not.

- Limited number of entries & information (**POP**)

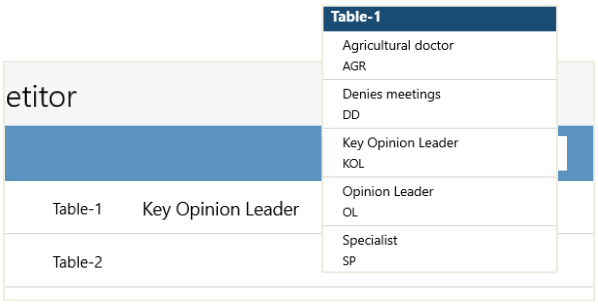
  This is usually true for zoom tables, where the number of entries is relatively limited, and information-wise the entry code and description display is fully sufficient. In this case, the entries list appears as a pop-up window and the required configuration is

  `#ValueMember#DisplayMember#DataMember#`
  `[POP]select ValueMember,DropDown1,DropDown2 from …` where

  - ValueMember is the column of the entries list to be assigned to the element of screen EditForm.
  - DisplayMember is the column of the entries list that will appear in the element of screen EditForm.
  - DataMember is the table which the entries list refers to.
  - DropDownMember are the columns (max 2) displayed in the entries list.

To display an entries list from zoom table “Table-1” of the person,

```
<Item Type="Resco.Controls.DetailView.ItemLink">
  <Property Name="Label" Value="Table 1" />
  <Property Name="DataMember" Value="fTableField1Code" />
  <Property Name="Name" Value="fTableField1Code" />
  <Property Name="Tag" Value="
         #Code#coalesce(Description,Code)#ESGOZPersonTable1
         #[POP] select Code,coalesce(Description,Code)
         from ESGOZPersonTable1 " />
</Item>
```



- Extended number of entries & information (**InvForm**)

  This is usually true for basic tables, where the number of entries is big or, information-wise, displaying just two table elements is not enough. In this case it is recommended to use an InvForm type of screen. The entries list is displayed in full screen and the required configuration is

  `ommand#ValueMember#DisplayMember#DataMember` where

  - Command is the name of the command associated with the InvForm screen of the entries list.
  - ValueMember is the column of the entries list to be assigned to the element of screen EditForm.
  - DisplayMember is the column of the entries list that will appear in the element of screen EditForm.
  - DataMember is the table which the entries list refers to.

To display an entries list from table “Addresses” of the person,

```
<Item Type="Resco.Controls.DetailView.ItemLink">
  <Property Name="Label" Value="Address" />
  <Property Name="DataMember" Value="fAddress" />
  <Property Name="Name" Value="fAddress" />
  <Property Name="Tag" Value="SiteInvForm#GID#Address#ESGOSites" />
</Item>
```

- Inactive element (**External**)

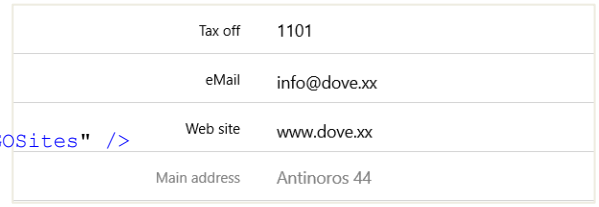
  In case we want the EditForm screen element to be inactive and the information to be displayed comes from a direct reference to a table field, the default configuration is

  `External#ValueMember#DisplayMember#DataMember` where

  - ValueMember is the column of the entries list to be assigned to the element of screen EditForm.
  - DisplayMember is the column of the entries list that will appear in the element of screen EditForm.
  - DataMember is the table which the entries list refers to.

  To display the main person address, without allowing the user to make changes,

```
<Item Type="Resco.Controls.DetailView.ItemLink">
  <Property Name="Label" Value="Main address" />
  <Property Name="DataMember" Value="MainSiteGID" />
  <Property Name="Name" Value="MainSiteGID" />
  <Property Name="Tag" Value="External#GID#Address#ESGOSites" />
  <Property Name="Enabled" Value="false" />
</Item>
```



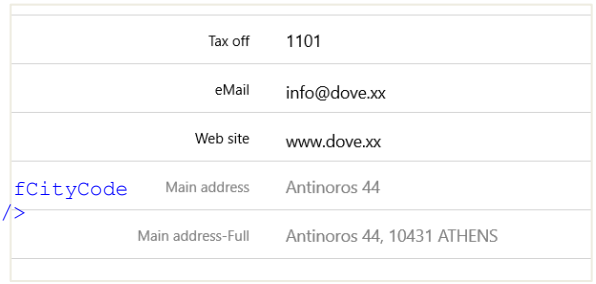
- Inactive element (**SQL**)

  In case we want the EditForm screen element to be inactive and the information to be displayed does not derive from a direct reference to a table field, the default configuration is

  `SQL#Select query`

  To display additional information on the person's main address, without allowing the user to make changes,

```
<Item Type="Resco.Controls.DetailView.ItemLink">
  <Property Name="Label" Value="Main address-Full" />
  <Property Name="DataMember" Value="MainSiteGIDFull" />
  <Property Name="Name" Value="MainSiteGIDFull" />
  <Property Name="Tag" Value="SQL#
            select Address || ', ' || fPostalCode || ' ' || fCityCode
            from ESGOSites where GID ='[MainSiteGIDFull]'" />
  <Property Name="Enabled" Value="false" />
</Item>
```



Item-Photo

Type	Specify Photo. By focusing on the element, the picture is enlarged. This type of element is available only on UWP & Android.
PhotoPath	
Height, Width	The height-width of the element.
NumberOfRows	The number of rows of the element. It is used as an alternative definition for the height-width of the element and overrides these.

Advanced functionality

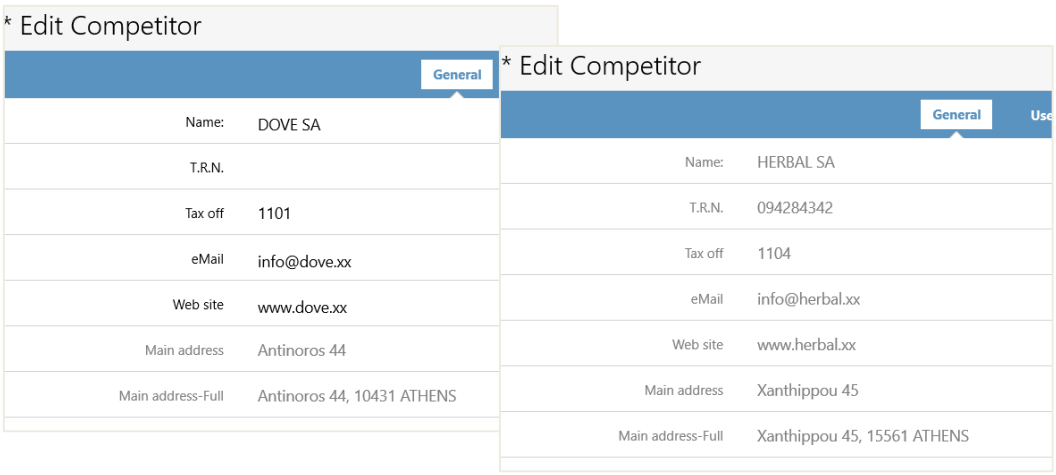
Condition-based intervention

It is possible to define a no-intervention condition on elements of the EditForm screen. The settings required to enable this feature are:

- Command. Define, in the select query of the command, a distinct column named RecordState, whose content describes the no-intervention condition. The no-intervention rule only applies to entries where the condition returns a value of 1.
- Form. Add to DetailView a record of the non-visible form corresponding to the RecordState column.

Example

Let's assume that we want to only allow intervening in the data of the "Competitor" EditForm screen when the entry lacks the person's TRN.




```
<SampleEditFormMaster Assembly="Entersoft.Mobile.ESMobile"
                      Type="Entersoft.Mobile.ESMobile.EditFormCreatorCommand
                      ">
  <Params>
    <FormID Type="System.String" Value="SampleEditFormMaster" />
    …
    <BaseSelect Type="System.String" Value="
                Select …
                  case
                    when p.TaxRegNumber is null then 0
                    else 1 end RecordState
                From ESGOPerson p
                "/>
    <Editable Type="System.Boolean" Value="false" />
  </Params>
```

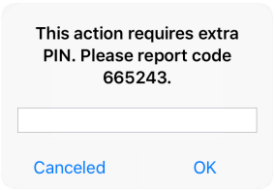
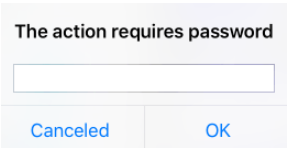
```
<Item Type="Resco.Controls.DetailView.ItemTextBox">
  <Property Name="Label" Value="Record State" />
  <Property Name="DataMember" Value="RecordState"
  />
  <Property Name="Name" Value="RecordState" />
  <Property Name="Visible" Value="false" />
```

Password protection

It is possible to define a desired degree of protection on elements of the EditForm screen. The settings required to enable this feature vary depending on whether we want to protect all elements or a specific element of the EditForm screen.

Total elements

The check is activated upon calling the EditForm screen. The degree of protection shall be adjusted by indicating value true to the appropriate command property, depending on the degree of protection desired.

Property	Comment	
RequiresExtraPin	High degree of protection. The approval code is provided by an authorized back-office user. When calling the EditForm screen, the device user is asked to enter this approval code.	
RequiresPassword	Low degree of protection. The approval code is the same as the user's password for the ESMobile app. When calling the EditForm screen, the device user is asked to enter this password.	

Specific element

The check is activated by focusing on an element of the EditForm screen. The protection level can be configured in the DetailView file of the screen and by in assigning the Tag property of each element, the #RequiresExtraPin or #RequiresPassword label for a high or low degree of protection, respectively. This feature is available on all types of elements of the EditFrom screen. Not that, especially in the case of an ItemLink-type element, labels must be assigned without the prefix of character #.

Example

Let's assume that we want a low level of protection on the person's TRN & Tax Office details of the "Competitor" EditForm screen.

```
<Item Type="Resco.Controls.DetailView.ItemTextBox">
  <Property Name="Label" Value="T.R.N."/>
  <Property Name="DataMember" Value="TaxRegNumber"/>
  <Property Name="Name" Value="TaxRegNumber"/>
  <Property Name="Tag"
            Value="KL:num#RequiresPassword"/>
</Item>
```

```
<Item Type="Resco.Controls.DetailView.ItemLink">
  <Property Name="Label" Value="Tax off" />
  <Property Name="DataMember" Value="fTaxOfficeCode"/>
  <Property Name="Name" Value="fTaxOfficeCode"/>
  <Property Name="Tag"
            Value="TaxOfficeInvForm#Code#DescriptionRequiresPassword"/>
</Item>
```

Required elements

It is now possible to specify an EditForm screen element as required. By enabling this feature, when saving an entry, it checks the EditForm screen elements, and if any of the required elements are empty, the save process fails and a relevant error message pops up.

The required elements are specified in the DetailView file of the EditForm screen and by assigning value “true” to the Required property of the relevant element, or alternatively by assigning the condition (using a numerical field) which makes it mandatory to fill in the element. This feature is available on all data types of the EditForm screen, except numeric fields that by default cannot be empty.

Example-1

Let assume that we want the person's Name of the “Competitor” EditForm screen to be defined as required.

```
<Item Type="Resco.Controls.DetailView.ItemTextBox">
  <Property Name="Label" Value="Name:" />
  <Property Name="DataMember" Value="Name"/>
  <Property Name="Name" Value="Name"/>
  <Property Name="Required" Value="true"/>
</Item>
```

Example-2

Let’s assume that we want element Text-1 to be required, when element Flag-1 of the “Competitor” EditForm screen is enabled.

```
<Item Type="Resco.Controls.DetailView.ItemTextBox">
  <Property Name="Label" Value="Text-1"/>
  <Property Name="DataMember" Value="StringField1"/>
  <Property Name="Name" Value="StringField1"/>
  <Property Name="MultiLine" Value="true"/>
  <Property Name="Required" Value="StringField1#FlagField1=1"/>
</Item>
```

Menu button (ActionsCommand)

Example SampleEditFormActions

It is possible to extend the EditForm screen with the default menu button -Actions. This extension meets the need for immediate action execution through the EditForm screen interface. The desired actions to be executed appear as distinct options in the menu button. To utilize this feature, the following settings are required.

Button configuration

Specifying the commands to be executed is possible using special command type CommandSelector. The special feature of this type of command is that it allows the user to specify a commands list (section CommandList). The individual commands syntax of the list should be

Part-1|Part-2|Part-3 where:

Part-1:	Action label #Command
Part-2:	#AppIDPlatforfID1#AppIDPlatforfID2
Part-3:	The execution "specifications" for the command. The required configuration varies according to the type of command to be executed. • Edit type command, Current = DataSource • New type command, Parent = DataSource where the source column of the variable [CURRENT] or [PARENT] is defined as DataSource, respectively.

Button activation

- The display of the button - actions is activated by indicating the CommandSelector file in the ActionsCommand property of EditForm command. The syntax of the property should be in the following form: CommandSelector|DataSource, where the source column of the variable [CURRENT] or [PARENT] is defined as DataSource. In case the DataSource is not common to all orders to be executed, the ActionsCommand property should be in CommandSelector|DataSource1|DataSource2|… format.
- The DataSource column must be a distinct element in the DetailView file of the EditForm screen. Additionally, the contents of the DataMember & Name properties of this element should match the name of the DataSource column.

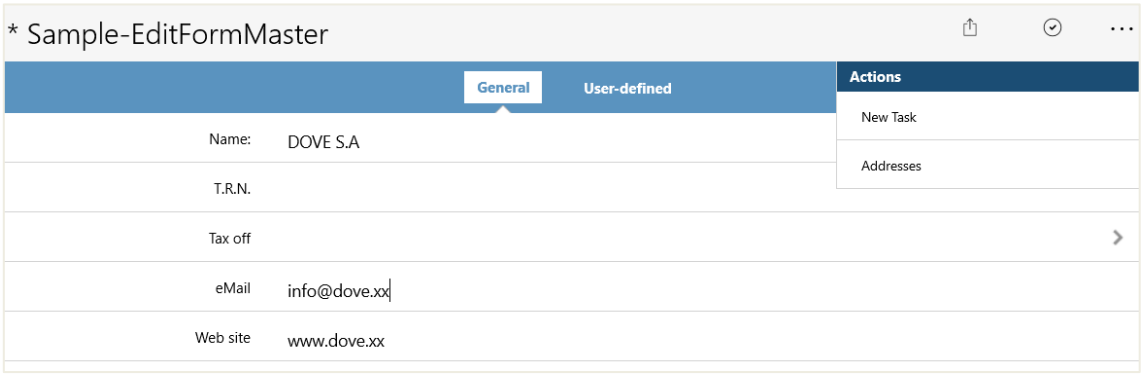
Example

Suppose that we wish to enable the “Competitor” EditForm screen to directly call the new Task creation action and to display its address list.

```
<SampleEditFormActions Assembly="Entersoft.Mobile.ESMobile"
                       Type="Entersoft.Mobile.ESMobile.CommandSelector">
  <Params>
    <Title Type="System.String" Value="Actions" />
    <CommandList Type="System.Collections.Hashtable">
      <Command1 Type="System.String"
                Value="New Task#ToDoCTXNewFormTask|#82#89|Parent=PersonGID"/>
      <Command2 Type="System.String"
                Value="Addresses#PersonSiteListForm|#82#89|Current=PersonGID"/>
    </CommandList>
  </Params>
</SampleEditFormActions>
```

```
<SampleEditFormMaster Assembly="Entersoft.Mobile.ESMobile"
                      Type="Entersoft.Mobile.ESMobile.EditFormCreatorCommand">
    <Params>
      <FormID Type="System.String" Value="SampleEditFormMaster" />
      <BaseSelect Type="System.String" Value="Select p.GID PersonGID,…"/>
      <ActionsCommand Type="System.String"
                      Value="SampleEditForactions|PersonGID"/>
    </Params>
</SampleEditFormMaster>
```

```
<Item
Type="Resco.Controls.DetailView.ItemTextBox">
  <Property Name="DataMember" Value="PersonGID"
  />
  <Property Name="Name" Value="PersonGID" />
  <Property Name="Visible" Value="False" />
</Item>
```



Master-Detail entity (DocForm)

The Data entry screen of a master-detail entity (DocForm) is used to manage the entry elements relating to the Task and Document entities of the ESMobile application. The distinctive DocForm screen feature is that it consists of the following parts, each of which is implemented in a stand-alone form file.

- Header. Concerns the master part of the entity. It refers to key entity details (code, person, address, etc.) and its existence is mandatory.
- Contents. Concerns the detail part of the entity. For the Task entity this part may refer to catalogue items, warehouse items, persons or resources and its existence is optional. The Document entity exclusively refers to warehouse items and its existence is mandatory.
- Other areas. Using a relevant appendix, it is possible to expand the information displays on the DocForm screen, as well as directly perform a series of actions.

Note that

The DocForm screen implementation "principles" are generally the same, regardless of whether the screen concerns the Task entity or the Document entity. The parts that, by way of exception, concern a specific entity, are marked accordingly.

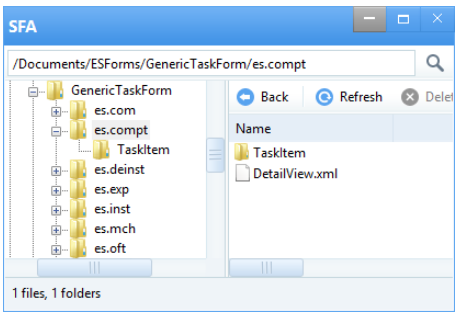
The elements required to implement a DocForm type of screen are:

Element	Comment
Command	Task entity The user must use a command of type NewTaskCommand or EditTaskCommand, to create or manage an entry, respectively. Note that, when the creation of a new entry is called through a person's or point-of-sales interface, using a NewTaskFromPersonCommand or NewTaskFromSiteCommand type of command is required, respectively. Document entity The user must use a command of type NewDocumentCreatorCommand or EditDocumentCreatorCommand, to create or manage an entry, respectively. Note that, when the creation of a new entry is called through a point-of-sales or appointment's interface, using a NewDocumentFromSiteCommand or NewDocumentFromAppCommand type of command is required, respectively.
Form	
Header	In order to implement the Header part, it is necessary to use a DetailView.xml file.
Contents	In order to implement the Contents part, it is necessary to use an AdvancedList.xml file. In addition, in order to implement a screen that displays the full details of the selected line, it is necessary to use a DetailView.xml file
Other areas	In order to implement the Other areas part, it is necessary to use an Actions.xml file.

Note here that all of the form files that make up the DocForm screen must be in a default folder in the ESForms or CSforms area. In particular, the following applies per entity.

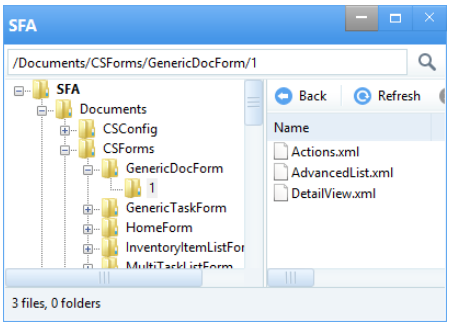
Task entity

All of the form files should be in a sub-folder of the GenericTaskForm area. The name of the sub-folder should be the same as the InternationalID of the task type in question. Special attention should be paid in order to always use lower case characters for the sub-folder name. The file for the Header part (DetailView.xml) is placed in this area, while the files for the Contents part (AdvancedList.xml) & Fill line details (DetailView.xml), as well as for the Other areas part (Actions.xml) are placed in sub-folder TaskItem.



Document entity

All of the form files should be in a sub-folder of the GenericDocForm area. The name of the sub-folder should be the same as the ID of the document type in question. All the files of the form are placed in this area. Note here that, the screen file with the Full line details (DetailView_LineItem.xml) is only available for configuration on UWP & Android.



Next up in this section, detailed implementation instructions for DocForm type of screens will be given, using a specific example. For the sake of simplification, our examples only refer to creating a new entry listing through the point of sales interface.

Screen Data

It is important to note that in the case of a DocForm screen the data is dynamically loaded and not derived from writing a select query at a command level. This means that the settings required at a command level are rather limited, because the columns available for the Header & Contents parts are default by the ESMobile application. The command file should be in the Commands sub-folder of the ESConfig or CSConfig area. Attention: the command file name should match the name of the command in the file. Regarding the required settings at a command level, the following applies per DocForm entity type.

Task entity

Example ES.MCH-Measurement

Example

Suppose that we wish to implement a Data entry screen which can be used to create a task of ES.MCH-Measurement type. We want this screen to display some basic identification details of the task and allow the user to manage item lines.

```
<MerchandisingSiteNewForm Assembly="Entersoft.Mobile.ESMerchandize"
                          Type="Entersoft.Mobile.ESMerchandize.NewTaskFromSiteCommand">
  <Params>
    <TaskType Type="System.String" Value="es.mch" />
    <FormID Type="System.String" Value="" />
    <NoDetail Type="System.Boolean" Value="" />
  </Params>
</MerchandisingSiteNewForm>
```

Property	Comment
TaskType	The InternationalID of the task type. For this example, it's es.mch.
FormID	The folder in the ESForms or CSForms area, where the relevant AdvancedList form files related to the screen can be found. The definition should be in the form of the GenericTaskForm/InternationalID task type. For this example, it's folder Generic TaskForm/es.mch. Defining this property is only mandatory only in case the task lacks the Contents part (e.g. ES.SAP-Sales appointment type of task).
NoDetail	The task also has a Contents part (false) or not (true). Defining this property is mandatory only in case the task lacks the Contents part (e.g. ES.SAP-Sales appointment type of task). Note here that this property only applies to iOS platforms. In UWP & Android, the corresponding setting is done in the ShowContents property of the screen's Actions file.
SaveMenu	The save button options. The typical options are: 1-Save, 2-Complete, & 3-Cancel. Mote here that setting the save options can also be done "centrally", by appropriately configuring the task type in question. In this case, the SaveMenu property must be empty.

In a DocForm screen for the Task entity, the available columns in the Contents part include, on one hand, all fields of table “Task item” (ESTMTaskItem table) and, on the other hand, the non store fields of the table below.

Column name			
PersonName	ItemMUCode	LastCountedDate	ExtStringField1
ItemCode	SiteGID	LastSoldDate	ExtStringField2
ItemDescription	TypeGID	CountedQty1	ExtStringField3
InventoryItemCode*	TypeInternationalID	CountedQty2	ExtStringField4
InventoryItemDescription*	GroupField	CountedQty3	ExtStringField5
InventoryItemCodeDescription*	GroupFieldSubTotal1	SoldQty1	ExtDateField1

CatalogueItemCode*	GroupFieldSubTotal2	SoldQty2	ExtDateField2
CatalogueItemDescription*	Category1Code	SoldQty3	ExtDateField3
CatalogueItemCodeDescription*	Category2Code	ExtNumericField1	ExtDateField4
ItemFamilyCode	Category1Description	ExtNumericField2	ExtDateField5
ItemGroupCode	Category2Description	ExtNumericField3	Warning
ItemCategoryCode	LastCountedQty	ExtNumericField4	WarningMessage
ItemSubcategoryCode	LastSoldQty	ExtNumericField5	Error
ItemTaskCategoryValueGID	LastSoldPrice		ErrorMessage

* These columns receive content only when the line refers to an inventory item or catalogue item, respectively. If, for example, we want the "Item code" column to have content at all times, regardless of whether it refers to an inventory item or a catalogue item, the non store ItemCode field should be used. If we want it to have content only when it refers to an inventory item, the non store InventoryItemCode field should be used, while, if we want it to have content only when it refers to a catalogue item, the non store CatalogueItemCode field should be used.

Document Entity

Example 1-Order

Example

Suppose that we wish to implement a Data entry screen which can be used to create a document of type 1-Order. We want this screen to display some basic identification details of the document and allow the user to manage item lines.

```
<NewDocumentfromSite Assembly="Entersoft.Mobile.ESMobile"
                     Type="Entersoft.Mobile.ESMobile.NewDocumentFromSiteCommand">
  <Params>
     <SiteGID Type="System.String" Value="" />
     <DocType Type="System.String" Value="" />
  </Params>
</NewDocumentfromSite>
```

Property	Comment
SiteGID	The point of sales where the document is issued. This property is dynamically sourced and therefore its content should be empty. Note here that properties PersonGID & AppGID play the exact same role.
DocType	The ID of the document type. For this example, it's 1. Defining this property is required only in cases the document type does not result from the configuration of the button for calling the action (e.g. Doc#NewDocumentfromApp#1 button)
NullCustomer	The document is of type stock movement (true) or sales - collection (false). Defining the property is mandatory only in case the document is of type stock movement (e.g. document of type 13-Delivery note to site).

In a DocForm screen for the Document entity, the available columns of the Contents part include, on one hand, all fields of table "Item line" (ESFISalesDocLineItem table) and, on the other hand, the non store fields of the table below.

Column name			
ItemCode	ItemWeightQuantity	ExtStringField1	ExtDateField1
ItemDescription	ItemWeightMURelation	ExtStringField2	ExtDateField2
ItemFamilyCode	ItemWeightMUDecimals	ExtStringField3	ExtDateField3
ItemGroupCode	ItemWeightRelationWithMMU	ExtStringField4	ExtDateField4
ItemCategoryCode	ItemWeightMUCode	ExtStringField5	ExtDateField5
ItemSubcategoryCode	ItemVolumeQuantity	ExtNumericField1	Warning
ItemMUCode	ItemVolumeMURelation	ExtNumericField2	WarningMessage
GroupField	ItemVolumeMUDecimals	ExtNumericField3	Error
fColorCode	ItemVolumeRelationWithMMU	ExtNumericField4	ErrorMessage
fSizeCode	ItemVolumeMUCode	ExtNumericField5	

Display format / Header

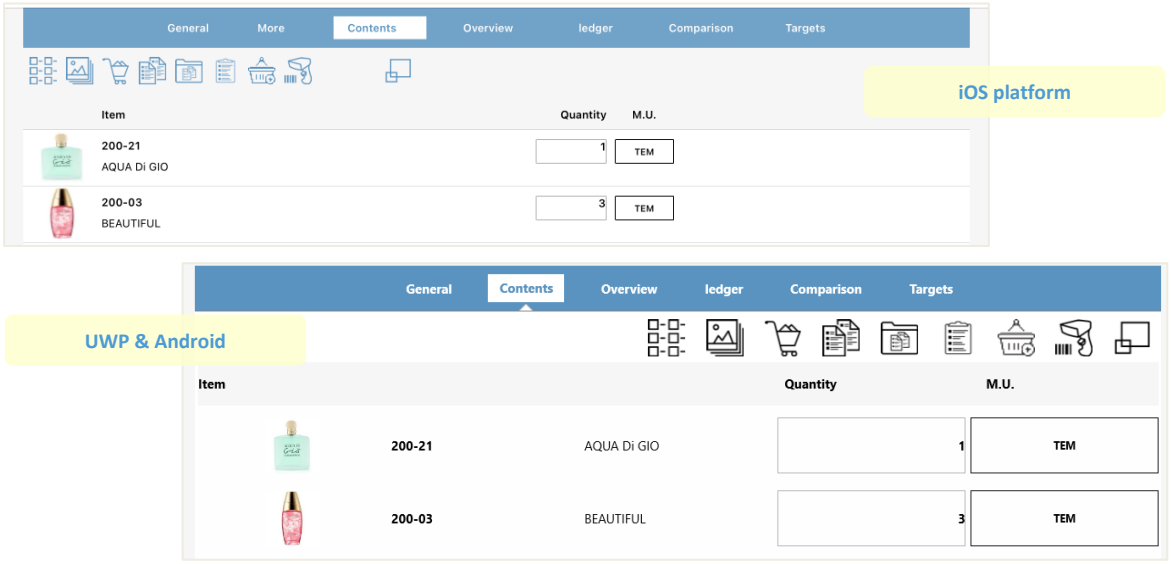
The Header part is always placed as the first page of the DocForm screen. The form for this page is implemented using a DetailView.xml file. The definition method and available properties of the DetailView file are exactly the same as described for the EditForm type of screen.

Display format / Contents

The Contents part is always placed as the second page of the DocForm screen and always has the label "Contents" as title. The form for this page is implemented using a AdvancedList.xml file. The definition method and available properties of the AdvancedList file are generally the same as described for the ListForm type of screen. Note here that the AdvancedList file of the Contents part implemented on iOS can also be used, with some minimal interventions, on UWP & Android. However, in case the display format of the Contents tab is not satisfactory, the AdvancedList file should be expanded with the properties that relate to the special features of the SFListForn type of screen.

Example

Suppose that we've implemented a DocForm screen on iOS, which we want to use as is on UWP & Android.



As shown in the images of our example, using minimal interventions, the display format of the screen on UWP & Android satisfactorily simulates that of the iOS platform. The minimum required adjustments are:

- Adjust the BackColor property of both the entire screen and the data area.
- If the screen has a title area, add & adjust the HeaderTemplateIndex property.
- If the screen has a totals area, add & adjust the FooterTemplateIndex property. Note that, especially for the Document entity, it is necessary to configure the data of the totals area, based on the specifications that apply for UWP & Android. Instructions for the required settings are given below in section “Totals area”.
- If the screen has a grouping area, it is mandatory to expand the AdvancedList file with the properties related to the special features of the SFListForm screen.

Next up in this section, detailed implementation instructions will be given for the Contents part of a DocForm screen, using a specific example. For the sake of simplification, the example has been implemented so that the same AdvancedList file can be used on both the Task entity's Data entry screen (for this example, ES.MCH-Measurement type of task) and the Document entity's Data entry screen (for this example, a 1-Order type of document).

Element display location

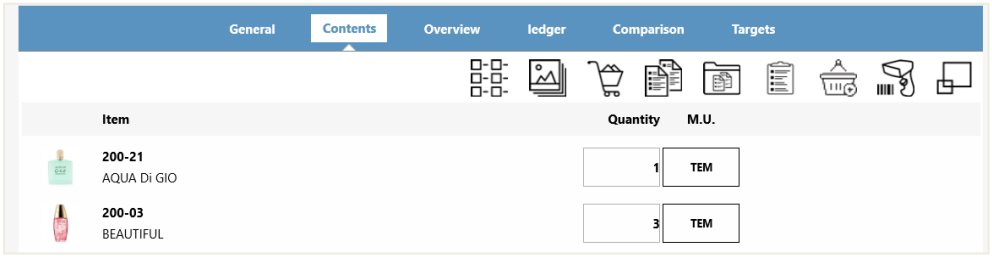
On a DocForm type of screen, the definition of the element display location of the Contents part varies, depending on the ESMobile application platform. In particular, the following apply per platform.

- iOS platform. Adjust the Bounds property.
- UWP & Android. Add the properties related to the grid definition (Rows-Columns properties) and the properties related to element placement inside the grid (Row, Column, RowSpan, ColumnSpan properties).

Example

Suppose that we want to expand our AdvancedList file of the DocForm screen so that there is also an "adjustable" placement of elements in UWP & Android platform.

```
<AdvancedList>
  <Property Name="version" Value="2" />
  <Property Name="ItemSpan" Value="1" />
  <Property Name="Rows" Value="2" />
  <Property Name="Columns" Value="24" />
  <Property Name="Margin" Value="1" />
  <Property Name="Size" Value="24" />
  <Property Name="Orientation" Value="vertical" />
  <RowTemplate comment="Normal">
  <Property Name="Name" Value="RowTemplate" />
    <Cell Type="Resco.Controls.AdvancedList.TextCell"
          Row="0" Column="2" RowSpan="1" ColumnSpan="4">
      <Property Name="Bounds" Value="20,8,45,10" />
      <Property Name="CellSource" Value="ItemCode" />
      …
    </Cell>
  <Property Name="Height" Value="24" />
  <Property Name="AlternateRowColor" Value="false" />
  <Property Name="BackColor" Value="Transparent" />
  </RowTemplate>
</AdvancedList>
```



Note that, through the ApplicationVisible property it is also possible to show or hide an element from a specific platform-application. The property is in the form #AppIDPlatforfID1#AppIDPlatforfID2, where:

Application		Platform	
8	Merchandising	2	iOS
22	Field Service	3	Android
322	xVan	4	UWP
1024	Medical Representative	9	UWP & Android

Example

Suppose we wish to set up the AdvancedList file of our DocForm screen so that the Item code appears only on iOS platforms.

```
<Cell Type="Resco.Controls.AdvancedList.TextCell"
      Row="0" Column="2" RowSpan="1" ColumnSpan="4"
      ApplicationVisible ="#82">
  <Property Name="Bounds" Value="20,8,45,10" />
  <Property Name="CellSource" Value="ItemCode" />
  …
</Cell>
```

Image column (ImageCell)

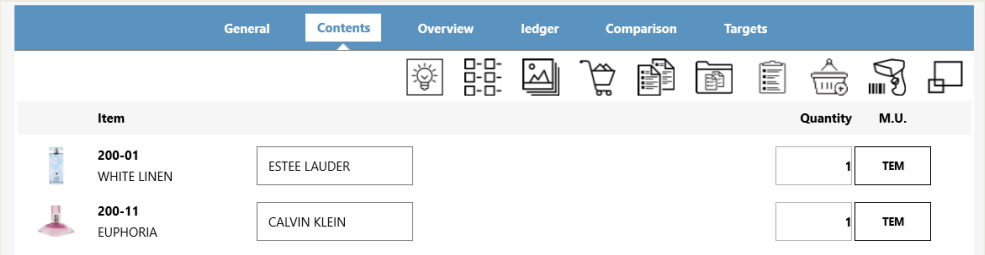
On a DocForm type screen, the image column of the Contents part is set using an ImageCell-type element. Regarding the definition method and the available properties of the element, the following apply:

Property	Comment
Type	The element must be of type ImageCell.
CellSource	The column that links the line with the image file name. Note that if the association column does not belong to the fields in the line's table, the corresponding non store field should be used (e.g. for association based on item code, the non store ItemCode field is indicated).
ImageFolder	The folder where the image files are located. It is only filled in case we wish to designate a folder other than the "default" one, ProductImages.
ImageExtention	The type of image files. It is only entered in case we wish to designate a type other than the "default" one. Note that the default type can be designated in mobile parameter ImageFileExtension.
Height, Width	The image dimensions. Filled in only if we wish the image to not occupy its full space based on the properties of its display location. Concerns UWP & Android platforms only.
Visible	Display (true) or hide (false) the element.
Selectable	By indicating “true”, focusing on the image automatically enlarges it. Concerns the iOS platform only.

Example-1

Suppose that we wish the image column of our DocForm screen to display the image of the line item.

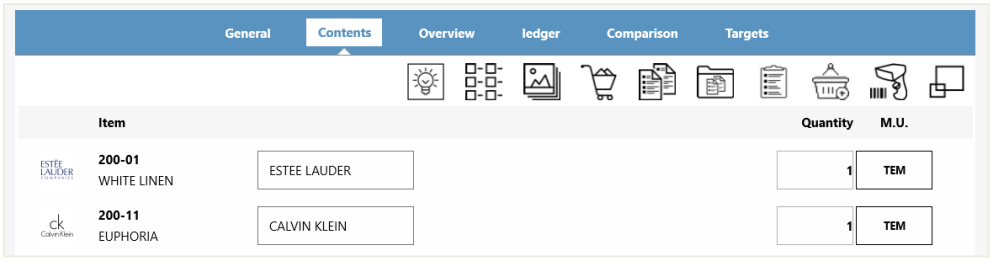
```
<Cell Type="Resco.Controls.AdvancedList.ImageCell"
      Row="0" Column="0" RowSpan="2" ColumnSpan="2">
  <Property Name="Bounds" Value="2,1,16,40" />
  <Property Name="CellSource" Value="ItemCode" />
  <Property Name="Visible" Value="true" />
</Cell>
```



Example-2

Suppose that we wish the image column of our DocForm screen to display the logo of the line item manufacturer. Suppose also that we have ensured, through the Assign_CellSource functionality, that the manufacturer information is assigned to the StringField1 field of the line.

```
<Cell Type="Resco.Controls.AdvancedList.ImageCell"
      Row="0" Column="0" RowSpan="2" ColumnSpan="2">
  <Property Name="Bounds" Value="2,1,16,40" />
  <Property Name="CellSource" Value="StringField1" />
  <Property Name="ImageFolder" Value="CSImages/Logo" />
  <Property Name="ImageExtention" Value="png" />
  <Property Name="Visible" Value="true" />
</Cell>
```



Standard action buttons

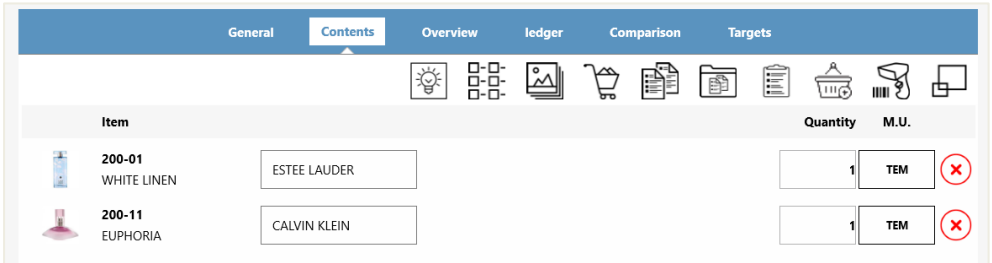
On a DocForm screen, the action buttons on the Contents part can be defined using a ButtonCell-type element, where the ImageDefault property indicates the button icon and the Name property indicates the command to be executed. Adding the standard action buttons requires to define the element using the following, per button, properties.

Button	Name	Comment
	PlusButton	Increases line quantity.
	MinusButton	Decreases line quantity.
	AnalysisButton	Displays an input screen for line quantity per dimension. Available only in the Document entity.
	ISUDButton	Displays a screen with the full line details, where the user can make changes in the individual line fields.
	DeleteButton	Deletes line.
	BalanceButton	Displays a screen, in direct connection with the back office, that provides information on the total item availability. When the line quantity exceeds the current site balance, this icon turns red. It is also necessary for property CellSource to indicate default value ItemCurrentBalanceBranchPositive.
	GiftButton	Assigns 100% discount to the discount field of the line, where mobile parameter Doc_GiftDiscount_Field has been specified. Available only in the Document entity.
TEM	ItemMUCode	Displays a measurement unit selection screen.

Example

Let us say, for example, that we want to add the Delete line button to the Contents part of our DocForm screen.

```
<Cell Type="Resco.Controls.AdvancedList.ButtonCell"
      Row="0" Column="23" RowSpan="2" ColumnSpan="1">
  <Property Name="Bounds" Value="225,5,12,12" />
  <Property Name="CellSource" Value="" />
  <Property Name="Name" Value="DeleteButton" />
  <Property Name="DesignName" Value="" />
  <Property Name="ImageDefault" Value="iVBORw0..." />
  <Property Name="Visible" Value="true" />
</Cell>
```



Configure a selected entry

In a DocForm screen it is possible to designate two RowTemplates for the data area. This feature covers the need to differentiate the elements and display format between the normal (Normal RowTemplate) and selected (Selected RowTemplate) line. The “principles” of implementing the Selected RowTemplate area vary depending on the entity to which the DocForm screen refers.

- Task Entity. Designating a distinct Selected RowTemplate for the selected line is not supported. However, in the AdvancedList file on the screen, there should be the SelectedTemplateIndex property, which should have value 0.
- Document Entity. Designating a distinct Selected RowTemplate for the select line is mandatory, even if its details are is identical to the normal line. However, it is also mandatory that, in the AdvancedList file of the screen, there is the SelectedTemplateIndex property, which should have the value of the SEQ.NO of Selected RowTemplate. Especially on iOS, as selected RowTemplate the one with SEQ. NO 1 must be mandatorily designated.

The definition method and available properties of the selected line are exactly the same as described for the normal line.

Element format properties

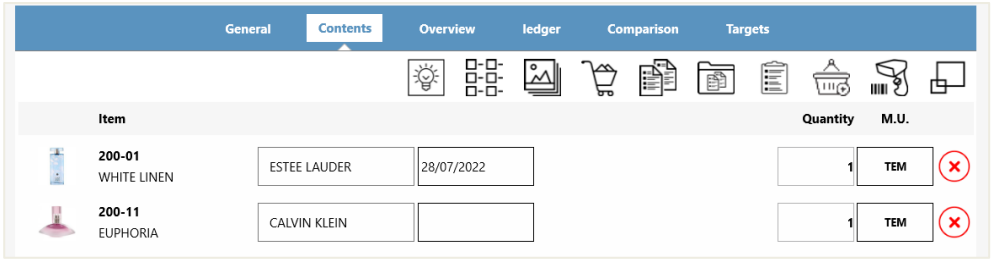
Regarding the element format properties of the Contents part in the DocForm screen, the following apply.

Property	Comment
Alignment	The alignment of the element's content with the following values available: Left, Right & Center. Especially on UWP & Android, values UpperLeft, LowerLeft, UpperRight, LowerRight & UpperCenter, LowerCenter can also be used.
LineBreakMode	The behavior in case the content of the element exceeds the limits of its position, with available values: 0-Do not wrap, 1-Wrap at word boundaries, 2- Wrap at character boundaries, 3-Truncate the head of text, 4-Truncate the tail of text & 5-Truncate the middle of text.
FontSize	The font size.
FontStyle	The font style, with the following values available: Regular, Bold & Italic.
ForeColor	The font color, with the following values available: Black, Blue, Brown, Cyan, Gray, Darkgray, Green, Lightgray, Magenta, Orange, Purple, Red, White & Yellow. Especially on UWP & Android, specifying the color can also be done using the HEX color number.
BackColor	The background color, with the following values available: Black, Blue, Brown, Gray, Green, Orange, Red, White & Yellow. Especially on UWP & Android, specifying the color can also be done using the HEX color number.
Border	The grid borders, with available values: All, Bottom, Left, Right & Top.
At its	The grid color, with available values: Black, Blue, Brown, Gray, Green, Orange, Red, White & Yellow. Especially on UWP & Android, specifying the color can also be done using the HEX color number.
FormatString	The display format of a number type of element or a date type of element. Some of the typical options, on a case-by-case basis, are: Definition / Result: {0:G} 16325.62; {0:C} 16,325.62 €; {0:N} ή {0:#,#.00} 16,325.62; {0:P} ή {0:0.00\%} 163.26 %; {0:#.0} 16326 Definition / Result: {0:ddd d/M HH:mm} Sun 9/7 00:33; {0: dd/MM/yyyy} 09/07/2022; {0: HH:mm} 00:33

Example

Let us say, for example, that we want to add the Date-1 line field to the Contents part of our DocForm screen. Suppose also that want the element to have a gray grid and be displayed as a date without time.

```
<Cell Type="Resco.Controls.AdvancedList.TextCell"
      Row="0" Column="10" RowSpan="2" ColumnSpan="3">
  <Property Name="Bounds" Value="105,8,25,20" />
  <Property Name="CellSource" Value="DateField1" />
  <Property Name="FormatString" Value="{0: dd/MM/yyyy}" />
  <Property Name="FontSize" Value="12" />
  <Property Name="FontStyle" Value="Regular" />
  <Property Name="ForeColor" Value="" />
  <Property Name="Border" Value="all" />
  <Property Name="BorderColor" Value="grey" />
  <Property Name="Visible" Value="true" />
</Cell>
```



Element processing properties (LineEditing)

In a Docform screen it is possible to edit an element at a line level (LineEditing). The properties associated with this functionality are specific and their configuration varies, depending on the type of element we want to give (Cell-Editable) or not (Cell-Not Editable) the ability of LineEditing to. The available element types are: String, Date, Numeric, Boolean & Zoom.

Cell-Editable

Property	Type	Comment
Type	*All types*	Specify the TextCell value.
	Zoom	Especially on iOS and for the Document entity, value ButtonCell should be specified.
Selectable	*All types*	Specify value “true”.
DesignName	*String*	Specify value String. By focusing on the element, the alphanumeric keypad is displayed.
	Date	Specify value datetime or date. By focusing on the element, the selection screen appears for date-time or date, accordingly.
	Numeric	In this case, the property must be empty. In that way, by focusing on the element the alphanumeric keypad pops up.
	Boolean	Specify value bool. The element takes the form of selection (value 1) / de-selection (value 0).
	Zoom	By focusing on the element, a value selection list appears. The definition required is: `zoom=Command#ValueMember#CellSource` where • Command is the name of the InvForm command related to the selection list to display. • ValueMember is the column of the entries list to be assigned to the Contents part element. • CellSource is the element of the Contents part where the assignment will take place. Note here that it is necessary to add, in the select query of the InvForm command, a column of type Assign_CellSource, where the value to be assigned is ValueMember and the assignment element is CellSource.
BindType	*All types*	In this case, the property must be empty. Concerns the iOS platform only.
	Numeric	Specify value label. Concerns the iOS platform only.
DisableKeyboard, DisablePaste	*String*	If, for any reason, we wish to remove the ability to fill in the element by keyboard or pasting, the value “true” must be designated in these properties (e.g. we only want to be able to populate it by barcode scanning). Concerns the iOS platform only.

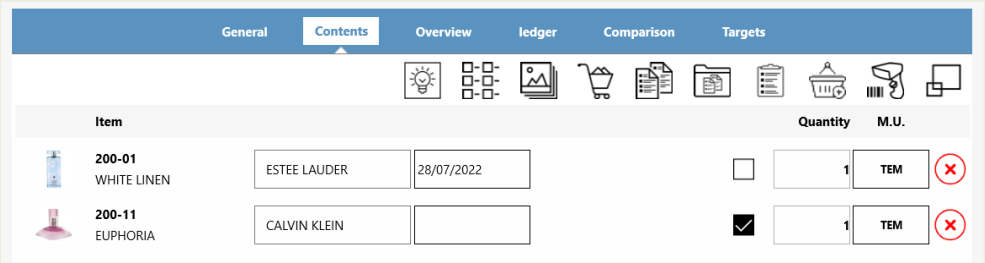
Cell-Not Editable

Property	Type	Comment
Type	*All types*	Specify value TextCell.
DesignName	*All types*	The exact same applies as described for Cell-Editable. Note here that for Cell-Not Editable specifying this property is optional.
Selectable	*All types*	Specify value “false”.
BindType	*All types*	Specify value label. Concerns the iOS platform only.

Example-1

Suppose we wish to add line field Number-1 to the Contents part of our DocForm screen, which shall be in select / de-select format and Editable.

```
<Cell Type="Resco.Controls.AdvancedList.TextCell"
      Row="0" Column="18" RowSpan="2" ColumnSpan="1">
  <Property Name="Bounds" Value="173,8,10,20" />
  <Property Name="CellSource" Value="NumericField1" />
  <Property Name="DesignName"
            Value="bool" />
  <Property Name="Selectable" Value="true" />
  <Property Name="BindType" Value="" />
</Cell>
```

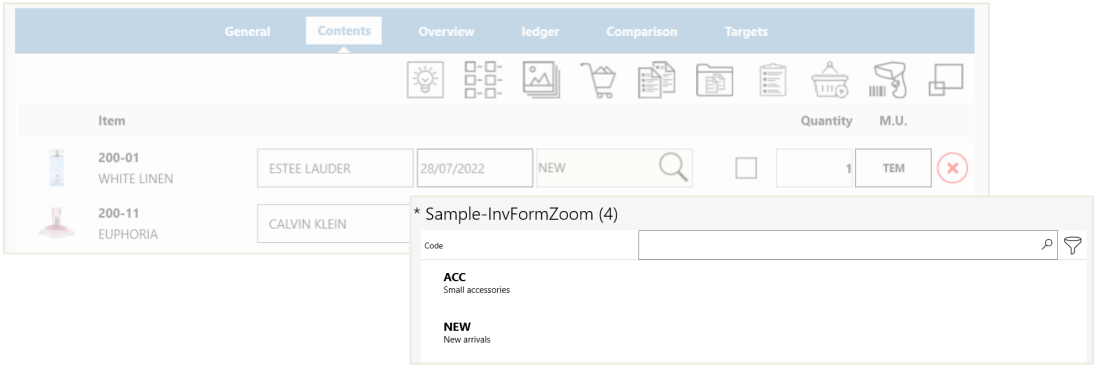


Example-2

Suppose we wish to add line field Text -2 to the Contents part of our DocForm screen, which shall be in the format of a selection list of values, from item Table-1 (table ESFIZItemTable1) and Editable.

```
<Cell Type="Resco.Controls.AdvancedList.TextCell"
      Row="0" Column="13" RowSpan="2" ColumnSpan="4"
      ApplicationVisible="#89">
  <Property Name="Bounds" Value="132,8,35,20" />
  <Property Name="CellSource" Value="StringField2" />
  <Property Name="DesignName"
            Value="zoom=SampleInvFormZoom#Code#StringField2" />
  <Property Name="Selectable" Value="true" />
</Cell>

<Cell Type="Resco.Controls.AdvancedList.ButtonCell"
      Row="0" Column="13" RowSpan="2" ColumnSpan="4"
      ApplicationVisible="#82">
  <Property Name="Bounds" Value="132,8,35,20" />
  <Property Name="CellSource" Value="StringField2" />
  <Property Name="DesignName"
            Value="zoom=SampleInvFormZoom#Code#StringField2" />
  <Property Name="Selectable" Value="true" />
</Cell>
```



As mentioned above, for iOS the zoom type element should be designated as ButtonCell, while for UWP & Android it should be designated as TextCell. This particularity can be addressed by designating two elements and using the ApplicationVisible property

Format by condition (Binding)

On a DocForm type of screen, it is possible to differentiate by condition (Binding) some of the formatting properties related to the Contents part. More specifically, using Binding can be done for properties BackColor, ForeColor, BorderColor & Visible of element type TextCell. The types of condition that can be used when setting up the Binding are: GreaterThan, LessThan, Equals, NotNull, Compound, IsOddIndex & AlwaysTrue. To utilize this feature, it is necessary to:

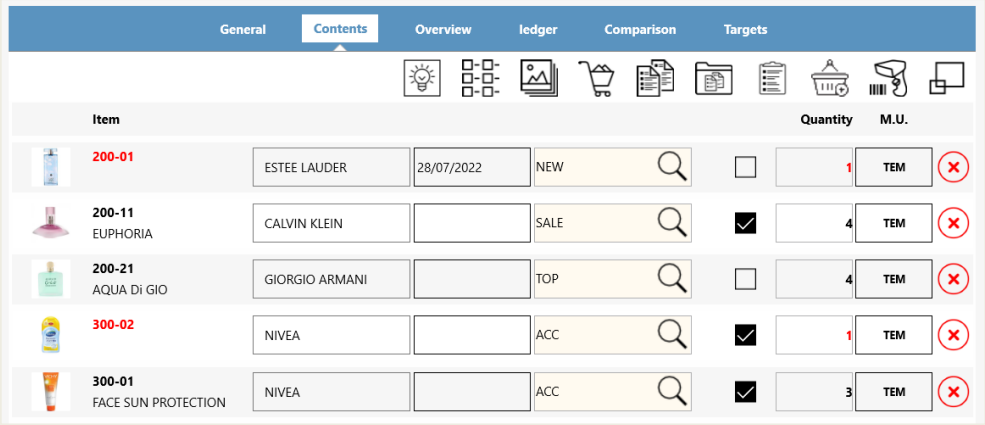
- Specify the Binding condition in the AdvancedList file of the Contents part.
- Call the Binding condition, either at an area level (RowTemplate), or an element level (Cell). This should be in form {Binding Name} where Name is the Binding condition name. Note here that, in the case the condition is being called at a Cell level, special attention should also be paid to the proper configuration of the properties related to LineEditing, meaning the DesignName, Selective & BindType properties.

Example

Let us say, for example, that we want to format the Contents part for the DocForm screen based on the below specifications.

1. Switch the BackColor of the Normal RowTemplate for an odd-even row number
2. Hide the "Item description" element when the line quantity is < 3. This element should be Not Editable.
3. Change the ForeColor of the “Item code” & “Quantity” elements when the line quantity is < 3. The “Item code” element should be Not Editable and the “Quantity” element should be Editable.

	Define condition	Call condition
1	`<Binding name="AlterRowBackColor" type="string"> <Filter type="IsOddIndex" result="F6F6F6" /> <Filter type="AlwaysTrue" result="FFFFFF" /> </Binding>`	`<AdvancedList> <RowTemplate comment="Normal"> <Property Name="Name" Value="RowTemplate" /> <Cell>…</Cell> <Property Name="Height" Value="24" /> <Property Name="BackColor" Value="{Binding AlterRowBackColor}" /> </RowTemplate> <Binding name="AlterRowBackColor" type="string">…</Binding> <Binding name="AlterCellForeColor" type="string">…</Binding> <Binding name="AlterCellBool" type="boolean">…</Binding> </AdvancedList>`
2	`<Binding name="AlterCellBool" type="boolean"> <Filter type="LessThan" column="Quantity" value="3" result="false" /> <Filter type="AlwaysTrue" result="true" /> </Binding>`	`<Cell Type="Resco.Controls.AdvancedList.TextCell" Row="1" Column="2" RowSpan="1" ColumnSpan="4"> <Property Name="Bounds" Value="20,25,45,10" /> <Property Name="CellSource" Value="ItemDescription" /> <Property Name="DesignName" Value="string" /> <Property Name="ForeColor" Value="" /> <Property Name="Visible" Value="{Binding AlterCellBool}"/> <Property Name="Selectable" Value="false" /> <Property Name="BindType" Value="label" /> </Cell>`
3	`<Binding name="AlterCellForeColor" type="string"> <Filter type="LessThan" column="Quantity" value="3" result="FF0000" /> <Filter type="AlwaysTrue" result="000000" /> </Binding>`	`<Cell Type="Resco.Controls.AdvancedList.TextCell" Row="0" Column="2" RowSpan="1" ColumnSpan="4"> <Property Name="Bounds" Value="20,8,45,10" /> <Property Name="CellSource" Value="ItemCode" /> <Property Name="DesignName" Value="string" /> <Property Name="ForeColor" Value="{Binding AlterCellForeColor}"/> <Property Name="Visible" Value="true" /> <Property Name="Selectable" Value="false" /> <Property Name="BindType" Value="label" /> </Cell>`  `<Cell Type="Resco.Controls.AdvancedList.TextCell" Row="0" Column="19" RowSpan="2" ColumnSpan="2"> <Property Name="Bounds" Value="188,8,18,20" /> <Property Name="CellSource" Value="Quantity" /> <Property Name="DesignName" Value="" /> <Property Name="ForeColor" Value="{Binding AlterCellForeColor}"/> <Property Name="Visible" Value="true" /> <Property Name="Selectable" Value="true" /> <Property Name="BindType" Value="label" /> </Cell>`



Note that

Especially on UWP & Android, and in case either the Binding condition is sufficiently specific, or we want it to be called in an ImageCell or ButtonCell type of element, it is possible to define the Binding condition by using the Business Rules tool.

Header area

In DocForm screens it is also possible to display a header area (Header RowTemplate). This area is defined in the AdvancedList file of the screen and it is optional, while the way to show-hide the area varies, depending on the ESMobile application platform. In particular, the following apply per platform.

```
<AdvancedList>
  …
  <Property Name="HeaderTemplateIndex" Value="3" />
  <HeaderRow>
    <Property Name="TemplateIndex" Value="3" />
    <Property Name="StringData" Value="" />
  </HeaderRow>
  …
</AdvancedList>
```

- iOS platform. Designating a distinct Header RowTemplate is mandatory. It is also mandatory, that the Header RowTemplate defined is the one with SEQ.NO 3. To display the area, the TemplateIndex property of the HeaderRow section must indicate the SEQ.NO of the Header RowTemplate. To hide it, the user can simply specify value 0 at the area's Height property.
- UWP & Android. Designating a distinct Header RowTemplate is optional. To display the area, the HeaderTemplateIndex property must indicate the SEQ.NO of the Header RowTemplate. To hide it, simply leave the property empty. It is suggested that, for iOS compatibility purposes, the Header RowTemplate with SEQ.NO 3 be designated.

Regarding the definition method and available properties of the title area, the exact same apply as described in the corresponding section of the ListForm screen, including of course, - for UWP & Android - the special SFListForm screen features.

Grouping area

In DocForm screens it is also possible to display a line grouping area (SectionHeader RowTemplate). The Task entity grouping criterion is set at a task type level, while the Document entity one is set by configuring the Doc_GroupField mobile parameter.

Note that

Any one of the task-document line fields can be designated as a grouping criterion. At the same time, however, using the Business Rules tool allows the user to specify a linked entity field (see section: Ideas & Solutions/ DocForm screens/ Line grouping)

The information available for display in the grouping area includes the default columns of the below table. For the Task entity in particular, all user-defined numeric fields of the task line are included.

Column name	Information
Task entity	
GroupField	Grouping criterion
GroupFieldSubTotal1	Quantity
GroupFieldSubTotal2	Order quantity

Column name	Information
Document Entity	
GroupField	Grouping criterion
LineSubTotal	Line total
QtySubTotal	Quantity
NetSubTotal	Net value
VatSubTotal	VAT value
DicountSubTotal	Total discount value
TotalSubTotal	Total value
DiscTotalPercSubTotal	Average discount %
WeightSubTotal	Weight
VolumeSubTotal	Volume

This area is defined in the AdvancedList file of the screen and it is optional, while the way to show-hide the area varies, depending on the ESMobile application platform. In particular, the following apply per platform.

- iOS platform. Once a grouping field has been defined in the database, specifying a distinct SectorHeader RowTemplate is mandatory. The area is automatically shown, while in order to hide it, simply specify value 0 in the area's Height property.
- UWP & Android. Once a grouping field has been defined in the database, the area is automatically shown, in its default format. If we wish to differentiate the default display format, it is necessary to define a distinct SectionHeader RowTemplate. To hide the area, simply specify value 0 at the area's Height property.

Regarding the definition method and the properties available at an area level (RowTemplate) and element level (Cell), the following applies:

Property	Comment
RowTemplate	
Name	The sectionheader label is mandatory.
Height	The area height.
BackColor	It must be specified by using an RGB color code and should be in format #0,0,0. On UWP & Android in particular, HEX color numbers can be used.
Cell	
Type	The SectionHeader RowTemplate only supports TextCell-type elements.
CellSource	• For default columns the column name should be specified as mentioned in the table above. • For the freely-defined numeric fields of the line, the field name is specified in the database. On UWP & Android in particular, it is also possible to display the average (function AVERAGE) and sum (function: SUM) information, for any one of the numeric fields on the task-document line.

Note that by using the -Collapse button, it is possible to expand-collapse all groups. Specifically in UWP & Android platforms, it is also possible to focus on the area of a group, in order to expand-collapse a specific group.

Totals area

In DocForm screens it is also possible to display a totals area (Footer RowTemplate) on the lines. The information available for display in the totals area includes both all user-defined numeric fields of the header & line and the default columns from the table below.

Column name	Information
Task entity	
LineTotal	Line total
QtyTotal	Quantity

Column name	Information
Document Entity	
LineTotal	Line total
QtyTotal	Quantity
GiftTotal	Gift quantity
(IOS) NetTotal (UWP & Android) NetValue	Net value
(iOS) VatTotal (UWP & Android) VatValue	VAT value
(iOS) Total (UWP & Android) TotalValue	Total value
(iOS) DiscTotal (UWP & Android) DiscValue	Total discount value
DiscTotalPerc	Average discount %
Budget	Appointment turnover budget
MinValue	Minimum document value
TradeAccountAvgCollectionTime	Average collection time

This area is defined in the AdvancedList file of the screen and it is optional, while the way to show-hide the area varies, depending on the ESMobile application platform. In particular, the following apply per platform.

```
<AdvancedList>
  …
  <Property Name="FooterTemplateIndex" Value="2" />
  <FooterRow>
    <Property Name="TemplateIndex" Value="2" />
    <Property Name="StringData" Value="" />
  </FooterRow>
  …
</AdvancedList>
```

- iOS platform. Designating a distinct Footer RowTemplate is mandatory. It is also mandatory, that the Footer RowTemplate defined is the one with SEQ.NO 2. To display the area, the TemplateIndex property of the FooterRow section must indicate the SEQ.NO of the Footer RowTemplate. To hide it, the user can simply specify value 0 at the area's Height property.
- UWP & Android. Designating a distinct Footer RowTemplate is optional. To display the area, the FooterTemplateIndex property must indicate the SEQ.NO of the Footer RowTemplate. To hide it, simply leave the property empty. It is suggested that, for iOS compatibility purposes, the Footer RowTemplate with SEQ.NO 2 be designated.

Regarding the definition method and the properties available at an area level (RowTemplate) and element level (Cell), the following applies:

Property	Comment
RowTemplate	
Height	The area height.
BackColor	It can be specified by using an RGB color code and should be in format #0,0,0, or by using a HEX color code. Concerns UWP & Android platforms only.
Cell-iOS	
Type	The SectionHeader RowTemplate only supports TextCell-type elements.
CellSource	Used only for header information. Specify the field name in the database.

Name	Used for default columns and for line fields. The required method of definition, on a case-by-case basis, is: • Default columns. Specify the column name, as mentioned in the above table. • Line fields. The definition must be in Total_FieldName form, where the FieldName is the field name in the database.
Cell-UWP & Android	
Type	The SectionHeader RowTemplate only supports TextCell-type elements.
CellSource	Used for all available information. The required method of definition, on a case-by-case basis, is: • Default columns. Specify the column name, as mentioned in the above table. • Header fields. Specify the field name in the database. • Line fields. The definition must be NumFieldxTotal form, where the Fieldx is the name of the UDF numeric field in the database.

Example

Suppose we want to add to our DocForm screen the totals area, which shall display the following information. Even if we want the elements to be configured so that the AdvancedList file on the form is compatible with all the ESMobile application platforms.

1. The number of lines
2. The total of the “Quantity” line field
3. The amount entered in the header “Number-1” field
4. The total of the line “Number-1” field

Define elements

1

```
<RowTemplate comment="Footer">
  <Cell Type="Resco.Controls.AdvancedList.TextCell"
        Row="0" Column="3" RowSpan="2" ColumnSpan="1">
    <Property Name="Bounds" Value="30,7,10,16" />
    <Property Name="CellSource" Value="LineTotal" />
    <Property Name="Name" Value="LineTotal" />
    <Property Name="Visible" Value="true" />
    <Property Name="Selectable" Value="" />
  </Cell>
  …
  <Property Name="Height" Value="14" />
  <Property Name="BackColor" Value="EDF3FE" />
</RowTemplate>
```

2

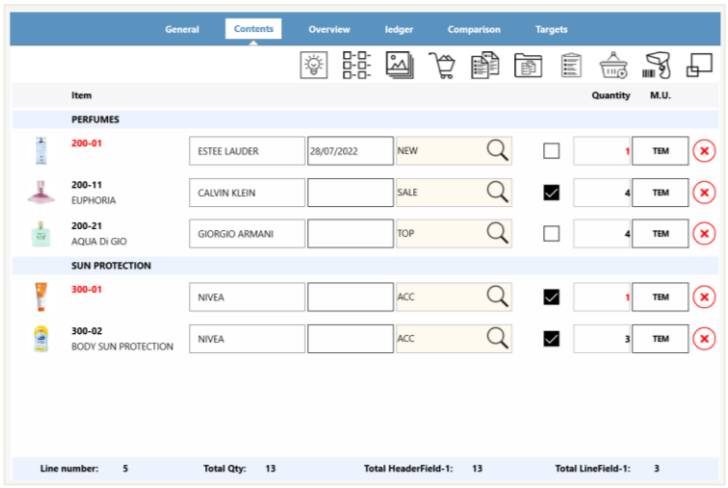
```
<RowTemplate comment="Footer">
  <Cell Type="Resco.Controls.AdvancedList.TextCell"
        Row="0" Column="8" RowSpan="2" ColumnSpan="1">
    <Property Name="Bounds" Value="90,7,10,16" />
    <Property Name="CellSource" Value="QtyTotal" />
    <Property Name="Name" Value="QtyTotal" />
    <Property Name="Visible" Value="true" />
    <Property Name="Selectable" Value="" />
  </Cell>
  …
  <Property Name="Height" Value="14" />
  <Property Name="BackColor" Value="EDF3FE" />
</RowTemplate>
```

3

```
<RowTemplate comment="Footer">
  <Cell Type="Resco.Controls.AdvancedList.TextCell"
        Row="0" Column="15" RowSpan="2" ColumnSpan="1">
    <Property Name="Bounds" Value="155,7,10,16" />
    <Property Name="CellSource" Value="NumericField1" />
    <Property Name="Name" Value="" />
    <Property Name="Visible" Value="true" />
    <Property Name="Selectable" Value="" />
  </Cell>
  …
  <Property Name="Height" Value="14" />
  <Property Name="BackColor" Value="EDF3FE" />
</RowTemplate>
```

4

```
<RowTemplate comment="Footer">
  <Cell Type="Resco.Controls.AdvancedList.TextCell"
        Row="0" Column="21" RowSpan="2" ColumnSpan="1">
    <Property Name="Bounds" Value="220,7,10,16" />
    <Property Name="CellSource" Value="NumField1Total" />
    <Property Name="Name" Value="Total_NumericField1" />
    <Property Name="Visible" Value="true" />
    <Property Name="Selectable" Value="" />
  </Cell>
  …
  <Property Name="Height" Value="14" />
  <Property Name="BackColor" Value="EDF3FE" />
</RowTemplate>
```



Display format / Other areas

The implementation of the form that correspond to the Other areas part can be done using Actions.xml file. The other areas that make up a DocForm screen are: the additional Tabs (section: Tabs), the Action buttons (section: Actions), the Menu buttons -Actions (section: ToolbarActions) & -Online actions (section: ToolbarOnlineActions) and finally button -Sorting (section: SortBy) & -Layouts (section: Layouts). The elements placed in these areas, with the exception of the Sorting & Layouts buttons, require the definition of an appropriate, on a case-by-case basis, command to be executed. This section shall briefly, as well as by means of a specific example, present the definition method and the available properties of the Actions file areas in the DocForm screen.

Additional tabs (DocTab)

Elements related to additional tabs of the DocForm screen are defined in the Tabs section of the screen's Actions file. In this section we can usually find the actions concerning display of information related to the current person" (ESGOPerson entity) or the "current customer" (ESFITradeAccount entity).

The extra tabs are placed right after the "Contents" tab, following the order they have been set to in the Actions file. Note that the "Contents" tab is always the "default" DocForm screen tab. To change this behavior simply indicate the SEQ.NO of the tab that we want to act as "default" in property DefaultTab of the Actions file.

Attention

Especially on iOS, the Tag property of the DocForm AdvancedList file should be empty, in order for the additional tabs to display.

Regarding the definition method and the available properties of the Tabs section, the following apply:

Property	Comment	
Caption	The label displayed as the tab title.	
ESCaptionID	Exclusively refers to the product translation process (Translation key).	
Command	The command to be executed.	
ParamList	The execution "specifications" for the command.	
	Name	The name of the parameter. The available values are Current & Parent, which respectively supply the variables [CURRENT] & [PARENT] of the command to be executed. Especially in case where the tab concerns a DataGridReport type screen, the variables named [DOCGID], [APPGID] & [SITEGID] are also available for supply.
	DataSource	The supply column of the variable in question. Any work task-document header column can be used.

Example-1

Let us say, for example, that we want to add to our DocForm an additional "Ledger" tab which, by drawing information from the local database, displays the current customer's tab (command: CustomerLedgerIOSListForm).

```
<CustomerLedgerIOSListForm Assembly="Entersoft.Mobile.ESMerchandize"
       Type="Entersoft.Mobile.ESMerchandize.ESDataGridCommand">
  <Params>
   <Title Type="System.String" Value="Customer Ledger" />
   <FormID Type="System.String" Value="CustomerLedgerIOSListForm"/>
   <Filter Type="System.String" Value="e.fTradeAccountGID = '[CURRENT]'"/>
   <BaseSelect Type="System.String" Value="Select…" />
  </Params>
</CustomerLedgerIOSListForm>
```

```
<Tabs>
 <DocTab Caption="Ledger"
         Command="CustomerLedgerIOSListForm">
  <ParamList>
    <Param Name="Current" DataSource="fTradeAccountGID"/>
  </ParamList>
 </DocTab>
</Tabs>
```

Example-2

Let us say, for example, that we want to add to our DocForm an additional "Counts" tab which, displays tasks of type ES.MCH-Measurement of the current customer (command: SampleDocFormTabPage).

```
<SampleDocFormTabPage Assembly="Entersoft.Mobile.ESMobile"
       Type="Entersoft.Mobile.ESMobile.ListFormCreatorCommand">
 <Params>
  <FormID Type="System.String" Value="SampleDocFormTabPage"/>
  <Title Type="System.String" Value="Counts" />
  <Filter Type="System.String" Value=
                "tt.InternationalID='ES.MCH'
                and t.fPersonGID = '[CURRENT]'"/>
  <BaseSelect Type="System.String" Value="Select..."/>
 </Params>
</SampleDocFormTabPage>
```

```
<Tabs>
 <DocTab Caption="Ledger">…</DocTab>
 <DocTab Caption="Counts"
         Command="SampleDocFormTabPage">
  <ParamList>
    <Param Name="Current" DataSource="fPersonGID"/>
  </ParamList>
 </DocTab>
</Tabs>
```

Example-3

Let us say, for example, that we to adjust the additional "Counts" tab for it to display tasks of type ES.MCH-Measurement of the current point of sales (command: SampleDocFormTabPage).

```
<SampleDocFormTabPage Assembly="Entersoft.Mobile.ESMobile"
       Type="Entersoft.Mobile.ESMobile.ListFormCreatorCommand">
 <Params>
  <FormID Type="System.String" Value="SampleDocFormTabPage"/>
  <Title Type="System.String" Value="Counts" />
  <Filter Type="System.String" Value=
                "tt.InternationalID='ES.MCH'
                and t.fPersonGID = '[CURRENT]'
                and t.fAddressGID= '[PARENT]'"/>
  <BaseSelect Type="System.String" Value="Select..."/>
 </Params>
</SampleDocFormTabPage>
```

```
<Tabs>
 <DocTab Caption="Ledger">…</DocTab>
 <DocTab Caption="Counts"
         Command="SampleDocFormTabPage">
  <ParamList>
    <Param Name="Current" DataSource="fPersonGID"/>
    <Param Name="Parent" DataSource="fAddressGID"/>
  </ParamList>
 </DocTab>
</Tabs>
```

Action buttons (ActionButton)

The action buttons always refer to a command to be executed. Elements related to actions buttons (ActionButton) of the DocForm screen are defined in the Actions section of the screen's Actions file. The special feature of the section is that each of its elements is shown as a distinct button of the DocForm screen.

Buttons that relate to calling up scenarios of the add lines list are mainly placed in section Actions. In this section, we can also find buttons that activate on a selected line, such as "classic" view-delete line buttons, as well as more specialized buttons, such as for switching to a screen that draws information from the local database or by direct connection to the back office. Finally, we can also find the special button for switching to a management screen for attachments of the DocForm entity.

Regarding the definition method and the available properties of the Actions section, the following apply:

Property		Comment
ImagePath		The folder where the image file corresponding to the button is located.
Name		The button type. This property accepts some default values, the more common ones being: • AddLineButton#Command, add lines button. The Command part indicates the command for the desired lines input list. • DeletedButton, delete line button. Note that on UWP & Android, the delete button appears by scrolling to the right of the current line. • Edit, button that displays a screen with the line's full details. • Collapse, line expand-collapse button. • Command, user-defined button. Note that, because the command to be executed is defined in the Command property, completely omitting the Name property does not cause any errors.
Command		The command to be executed. Only concerns "Command" type buttons.
ParamList		The execution "specifications" for the command. Only concerns "Command" type buttons.
	Name	The name of the parameter. The available values are Current & Parent, which respectively supply the variables [CURRENT] & [PARENT] of the command to be executed. Especially in case where the button concerns a DataGridReport type screen, the variables named [DOCGID], [APPGID] & [SITEGID] are also available for supply.
	DataSource	The supply column of the variable in question. Any column of the header or the task-document line can be used. In case a line column is used, it is necessary that the definition is in form ESTMTaskItem.Field & ESFISalesDocLineItem.Field for the Task entity and the Document entity, respectively.
ApplicationVisible		The applications-platforms where the button is available. The syntax should be of form: #AppIDPlatforfID1#AppIDPlatforfID2 where: Application: 8 Merchandising; 22 Field Service; 322 xVan; 1024 Medical Representative Platform: 2 iOS; 3 Android; 4 UWP; 9 UWP & Android
Width, Height		The width-height of the button. Note that the designating an "empty" button with a specific width results in creating a corresponding distance between other buttons in the area. Concerns the iOS platform only.

Example-Add lines list

Suppose, for example, that we wish to add a button to our DocForm screen that displays a lines input list (command: SampleAddLineForm for iOS & AddLineSFForm for UWP & Android).

```
<Actions>
  <ActionButton ImagePath="CSImages/Custom-Black.png"
                Name="AddLineButton#SampleAddLineForm"
                Width="30" Height="30"
                ApplicationVisible="#82" />
  <ActionButton ImagePath="CSImages/Custom-Black.png"
                Name="AddLineButton#SampleAddLineSFForm"
                Width="30" Height="30"
                ApplicationVisible="#89" />
</Actions>
```

Example-Data delivery

Suppose, for example, that we wish to add a button to our DocForm screen that will result in directly calling the process of data delivery to the back office (command: SyncPush).

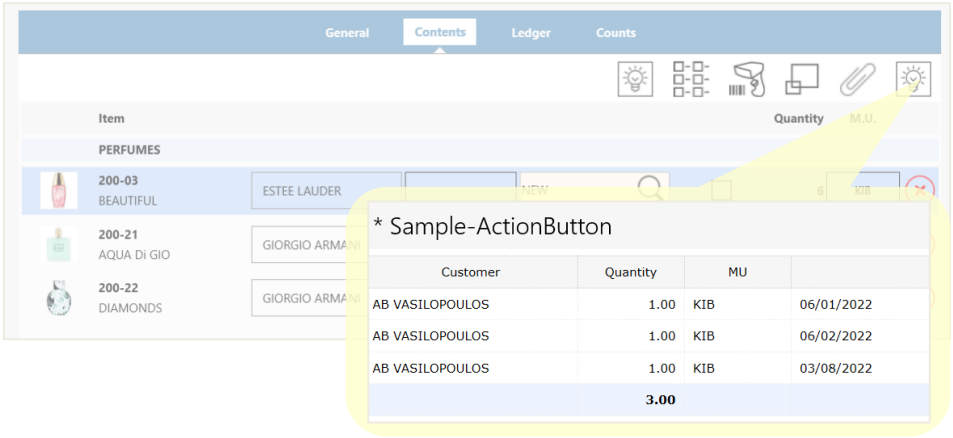
```
<Actions>
 <ActionButton ImagePath="Images/cloud.png"
               Command="SyncPush"
               Width="30" Height="30" />
</Actions>
```

Example-Local report

Let us say, for example, that we wish to add a button to our DocForm screen, that displays, by drawing information from the local database, the history of the order quantity for the current customer - item & measurement unit of the selected line (command SampleDocFormActionButton).

```
<SampleDocFormActionButton Assembly="Entersoft.Mobile.ESMobile"
          Type="Entersoft.Mobile.ESMobile.ESDataGridCommand">
 <Params>
  <FormID Type="System.String"
  Value="SampleDocFormActionButton"/>
  <Title Type="System.String" Value="Sample-ActionButton" />
  <LoadDataOnOpenForm Type="System.Boolean" Value="true" />
  <Filter Type="System.String" Value=
               "d.DocType = 1
               and dl.fItemGID ='[CURRENT]'
               and dl.fItemMUGID ='[PARENT]'
               and d.fTradeAccountGID = '[SITEGID]'"/>
  <BaseSelect Type="System.String" Value="Select..."/>
 </Params>
</SampleDocFormActionButton>
```

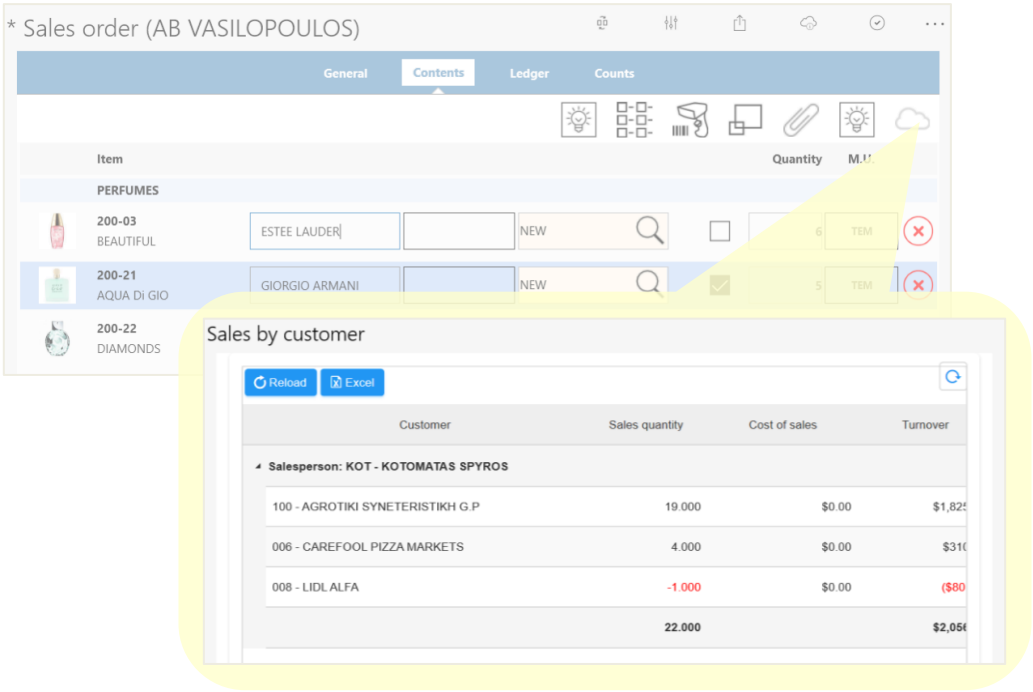
```
<Actions>
 <ActionButton ImagePath="CSImages/Custom-Black.png"
               Command="SampleDocFormActionButton"
               Width="30" Height="30" >
  <ParamList>
   <Param Name="Current" DataSource="ESFISalesDocLineItem.fItemGID"/>
   <Param Name="Parent"  DataSource="ESFISalesDocLineItem.fItemMUGID"/>
   <Param Name="SiteGID" DataSource="fTradeAccountGID"/>
  </ParamList>
 </ActionButton>
</Actions>
```



Example-Online report

Let us say, that we want to add a button to our DocForm screen that displays, in direct connection to the back office, the sales history of the selected line item (command Html_ESSalesPerItem).

```
<Actions>
 <ActionButton ImagePath="Images/cloud.png"
               Command="Html_ESSalesPerItem"
               Width="30" Height="30" >
 <ParamList>
    <Param Name="Current" DataSource="ESFISalesDocLineItem.fItemGID" />
 </ParamList>
 </ActionButton>
</Actions>
```


* Sales order (AB VASILOPOULOS)
General
Contents
Ledger
Counts
Item
Quantity
PERFUMES
200-03
BEAUTIFUL
ESTEE LAUDER
NEW
200-21
AQUA Di GIO
GIORGIO ARMANI
NEW
200-22
DIAMONDS
Sales by customer
Reload
Excel
Customer
Sales quantity
Cost of sales
Turnover
Salesperson: KOT - KOTOMATAS SPYROS
100 - AGROTIKI SYNETERISTIKH G.P
19.000
$0.00
006 - CAREFOOL PIZZA MARKETS
4.000
$0.00
008 - LIDL ALFA
-1.000
$0.00
22.000

Menu buttons (DocToolbarAction)

The menu buttons of the DocForm screen are pre-defined and meet the need for ergonomic display of actions typically related to the management of the DocForm entity, as well as actions related to drawing information in direct connection the back office. These actions appear as distinct options of the menu buttons to which they are incorporated. The default menu buttons on the DocForm screen and the settings required to integrate actions into them are:

	Button	Setting
	Actions	To add an action to the button, define it in the ToolbarActions section of the screen's Actions file. Defining the action to be executed is possible by using an element of type DocToolbarAction. Regarding definition method of the element, the exact same apply as described for section DocTab.
	Online	To add an action to the button, define it in the ToolbarOnLineActions section of the screen's Actions file. Defining the action to be executed is possible by using an element of type DocToolbarAction. Regarding definition method of the element, the exact same apply as described for section DocTab.
	Save	The button that marks the end editing the DocForm entity details. It always appears as the last button on the top right of the screen. Specifically in the case of the Task entity, pressing the Save button displays a list with the available save options. Note that the available button options can be defined either from the back office, through appropriate configuration of the task type, or at the level of a specific DocForm screen, by configuring the SaveMenu property of the command in question.

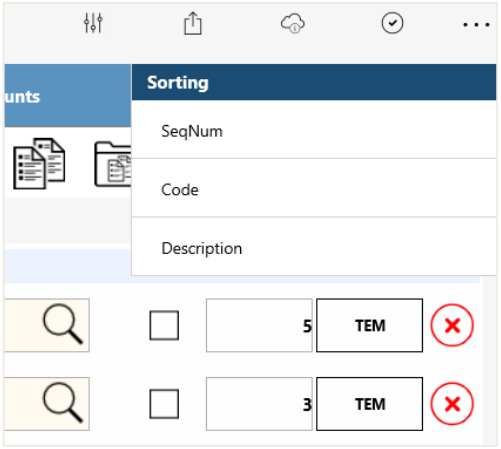
Sorting

Defining the alternative sorting criteria of the DocForm screen Contents part is possible in the SortBy section of the screen's Actions file. If alternative sorting criteria have been defined, the -Sort button appears on the top right part of the screen. By pressing this button, we have the option to switch between the available sorting criteria. The definition method and available properties for the alternative criteria are the exact same as described for the ListForm type of screen, in the relevant section.

Example

Suppose that we want to allow our DocForm screen to sort the Contents part by line SEQ.NO and code, or by item description.

```
<SortBy Type="gr.entersoft.esmobile.SortBy">
 <Definition>
  <SortByField Caption="SeqNum"
       Expression="GroupField, SeqNum" Default="false" />
  <SortByField Caption="Code"
       Expression="GroupField, ItemCode" Default="true" />
  <SortByField Caption="Description"
       Expression="GroupField, ItemDescription"
       Default="false" />
 </Definition>
</SortBy>
```



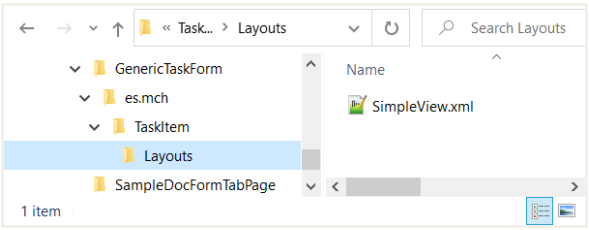
Note that

- In case line grouping for the DocForm screen is activated, it is mandatory to define the GroupField field as the first line sorting field.
- The line sorting action interprets all fields as text fields. For the sorting by numeric field to be correct, it is necessary to “convert” the number to text. (see section: Ideas & Solutions/ DocForm screens/ Line sorting)

Alternative layouts

In a DocForm screens, using the alternative layouts, it is possible to dynamically change the display format of the Contents part. The following applies regarding the necessary settings.

- Layout configuration. The layout can be configured using an AdvancedList.xml file. Regarding the definition method for the individual elements of the AdvancedList file, the exact same apply as described for the "default" layout of the Contents part.

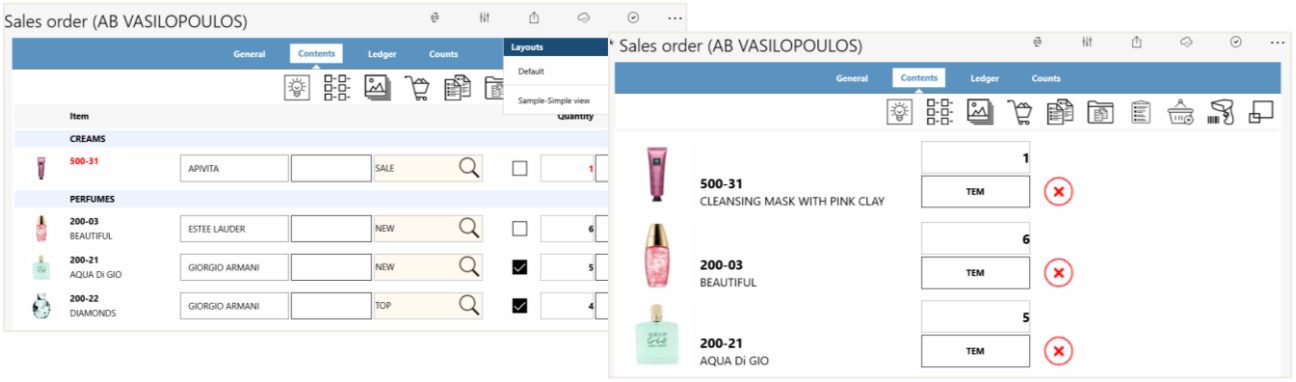


- Layouts location. Alternative layout files can have any name other than “AdvancedList.xml” and should be in the Layouts sub-folder of the area where the “default” layout of the Contents part is also located (e.g. GenericTaskForm/es.mch/TaskItem/Layouts folder, for measurement type tasks and GenericDocForm/1/Layouts folder, for order type documents).
- Layout call button. The alternative layouts can be called using the -Layouts button of the DocForm screen. To display this button, it is necessary to define the available layouts in the Layouts section of the DocForm screen's Actions file. The link between a button and a layout file is created by specifying the layout file name in the FormID property

Example

Let’s say that we wish to expand our DocForm screen with a layout that displays the Contents part in a simplified form. Suppose also that this layout file is named SimpleView.xml.

```
<ActionDefinition>
 <Layouts Type="gr.entersoft.esmobile.Layouts">
  <Definition>
   <ESLayout Caption="Sample-Simple view" FormID="SimpleView"/>
  </Definition>
 </Layouts>
</ActionDefinition>
```



Advanced functionality

Search

The DocForm screen allows the user to define alternative search criteria on the screen's Contents part. The search criteria are defined using the special type of command, SearchPanelCreatorCommand. The name of the command is default and should, for the Task entity, be in the SP_InternationalID format (e.g. SP_es.mch for Measurement type tasks), while, for the Document entity, it should be in the SP_doc_ID format (e.g. SP_doc_1 for Order type documents). The definition method and available properties for the alternative search criteria are the exact same as described for the ListForm type of screen, in the relevant section. Note that the functionality of defining alternative search criteria is available only on iOS.

Custom numeric keyboard

Example ES.COMPT-Competition

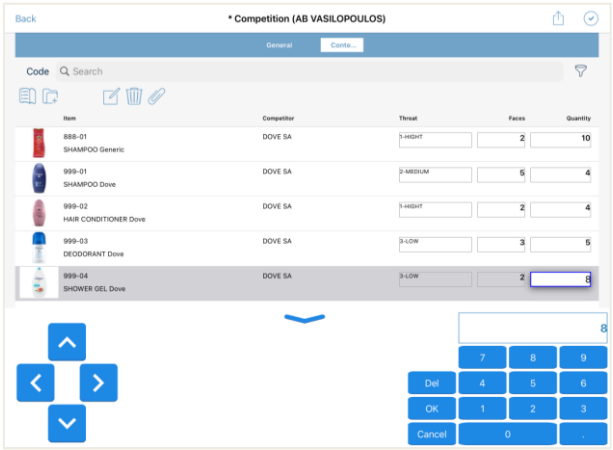
In a Task entity DocForm screen, and in case the requirements for filling in the numeric data of a line are quite specialized, it is possible to "replace" the default numeric pop up with an alternative one, which, in addition to the conventional buttons, also contains buttons that allow the user to switch to next-previous lines or a column of the Contents part. This feature is enabled in the AdvancedList file of the DocForm screen, by properly configuring the following properties of the line numeric data in question:

Property	Comment
KeyboardID	Specify value NumericDpad.
TabIndex	Specify a SEQ.NO that relates to the desired sequence of navigation between line data.
Selectable	Specify value True.

Example

Let's say we wish to enable the alternate keyboard in the views & quantity details of the Data entry screen, for task type ES.COMPT-Competition.

```
<AdvancedList>
  <RowTemplate comment="Normal">
    …
    <Cell Type="Resco.Controls.AdvancedList.TextCell">
      <Property Name="Bounds" Value="190,8,20,20" />
      <Property Name="CellSource" Value="NumericField1" />
      <Property Name="Name" Value="NumericField1" />
      <Property Name="Visible" Value="true" />
      <Property Name="Selectable" Value="true" />
      <Property Name="KeyboardID" Value="NumericDpad" />
      <Property Name="TabIndex" Value="1" />
    </Cell>
    <Cell Type="Resco.Controls.AdvancedList.TextCell">
      <Property Name="Bounds" Value="212,8,25,20" />
      <Property Name="CellSource" Value="Quantity" />
      <Property Name="Name" Value="Quantity" />
      <Property Name="Visible" Value="true" />
      <Property Name="Selectable" Value="true" />
      <Property Name="KeyboardID" Value="NumericDpad" />
      <Property Name="TabIndex" Value="2" />
    </Cell>
    …
</AdvancedList>
```



Signature Screen

DocForm screens allow the user to automatically display, upon completion of a task-document, a screen to enter the customer signature and attach it (as a jpg file) to the attachments of the current task-document.

Activating this feature is possible from the back office and by configuring the “Signature” field of the task-document type available options: 0-No, 1-Optional & 2-Mandatory.

Note here that specifically for the Document entity, it is also possible to use the signature screen under conditions. To utilize this feature, specify, using the Business rules tool, the desired value assignment rule in the non store ShouldCaptureSignature field of the document’s header.

Example

Let’s say that we wish to implement a Data entry screen, which can be used to create a document of type 6-Sales invoice. Suppose also we do not want the signature display screen to appear, in the case where the invoice is classified as “Cash”.

```
<BusinessRule Title="Assignment to Signature"
        Entity="ESFISalesDocument"
        Activation="0"
        Action="0"
        Inactive="false">
    <ExecutionConditions
        Entity="ESFISalesDocument"
        ScriptType="3"
        Script="[ESFISalesDocument].[InCash]=1"/>
    <OnChangeField
        Entity="ESFISalesDocument"
        Field="InCash"
        ScriptType="2"
        Script="False"
        AssignField="ShouldCaptureSignature"/>
</BusinessRule>
```

E-mail screen

DocForm screens allow the user to automatically write an E-mail with a pdf file attached, which shows the current task-document details. The following applies regarding the necessary settings.

Note that

The attached .pdf file auto-generation feature is not available on the UWP platform. Also, on the iOS platform, it is available on iOS operating system version >=13.

Screen configuration

The E-mail screen is implemented using special command type MailMergeCommand. The special feature of this type of command is that it allows the user to configure the data that makes up the recipients and body of an E-mail. The properties of the command to be configured are:

Property	Comment
FormID	The folder in the ESReports or CSReports area, where the report file related to the screen is located. Note that in order to implement the screen's display format, it is necessary to use a ReportDefinition.xml file. Note also that, by appropriately configuring the report file, it is also possible to display the: • Company logo. Simply set an image file with the default name PdfCompanyLogo.png in the CSConfig folder. • Customer signature. Simply enable, in the task-document type, the attach customer signature feature.
SubjectSQL	The select query that specifies the data to be displayed in the E-mail / Subject element.
MailRecipientSQL	The select query that specifies the data to be displayed in the E-mail / To element.
MailCCRecipientSQL	The select query that specifies the data to be displayed in the E-mail / Cc element.
MailBCCRecipientSQL	The select query that specifies the data to be displayed in the E-mail / Bcc element.
MailMode	The “behavior” of the E-mail delivery process. The available options are: • 0-Send HTML report attachment. • 1- Send PDF attachment. • 2-Send PDF attachment and text recording feature. • 3-Do not send.
TableList	The writing “specifications” for the “body” of the E-mail.

```
<MailMergeDocument Assembly="Entersoft.Mobile.ESMobile"
                   Type="Entersoft.Mobile.ESMobile.MailMergeCommand">
  <Params>
    <FormID Type="System.String" Value="DocumentMail" />
    <SubjectSQL Type="System.String" Value="Select ..." />
    <MailRecipientSQL Type="System.String" Value="Select ..." />
    <TableList Type="System.Collections.Hashtable">
      <ESFISalesDocument Value="Select ..." />
      <ESFISalesDocLineItem Value="Select ..." />
    </TableList>
  </Params>
</MailMergeDocument>
```

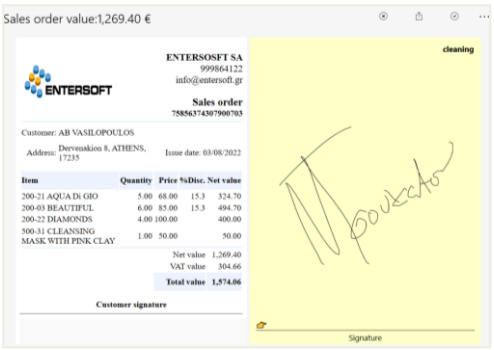
Screen activation

The E-mail screen is activated by defining a MailMergeCommand in the Actions file of the DocForm screen, preferably in the ToolbarActions section. The definition should be in the form MailMerge#Command, where the Command part indicates the command to be executed.

```
<ActionDefinition>
  <Actions>…</Actions>
  <ToolbarActions>
     <DocToolbarAction Caption="E-Mail"
                       Command="MailMerge#MailMergeDocument"/>
  </ToolbarActions>
</ActionDefinition>
```

Confirmation & Signature

DocForms allow for automatic display, upon completion of a task-document, of a confirmation and signature screen for the current entry details. The following applies regarding the necessary settings.



Screen configuration

The Confirmation & Signature screen is implemented using special command type ConfirmationCommand. The special feature of this type of command is that it is composed by two sub-screens, the E-mail screen and the Signature screen, while also allowing for physical printing of the data. The properties of the command to be configured are:

Property	Comment
SignatureType	The Task or Document entities require value 5 or 3, respectively.
MailMergeCommand	The command to be executed, that relates to the E-mail screen.
AutoEmail	Automatic e-mail delivery (true) or not (false).
PrintCommand	The command to be executed, that relates to the physical printing.
AutoPrint	Automatic printing (true) or not (false).

```
<DocConfirmation Assembly="Entersoft.Mobile.ESSalesForce"
                 Type="Entersoft.Mobile.ESMobile.ConfirmationCommand">
 <Params>
   <SignatureType Type="System.Int32" Value="3" />
   <MailMergeCommand Type="System.String" Value="MailMergeDocument" />
   <AutoPrint Type="System.Boolean" Value="false" />
   <AutoEmail Type="System.Boolean" Value="false" />
   <PrintCommand Type="System.String" Value="" />
 </Params>
</DocConfirmation>
```

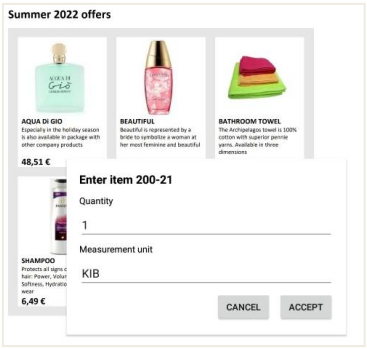
Screen activation

The Confirmation & Signature screen is activated by configuring the ConfirmationCommand property of the DocForm screen's Actions file. It is essential that the functionality of the Signature screen display is enabled at a task-document level.

```
<ActionDefinition>
  <Actions>…</Actions>
  <Tabs>…</Tabs>
  <ToolbarActions>…</ToolbarActions>
  <ToolbarOnLineActions>…</ToolbarOnLineActions>
  <ConfirmationCommand>DocConfirmation</ConfirmationCommand>
</ActionDefinition>
```

Add lines from PDF

Example SampleAddLineFromPDF



The Add lines from PDF screen (AddLineFromPDF) is available in the DocForm screen of the Document entity and is an alternative add lines tool, with the item selection being possible through an appropriately configured PDF file. This feature requires both a PDF file to be configured and the relevant actions button to be added in the document's DocForm screen. The AddLineFromPDF screen is only available on iOS & Android platforms.

Due to the particular features of the AddLineFromPDF screen, the ESMobile application does not provide a specific product implementation scenario for it. In this section detailed instructions will be given on how to implement this type of screen, at an application customization level.

Action button (ActionButton)

The AddLineFromPDF screen is implemented using special command type PdfInputCommand, in which essentially the only elements specified are the area and name of the PDF file to be called (PdfFilePath property).

The screen is activated by defining this command as a distinct button of the DocForm screen (Actions section if the Actions.xml file). The Name property of the button must indicate value AddFromPdf, while the Command property must indicate the command to be executed.

```
<SampleAddLineFromPDF Assembly="Entersoft.Mobile.ESMobile"
                      Type="Entersoft.Mobile.ESMobile.PdfInputCommand">
  <Params>
    <PdfFilePath Type="System.String" Value="CSPdfs/Sample1.pdf" />
  </Params>
</SampleAddLineFromPDF>
```

```
<ActionDefinition>
 <Actions>
   …
   <ActionButton ImagePath="CSImages/MyPDF.png"
                 Name="AddFromPdf"
                 Command="SampleAddLineFromPDF"
                 Width="30" Height="30"
                 ApplicationVisible="#82#83"/>

 </Actions>
</ActionDefinition>
```

PDF file configuration

The items to be made available for selection are designated in the PDF file. There are no specific limitations concerning the design of the PDF display format. However, particular attention should be paid to the URL that corresponds to each PDF item.

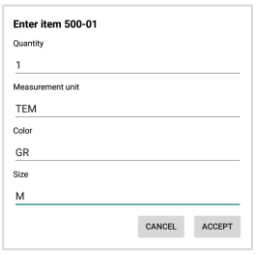
The URL has the following form: http://entersoft/{"Code":"item"}, where the "item" part must be the same as one of the available item selection codes (code or barcode). The URL of this format corresponds to the default screen for declaring the items to be imported, which includes the fields: Quantity, Measurement unit & Color-Size.

Note that the order in which the item identification check is executed depends on the Barcode_SearchMethod mobile parameter setup.

Example

Let's assume that we want to display the default screen for all PDF items.

simple item with code 200-21	simple item with barcode 900002	item color-size with code 500-01
http://entersoft/{"Code":"200-21"}	http://entersoft/{"Code":"900002"}	http://entersoft/{"Code":"500-01"}



For this example, the Barcode_SearchMethod mobile parameter should have a value of 1-2, so that it can be identified both by item code and by item barcode.

By applying further configuration, the default screen can be expanded for either all items, or for a specific PDF item.

- All items. Additional fields can be defined in the PdfEntryFields.json file. This file should be in the ESConfig or CSConfig folder of the ESMobile application.
- Specific item. The item URL has the following form: http://entersoft/{"Code":"item","InputFields":[{field-1},{field-2], ...]} . The additional fields are defined in the "InputFields" part.

Regardless of way the default screen will be expanded, the following properties must be designated for each additional field to be defined:

Property	Value
Label	The field title.
DataMember	The field of the document line to be updated.
Value	A default value for the field.
DataType	The field type. The available values are: 0-Text, 1-Number, 2-Selection list & 3-Date
FieldType	The field behavior. The available values are: 0-Editable & 1-ReadOnly
Options	To be filled-in only in case the DataType property has a value of 2-Selection list. The options should be designated as follows: ["option-1","option-2"]

Example

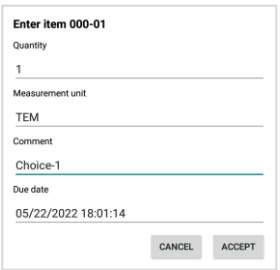
Let's assume that we wish to expand the default screen for all PDF items, so as to include Date-1 & Reason, where we wish to display a value selection list in the Reason field. Suppose also that, specifically for item 500-01, we wish that the extension includes only field Date-1.

simple item with code 000-01

1 http://entersoft/{"Code":"000-01"}

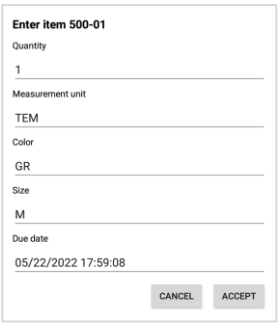
2 APdfEntryFields.json file with the following syntax

```
[
  {
    "Label":          "Comment",
    "DataMember":     "Reasoning",
    "Value":          "",
    "DataType":       2,
    "FieldType":      0,
    "Options":        ["Choice-1","Choice-2","Choice-3"]
  },
  {
    "Label":          "Due date",
    "DataMember":     "DateField3",
    "Value":          "",
    "DataType":       3,
```



```
        "FieldType":       0,
        "Options":         ""
      }
    ]
```

item color-size with code 500-01



http://entersoft/{"Code":"500-01","InputFields":[{"Label": "Due date","DataMember":"DateField3","Value":"","DataType":3,"FieldType":0,"Options":""}]}

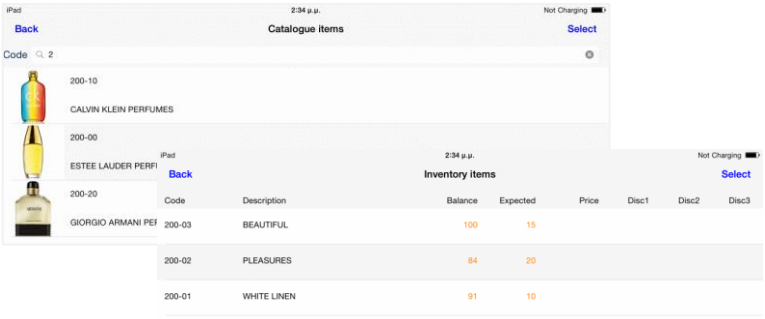
Note that

- In case we want some of the items listed in the PDF file to be eligible for selection only by a specific ESMobile application, the URL can be specially customized at an ESMobile application level. This feature requires the URL to be designated in the following format:
  - http://entersoft-essfa/{"Code":"item"}, for the SFA-Merchandising application
  - http://entersoft-esxvan/{"Code":"item"}, for the xVan application
  - http://entersoft-essfa/{"Code":"item"}, for the Field Service application
  - http://entersoft-esxvan/{"Code":"item"}, for the Medical Representative application
- Especially on the iOS Platform, URL identification in non-Latin characters requires a specific encoding. In the case of such a URL, it must be converted to the required encoding. This conversion can be easily done using tools such as www.urlencoder.org.

  e.g. for an item with code ΔΠ-001, the URL should not be in format http://entersoft/{"Code":"ΔΠ-001"} but in format http://entersoft/{"Code":"%CE%94%CE%A0-001"}

Add lines from catalogue items

In DocForm screens of the Document entity it is possible to automatically "replace" an add lines list (AddLineButton) with a default list of 2 levels, where the first level displays a list of catalogue items and the second a list of inventory items, mentioned in the select catalogue item. To enable this feature, assign value 1-Yes in mobile parameter Doc_UseCatalogueItems.



Note that

The screens that concern catalogue items & inventory items lists are default and can be implemented using the CatalogueItemInvForm & ItemInvList commands, respectively.

Bulk update selected lines

Example ES.MCHCP-Pricing

In DocForm screens it is possible to bulk update data for the total of selected lines of the task-document. To utilize this feature, it is necessary, on one hand, to configure the screen where the data to be updated are specified and on the other hand, to add the relevant action in the DocForm screen of the task-document.

Due to this feature's unique nature, the ESMobile application does not provide a specific product implementation scenario. In this section, there will be detailed implementation instructions provided - at an application customization level - on a scenario of bulk updating selected lines, using a specific example.

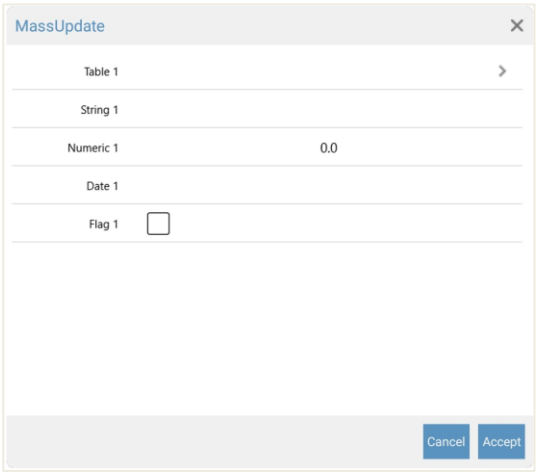
Screen configuration

Configuring the screen, on which the data to be updated are specified, is possible using file type DetailView.xml. This file must include the name MassUpdateDetailView.xml and be placed in the area where all the Contents part files of the DocForm screen are found (e.g. GenericTaskForm/es.mch/TaskItem area for a measurement-type task and GenericDocForm/1 for an order-type document). Note that the bulk update screen may contain all kinds of data (text, numeric, date, flag & selection list). Specifically in the case of selection list-type data, the designation must be in [POP] form.

Example

Let's assume we wish to implement a screen that allows bulk update of elements Text-1, Number-1, Date-1, Flag-1 & Table-1 of the ES.MCHCP-Pricing task type lines.

```
<DetailView DpiX="96" DpiY="96">
  <Item Type="Resco.Controls.DetailView.ItemLink">
    <Property Name="Label" Value="Table 1" />
    <Property Name="DataMember" Value="fCategoryValue1GID" />
    <Property Name="Name" Value="fCategoryValue1GID" />
    <Property Name="Tag" Value="#GID#Code#ESTMTaskCategoryValue#[POP]..." />
  </Item>
    <Item Type="Resco.Controls.DetailView.ItemTextBox">
    <Property Name="Label" Value="String 1" />
    <Property Name="DataMember" Value="StringField1" />
    <Property Name="Name" Value="StringField1" />
  </Item>
  <Item Type="Resco.Controls.DetailView.ItemNumeric">
    <Property Name="Label" Value="Numeric 1" />
    <Property Name="DataMember" Value="NumericField1" />
    <Property Name="Name" Value="NumericField1" />
  </Item>
  <Item Type="Resco.Controls.DetailView.ItemDateTime">
    <Property Name="Label" Value="Date 1" />
    <Property Name="DataMember" Value="DateField1" />
    <Property Name="Name" Value="DateField1" />
  </Item>
  <Item Type="Resco.Controls.DetailView.ItemCheckBox">
    <Property Name="Label" Value="Flag 1" />
    <Property Name="DataMember" Value="FlagField1" />
    <Property Name="Name" Value="FlagField1" />
  </Item>
```



Add action

The bulk update screen can be called by specifying the BatchUpdateSelected action as a distinct option of the -Actions menu button in the DocForm screen (ToolbarActions section of the Actions.xml file). Note that, in order to be able to select the rows to be updated, IsRowSelected must exist in the AdvancedList.xml file of the Contents part.

```
<ActionDefinition>
  <ToolbarActions>
    <DocToolbarAction Caption="Field's bulk update"
                      Command="BatchUpdateSelected"
                      ESCaptionID=""/>
  </ToolbarActions>
```

```
<AdvancedList>
  <Cell Type="Resco.Controls.AdvancedList.TextCell"
        Row="0" Column="7" RowSpan="2" ColumnSpan="1">
    <Property Name="Bounds" Value="65,8,10,10" />
    <Property Name="CellSource" Value="IsRowSelected" />
    <Property Name="Name" Value="IsRowSelected" />
    <Property Name="DesignName" Value="bool" />
    <Property Name="Visible" Value="true" />
    <Property Name="Selectable" Value="true" />
  </Cell>
```

Named task (NamedTask)

The Data entry screen of type Named task (NamedTask) is only available on iOS and can be used as an alternative way to implement the Data entry screen of a task which lacks the Contents part (e.g. ES.SAP-Sales appointment task type). The elements required to implement a NamedTask type of screen are:

Element	Comment
Command	The user must use a command of type NewFormCreatorCommand or EditFormCreatorCommand, to create or manage an entry, respectively. Regarding the elements defined at a command level generally the same applies as described for an EditForm type of screen. This section shall briefly present the points that differ and therefore require special attention when implementing a NamedTask type of screen.
Form	In order to implement the screen's display format, it is necessary to use a DetailView.xml file. Regarding the definition method of the form display elements, the exact same apply as described for an EditForm type of screen.

Attention

To ensure a smooth update of the ESMobile app, it is necessary that the screen's command file is custom, in case the screen DetailView file is custom. This rule applies even if no intervention is necessary in the command file.

Data / Special settings

Regarding settings at a command level, in conjunction with those applicable to an EditForm type of screen, the following apply as well.

Property	Comment
IsTask	Select a task save status (true) or not (false).
TaskType	The task type with available values 1-Sales appointment and 3-Sales task. Note that, if for any reason we wish to use a NamedTask screen to implement another type of task, the InternationalID of the task type should be specified in this property.
SaveMenu	The save options. The typical options are: 1-Save, 2-Complete, & 3-Cancel.

Note that on iOS and in versions of the ESMobile app earlier than 3.10, using a NamedTask screen was the only option for task types ES.SAP-Sales appointment and ES.STK-Sales task. However, from version 3.10 onwards, where it is possible to use a DocForm screen for these task types, it is now strongly recommended to avoid using a NamedTask screen. The main advantages of the DocForm versus the NamedTask screen are:

- Screen implementation. Common screen implementation “rules” for the Task entity, for all task types.
- Other screen areas. Ability to utilize the additional functionality provided through the Actions.xml file of the form.
- Business Rules. Ability to utilize the additional functionality provided through the Business Rules tool.

The actions required to "switch" to the new method of managing tasks ES.SAP-Sales appointment and ES.STK-Sales task, are:

- Specify value 1-Yes in the AppTodoAsTask company parameter. Note that after changing the parameter value, the user must refresh the system cache.
- Run the data initialization process on the device. Note that at the end of the initialization process, the stand-alone tables of tasks ES.APP-Sales Appointment (ESTMAppointment table) and ES.STK-Sales Task (ESTMToDO table) are now inactive.

Informative screens

The informative screens are used to display data in report form. The best way to implement the report depends on whether the information to be displayed is being drawn from the local database, or by direct connection to the server, as well as based on the desired report display format.

Local grid report (DataGridReport)

Example SampleDataGridReport

The DataGridReport informative screen is used to implement a report that displays information as a table (Grid) by drawing data from the local database. The elements required to implement a DataGridReport type of screen are:

Element	Comment
Command	Using a ESDataGridCommand type of command is required.
Report	In order to implement the report's display format, it is necessary to use a ReportDefinition.xml file.

Next up in this section, detailed implementation instructions for DataGridReport type of screens will be given, using a specific example.

Report Data

Defining the DataGridReport screen data, as well as the command-report link, are possible by appropriately configuring the individual properties of the command file. The command file should be in the Commands sub-folder of the ESConfig or CSConfig area. Attention: the command file name should match the name of the command in the file.

With respect to the elements defined at a command order level (data, sorting & search), the exact same applies as described for a ListForm screen, except that the screen report file should be in a sub-folder of the ESReports or CSReports area.

Example

Let us say, for example, that we wish to implement a DataGridReport screen that displays some basic customer financial data by drawing information from the local database. This report must fulfill the following basic specifications:

- Include only active customers
- Be sorted alphabetically by customer name, but also allow sorting by customer balance.
- Allow search for entries based on customer name

Let's also assume that the report of this screen is SampleDataGridReport.

```
<SampleDataGridReport Assembly="Entersoft.Mobile.ESMobile"
                      Type="Entersoft.Mobile.ESMobile.ESDataGridCommand">
  <Params>
    <FormID Type="System.String" Value="SampleDataGridReport" />
    <Title Type="System.String" Value="Sample-DataGrid" />
    <Filter Type="System.String" Value="p.Inactive = 0 and ta.Inactive = 0" />
    <BaseSelect Type="System.String" Value="
          select …." />
    <SortBy Type="gr.entersoft.esmobile.SortBy">
      <Definition>
        <SortByField Caption="Name"
                     Expression="p.Name" Default="true" />
        <SortByField Caption="Balance"
                     Expression="x.CurrentBalance desc" Default="false" />
      </Definition>
    </SortBy>
    <SearchPanelFilter Type="System.Xml.XmlElement" Value="">
      <element type="FieldChooser" minimumInput="" id="1">
        <column name="p.NameEQUC*" title="Name" soundex="SoundexEQUC" />
      </element>
    </SearchPanelFilter>
    <SoundexMappingsID Type="System.String" Value="SoundexConversion" />
  </Params>
</SampleDataGridReport>
```

Display format

Defining the elements that determine the report's display format is possible by appropriately configuring the individual properties of the screen's ReportDefinition file. This file has the following default parts.

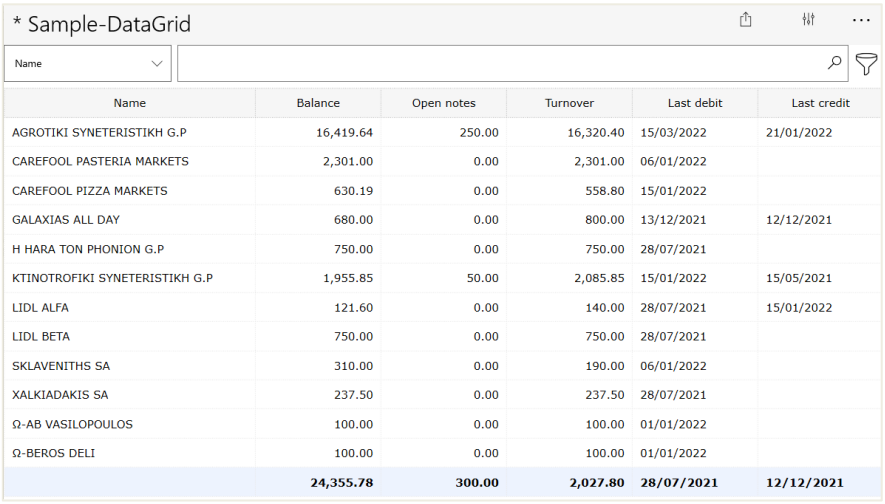
- CssStyle. Here the user configures the elements related to the display format of the report's areas and data. Note that the instructions on how to set up this part go beyond the present manual, and will therefore not be mentioned.
- ColumnSections. This part defines the elements displayed on the report, as well as the display position of each of them. It is possible to place all the elements to be displayed (Column) within a section (ColumnSection), but also split them into multiple sections.

The following applies to the basic properties of the ColumnSections part.

Property	Comment
ColumnSection	
Caption	The label displayed as the section title.
Column	
ID	The element SEQ.NO which must be unique.
Caption	The label displayed as the element title.
DataMember	The command column that corresponds to the element.
AggregateFunction	The function we want to apply to the element data. The function result is automatically displayed in the report's totals area.
Tag	By filling in this property, the report is enhanced with the drill down feature. Specify the command to be executed and its execution "specifications". The syntax should be of form Command#ParamName@DataSource, where • Command. is the command to be executed. • ParamName. is the name of the parameter. The available values are Current, Period, SalesPerson, UdfField1, UdfField2, UdfField3, UdfField4 & UdfField5, which supply the respective variables of the order to be executed. • DataSource. The supply column of the variable in question.
Weight	The width of the element which shall always be determined in proportion to the total elements to be displayed.

Example-1

Suppose, for example, that we want our DataGridReport screen to display customer information in a section: Name, Balance, Open notes, Turnover and Latest debit-credit.



* Sample-DataGrid

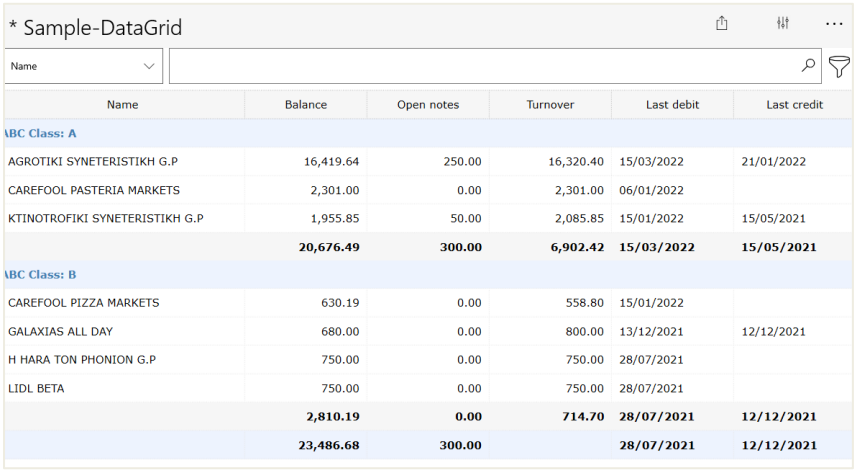
Name

Name	Balance	Open notes	Turnover	Last debit	Last credit
AGROTIKI SYNETERISTIKH G.P	16,419.64	250.00	16,320.40	15/03/2022	21/01/2022
CAREFOOL PASTERIA MARKETS	2,301.00	0.00	2,301.00	06/01/2022	
CAREFOOL PIZZA MARKETS	630.19	0.00	558.80	15/01/2022	
GALAXIAS ALL DAY	680.00	0.00	800.00	13/12/2021	12/12/2021
H HARA TON PHONION G.P	750.00	0.00	750.00	28/07/2021	
KTINOTROFIKI SYNETERISTIKH G.P	1,955.85	50.00	2,085.85	15/01/2022	15/05/2021
LIDL ALFA	121.60	0.00	140.00	28/07/2021	15/01/2022
LIDL BETA	750.00	0.00	750.00	28/07/2021	
SKLAVENITHS SA	310.00	0.00	190.00	06/01/2022	
XALKIADAKIS SA	237.50	0.00	237.50	28/07/2021	
Ω-AB VASILOPOULOS	100.00	0.00	100.00	01/01/2022	
Ω-BEROS DELI	100.00	0.00	100.00	01/01/2022	
	24,355.78	**300.00**	**2,027.80**	**28/07/2021**	**12/12/2021**

```
<ColumnSections>
  <ColumnSection ID="1">
  <Caption><![CDATA[]]></Caption>
    <Columns>
      <Column ID="1">
        <Caption><![CDATA[Name]]></Caption>
        <DataMember>Name</DataMember>
        <Weight>2</Weight>
      </Column>
      <Column ID="2">
        <Caption><![CDATA[Balance]]></Caption>
        <DataMember>CurrentBalance</DataMember>
        <AggregateFunction>Sum</AggregateFunction>
      </Column>
      <Column ID="3">
        <Caption><![CDATA[Open notes]]></Caption>
        <DataMember>OpenNotes</DataMember>
        <AggregateFunction>Sum</AggregateFunction>
      </Column>
      <Column ID="4">
        <Caption><![CDATA[Turnover]]></Caption>
        <DataMember>TurnOver</DataMember>
        <AggregateFunction>Avg</AggregateFunction>
      </Column>
      <Column ID="5">
        <Caption><![CDATA[Last debit]]></Caption>
        <DataMember>LastDebit</DataMember>
        <AggregateFunction>Max</AggregateFunction>
      </Column>
      <Column ID="6">
        <Caption><![CDATA[Last credit]]></Caption>
        <DataMember>LastCredit</DataMember>
        <AggregateFunction>Min</AggregateFunction>
      </Column>
    </Columns>
  </ColumnSection>
</ColumnSections>
```

Example-2

Let's say we wish to expand our DataGridReport screen to group data based on the customer's ABC class.



* Sample-DataGrid

Name

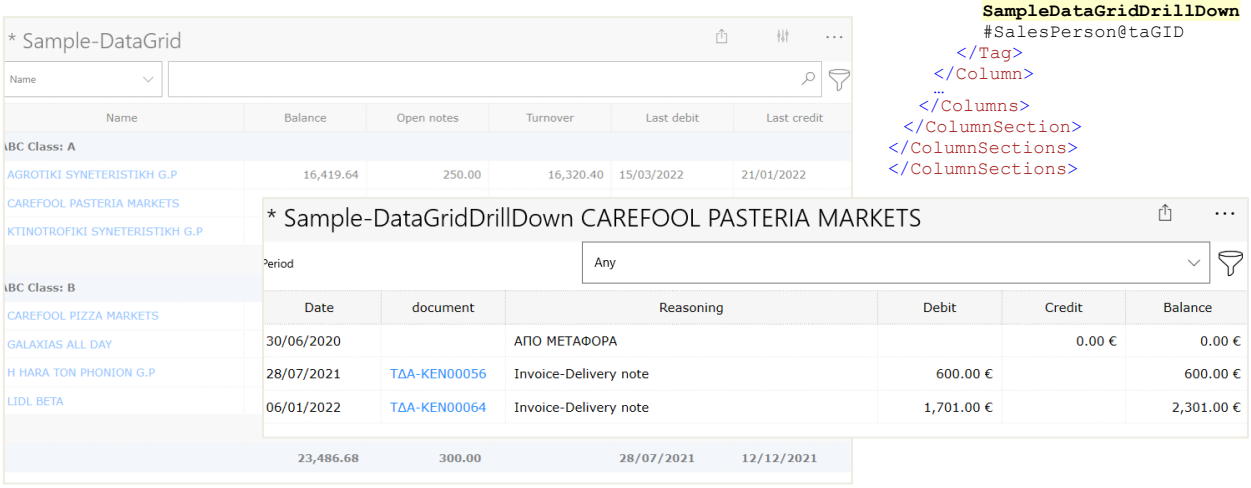
Name	Balance	Open notes	Turnover	Last debit	Last credit
ABC Class: A					
AGROTIKI SYNETERISTIKH G.P	16,419.64	250.00	16,320.40	15/03/2022	21/01/2022
CAREFOOL PASTERIA MARKETS	2,301.00	0.00	2,301.00	06/01/2022	
KTINOTROFIKI SYNETERISTIKH G.P	1,955.85	50.00	2,085.85	15/01/2022	15/05/2021
	20,676.49	**300.00**	**6,902.42**	**15/03/2022**	**15/05/2021**
ABC Class: B					
CAREFOOL PIZZA MARKETS	630.19	0.00	558.80	15/01/2022	
GALAXIAS ALL DAY	680.00	0.00	800.00	13/12/2021	12/12/2021
H HARA TON PHONION G.P	750.00	0.00	750.00	28/07/2021	
LIDL BETA	750.00	0.00	750.00	28/07/2021	
	2,810.19	**0.00**	**714.70**	**28/07/2021**	**12/12/2021**
	23,486.68	**300.00**		**28/07/2021**	**12/12/2021**

```
<ColumnSections>
  <ColumnSection ID="1">
  <Caption><![CDATA[]]></Caption>
    <Columns>
      …
      <Column ID="7">
        <Caption><![CDATA[ABC Class]]></Caption>
        <DataMember>ABCClass</DataMember>
        <GroupSeqNum>1</GroupSeqNum>
      </Column>
    </Columns>
  </ColumnSection>
</ColumnSections>
```

Example-3

Suppose, for example, that we want to expand our DataGridReport screen to be able, by focusing on an entry, to drill down on a DataGridReport screen that displays the current customer's tab. Suppose also that this screen's command is SampleDataGridDrillDown.

```
<ColumnSections>
  <ColumnSection ID="1">
  <Caption><![CDATA[]]></Caption>
    <Columns>
      <Column ID="1">
        <Caption><![CDATA[Name]]></Caption>
        <DataMember>Name</DataMember>
        <Tag>
          SampleDataGridDrillDown
          #SalesPerson@taGID
        </Tag>
      </Column>
      …
    </Columns>
  </ColumnSection>
</ColumnSections>
</ColumnSections>
```



E-mail screen

In DataGridReport screens it is possible to automatically write an E-mail with a pdf file attached, which shows the current report's details. To utilize this feature, no additional settings are required, beyond configuring the DataGridReport command properties associated with auto-populating e-mail recipients (MailRecipientSQL, MailCCRecipientSQL & MailBCCRecipientSQL properties).

Online reports

The online reports are used to implement a report that draws information though direct connection to the server. The way an online report is implemented varies depending on which application is selected as the report call tool, with available options the ESMobile application (HTMLReport) or the ESAnalyzer application (HybridReport).

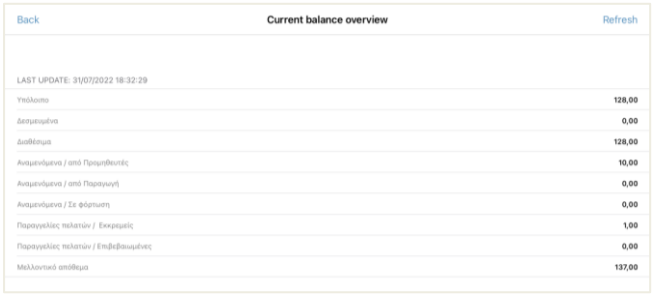
ESMobile App (HTMLReport)

The HTMLReport informative screen is only available on iOS. The screen data is defined at an EBS application level and by implementing the relevant EBS scroller. The report display format is predefined and occurs from the command type used to call the report with. The available options include displaying the details of a specific entry as a card (Card) displaying an entries list as a table (Grid). Regarding the definition method and the available properties of the HTMLReport screen, the following apply:

Element	Comment
Command	HTMLReport of type Card Using an InfoCommand type of command is required. In the Scroller property, the area / name of the EBS scroller are indicated, while property ParamName1 indicates the name of the execution parameter for the EBS scroller. Note that, if we want to call an online report on a selected entry, the EBS scroller should have a parameter that corresponds to the unique identification key of the entity, from which the online report is called. HTMLReport of type Gid Using an HtmlScrollerCommand type of command is required. In properties ScrollerGroup & ScrollerID, the area & name of the EBS scroller are indicated, while property ParamName indicates the name of the execution parameter for the EBS scroller. Note that, if we want to call an online report on a selected entry, the EBS scroller should have a parameter that corresponds to the unique identification key of the entity, from which the online report is called.

Example-Card

Suppose that we wish to implement an HTMLReport screen that displays the total stock availability for the current item.

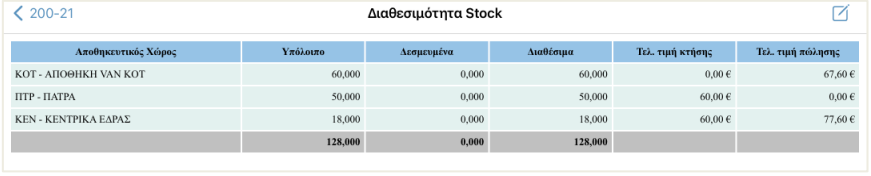



```
<InfoCommand_Item Assembly="Entersoft.Mobile.ESMobile"
        Type="Entersoft.Mobile.ESMobile.InfoCommand">
  <Params>
    <Title Type="System.String" Value="Current balance"/>
    <ParamName1 Type="System.String" Value="ISUDGID" />
    <Scroller Type="System.String"
              Value="ESTMPDAMap\ESTMPDAMapItem" />
  </Params>
</InfoCommand_Item>
```

Example-Grid

Suppose that we wish to implement an HTMLReport screen, that displays the total stock availability for the current item per warehouse.

```
<Html_ESItemBalanceStock Assembly="Entersoft.Mobile.ESMobile"
            Type="Entersoft.Mobile.ESMobile.HtmlScrollerCommand">
  <Params>
    <Title Type="System.String" Value="Stock availability" />
    <AutoExecute Type="System.Boolean" Value="true" />
    <ParamName Type="System.String" Value="ISUDGID" />
    <ScrollerGroup Type="System.String" Value="ESMobileQueries" />
    <ScrollerID Type="System.String" Value="ESItemBalanceStock" />
  </Params>
</Html_ESItemBalanceStock>
```



Αποθηκευτικός Χώρος	Υπόλοιπο	Δεσμευμένα	Διαθέσιμα	Τελ. τιμή κτήσης	Τελ. τιμή πώλησης
ΚΟΤ - ΑΠΟΘΗΚΗ VAN ΚΟΤ	60,000	0,000	60,000	0,00 €	67,60 €
ΠΤΡ - ΠΑΤΡΑ	50,000	0,000	50,000	60,00 €	0,00 €
ΚΕΝ - ΚΕΝΤΡΙΚΑ ΕΔΡΑΣ	18,000	0,000	18,000	60,00 €	77,60 €
	128,000	0,000	128,000		

Note that on iOS platforms and versions of the ESMobile app earlier than 5.0, using an HTMLReport type of screen was the only option for online reports. However, from version 5.0 onwards, where it is possible to use a HybridReport screen, it is now strongly recommended to avoid using an HTMLReport screen. The main advantages of the HybridReport versus the HTMLReport screen are:

- Report parameters. Added a stand-alone area with the report execution parameters, as well as the ability to use a parameter of any type (time period, selection list, multiple selection list, etc).
- Report display format. Maintained the settings defined at an EBS scroller level that concern the formating of the report details (column width, content alignment, number format, etc.).
- Data display types. In addition to the data display types supported by the ESMobile app (Grid & Card), the following types are also supported: Chart, Treemap, Pivot, Map & Combo.

Detailed instructions are given in the following section regarding activation of the ESAnalyzer application as the online reports call tool, as well as the implementation of HybridReport screens.

ESAnalyzer application (HybridReport)

Example SampleHybridReportGRID & SampleHybridReportPIVOT

The requirements that need to be met - at an installation level - in order for the ESAnalyzer to be used as a tool to call the online reports, are:

- Be able to execute the application Entersoft Online reports for Mobile Applications (ESAnalyzer).
- A sub-folder to exist in area HybridWebReports of the application, with the files of the current ESAnalyzer version, which, at this stage, is the 3.0.10.
- The relevant public query to exist in area ESPublicQueries or CSPublicQueries of the EBS application, for each EBS scroller that concerns an online report.
- The following mobile parameters must have been filled in accordingly. Note that, specifically on iOS platforms and in order to ensure compatibility with previous versions, by leaving the contents of these parameters empty, “switching” to the of ESAnalyzer application is not activated.

Mobile parameter	Value
HybridOnlineReports_BridgeID	…
HybridOnlineReports_Host	api.entersoft.gr
HybridOnlineReports_SubscriptionID	…
HybridOnlineReports_SubscriptionPassword	…
HybridOnlineReports_Version	3.0.10

The details required to implement a HybridReport type of screen are:

Element	Comment
Command	Using a HybridReportsCommand type of command is required. Note that, for reasons of compatibility with previous 5.0 versions of ESMobile App, it is possible to use command typeInfoCommand &. HtmlScrollerCommand, for the implementation of which the exact same apply, as described in scetion HTMLReport.
Report	In order to implement the report's display format, it is necessary to use a json file. Specifically when using a command of type HybridReportsCommand, defining the json file is mandatory, as the EBS scroller area and name are specified in properties GroupID & FilterID of this very file.

Report Data

The report data is defined at an EBS application level and by implementing the relevant EBS scroller. Keep in mind that it is also necessary to create the corresponding public query. As mentioned above, in the case of the HybridReport screen, the EBS scroller is defined in the screen's json file, so the command is only used to link the command to the report. The command file should be in the Commands sub-folder of the ESConfig or CSConfig area. Attention: the command file name should match the name of the command in the file.

Property	Comment
Title	The label displayed as the HybridReport screen title.
FormID	The folder of the ESReports or CSReports area, where the report’s json file related to the screen is located. Keep in mind that the folder and json file names should match.

Display format

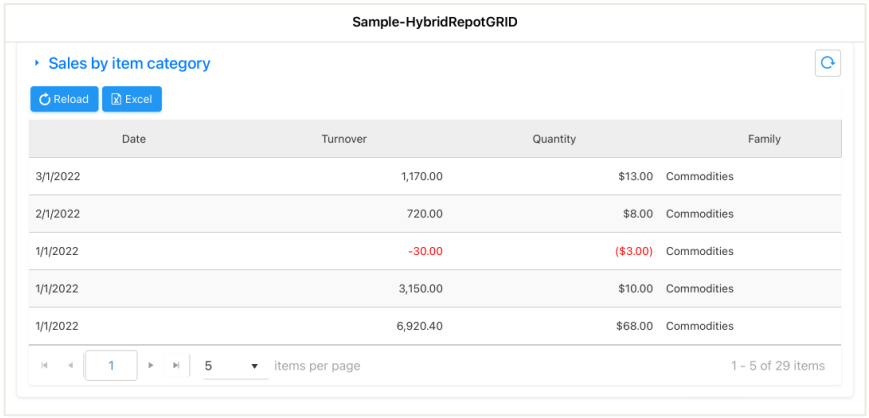
The report display format is defined by appropriately configuring property ESUIType of the screen's json file, with available values: ESGrid, ESCard, ESChart, ESTreemap, ESPivot, ESMap & ESCombo. The further json file settings vary, depending on the display format selected. Note that the json file detailed syntax instructions exceed the limits of the present manual and are provided in the ESAnalyzer application manual.

Example-Grid

Let us say, for example, that we want to implement a HybridReport screen that displays the sales quantity & turnover sizes per item group as a Grid.

```
<SampleHybridReportGRID Assembly="Entersoft.Mobile.ESMobile"
      Type="Entersoft.Mobile.ESMobile.HybridReportsCommand">
  <Params>
    <Title Type="System.String" Value="Sample-HybridRepotGRID" />
    <FormID Type="System.String" Value="SampleHybridRepotGRID" />
  </Params>
</SampleHybridReportGRID>
```

```
"Title": {
  "en": "Sales by item category",
        },
        "Description": "",
        "ESUIType": "esGrid",
        "esDef": {
          "GroupID": "ESWebManager",
          "FilterID": "SalesCubeByItemCategory",
          "PQOptions": {
                "ServerPaging": false,
                "PageSize": 5,
                "AutoExecute": true
}
```

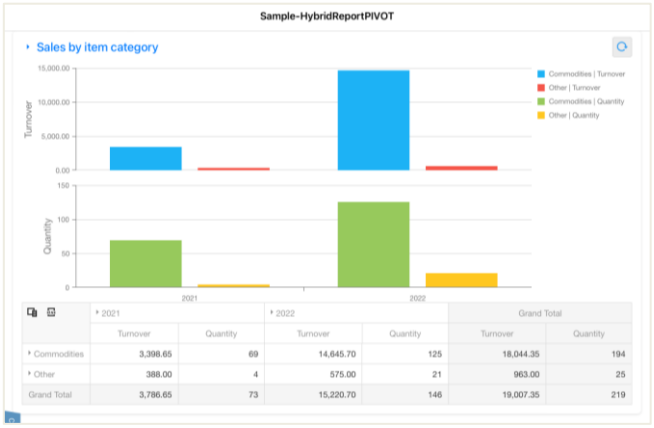


Example-Pivot

Let us say, for example, that we want to implement a HybridReport screen that displays the sales quantity & turnover sizes per item group as a Pivot.

```
<SampleHybridReportPIVOT Assembly="Entersoft.Mobile.ESMobile"
      Type="Entersoft.Mobile.ESMobile.HybridReportsCommand">
  <Params>
    <Title Type="System.String" Value="Sample-HybridRepotPIVOT" />
    <FormID Type="System.String" Value="SampleHybridRepotPIVOT" />
  </Params>
</SampleHybridReportPIVOT>
```

```
"Title": {
  "en": "Sales by item category",
},
        "Description": "",
        "ESUIType": "espivot",
        "PQOptions": {
          "AutoExecute": true
        },
        "esDef": {
          "GroupID": "ESWebManager",
          "FilterID": "SalesCubeByItemCategory",
          "UIOptions": {
                "theme": "Bootstrap",
                "enableChart": true,
                "autoBind": true,
                "cubeDef": {
                "pivotOptions": {
                }
        }
```



Circular Gauge (CircularGauge)

The Circular Gauge (CircularGauge) screen is used to implement a report that displays information as a percentage index, by drawing data from the local database. The CircularGauge screen can function either as a stand-alone screen, or as a distinct section of a Dashboard screen. The details required to implement a CircularGauge type of screen are:

Element	Comment
Command	Using special command type CircularGaugeCommand is required. Regarding the elements defined at a command level (data, sorting & searching), the exact same apply as described for a ListForm screen. However, the special feature of this type of command is element GaugeParams, through the individual properties of which the display format of the CircularGauge screen can be determined.

Regarding the definition method and the available properties of GaugeParams, the following apply:

Area	Property / Comment
Scale data	• StartAngle-SweepAngle. Configure the gauge to a full circle, semicircular, or quarterly index. • StartValue-EndValue. The gauge range. • Interval-MinorTicksPerInterval. The scale intervals. • RimColor-RimThickness. The color-thickness of the scale. • LabelOffset-LabelColor-LabelFontSize. The location and display format of the scale labels.
Scale areas	• StartValue-EndValue. The area range. • Offset-Color-Thickness. The location and display format of the area.
Scale indexes	• Value. The value expressed by the index. • LengthFactor. The length of the index needle. • Color-Thickness. The display format of the index needle. • KnobColor-KnobRadius. The color-size of the index knob.

Home dashboard screen (HomePage)

The Home dashboard screen (HomePage) is used as an information overview tool, by drawing information from the local database, its main feature being that it enables the “merging” of all available display formats regarding data (list, graph & circular gauge). The HomePage screen is always a stand-alone, i.e. a screen that isn’t linked to a specific list of entries.

The details required to implement a HomePage type of screen are:

Element	Comment
Command	Using a DashboardCreatorCommand type of command is required. Regarding the elements defined at a command level (data, sorting & search) the exact same apply as described for screen type ListForm.
Form	In order to implement the screen's display format, it is necessary to use an AdvancedList.xml and an ExtraLayoutParams.xml file Regarding the definition method for these files, the exact same apply as described for a ListForm screen, but with the limitation that in order to define the tabs-segments it is necessary to use ESTabs section of the ExtraLayoutParams file.

A classic example of implementation for this screen type is the screen that appears via option My insight on the main menu of the ES-SFA & ES-xVan applications.

Special screens

This section shall present ESMobile application screens, whose both functionality and display format are relatively pre-defined, therefore no special configuration options are provided.

Main menu

Designing the ESMobile application main menu is possible by using the special file Home.xml of form HomeForm. Thought the Home file details, it is possible to adjust the main menu structure and content, so that it better meets to the user navigation needs. The main menu consists of three default element types:

- Options group. The options group element (Group) is the first level of the main menu and is used to compile a set of similar options under a common title.
- Sub-menu. The options sub-menu element (Submenu) is the second level of the main menu and is used to compile a set of similar options under a common title. By focusing on an element of this type, the commands to be executed are displayed as a selection list.
- Command. The is option element (Command) is the third and last level of the main menu. By focusing on an element of this type, the user is redirected to the ESMobile app screen that refers to the element in question.

Regarding the Home file configuration, the only option is to change the elements it contains (add or remove element, rename element, etc.). Regarding the definition method and the available properties per element type, the following apply:

Property	Comment
Group	
Title	The label displayed as the element title.
ID	Exclusively refers to the product translation process (Translation key).
Submenu	
ID	Exclusively refers to the product translation process (Translation key).
System	Exclusively concerns the default Home file of the ESMobile application, where the Submenu element “Synchronization” has been flagged as “systemic”. The result of this setting is that the ability to hide this element has been completely removed.
Title	The label displayed as the element title.
Icon	The icon of the element.
Command	In this case, the property must be empty.
Command	
ID	Exclusively refers to the product translation process (Translation key).
System	Exclusively refers to the default Home file of the ESMobile application, where the Command element “Settings” has been flagged as “systemic”. The result of this setting is that the ability to hide this element has been completely removed.
Title	The label displayed as the element title.
Icon	The icon of the element. Note that no icon is displayed for elements that are incorporated under Submenu elements.
Command	The command to be executed.
PopToRoot	Flags the element as related to the main screen (true) or as an addition to the already existing “pile” of screens (false). It is recommended, for improved ESMobile performance purposes, to avoid the unconsidered use of the “false” value.

Attention

From version 4.0 onwards of the ESMobile app, to make it easier to access data synchronization processes, all the - Synchronization button actions have been transferred to the Calendar screen, to the corresponding main menu options. At the same time, the “Settings” screen was expanded to include all other Calendar screen control buttons.

Button	Settings screen
Information	Maintenance tasks/ Information
Connectivity	Connectivity
Settings	Version information/ Application parameters

Calendar

The Calendar screen is used exclusively to display Task entity entries as a label & pin on the map. The screen implementation requires the using a FormCreatorCommand type of command, which must be named TaskListform.xml. The special feature of the Calendar screen is that it is also necessarily accompanied by an "appendix" (CalendarTaskSettings file) located in the Settings sub-folder of the area with the Calendar form files. Details related to the screen's display format and its functionality can be configured using the CalendarTaskSettings file. This section shall present this file's properties.

Display format

Regarding the configuration of the CalendarTaskSettings file details, related to the Calendar screen's display format, the following apply.

Property	Comment
DefaultTab	The default Calendar screen with available values: 0-Day, 1-Week, 2-Month & 3-List. Note that the List tab is only available for iOS.
DisableDayTab	Hide the "Day" tab (true) or not (false).
DisableWeekTab	Hide the "Week" tab (true) or not (false).
DisableMonthTab	Hide the "Month" tab (true) or not (false).
DisableListTab	Hide the "List" tab (true) or not (false). Concerns the iOS platform only.
DisableMap	Hide the map (true) or not (false).
TimeInterval	The time interval (in minutes) of "segmentation" of a day's hours. Can only specify an integer.
TimeFormat	The display format of a day's hours.
VisitPlanTrayWidth	The width (in percentage) of bulk import tasks screen. Its value can range from 0 to 1, where value 1 corresponds to the 100% of the screen width. Concerns the iOS platform only.
BalloonTitle	The information that appears as content on a label & pin. The syntax should be in form Column1-Column2-Column… where Column is the current select query column of the TaskListForm command.

The background color and label text can also be adjusted. To utilize this feature, it is necessary to:

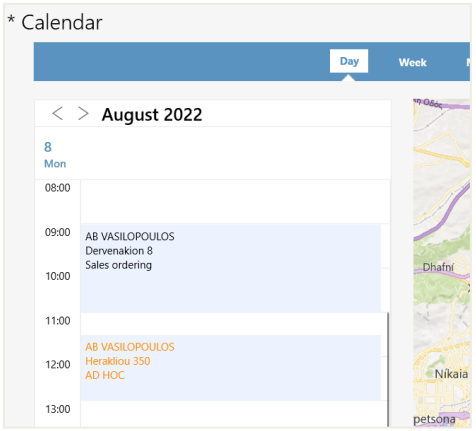
- Indicate the desired color in the "background color" & "text color" fields of the task type. Specifying the color is possible from the back office and by using the corresponding HEX number.
- Have, in the TaskListForm command select query, columns BackgroundColor & TextColor

Finally, it is also possible to differentiate the color of the background or text by condition. To utilize this feature, simply adjust the BackgroundColor or TextColor columns of the TaskListForm command select query so that they describe the desired condition.

Example

Suppose that we wish the label's default text color to be black, and specifically for the case of ad hoc task to be orange.

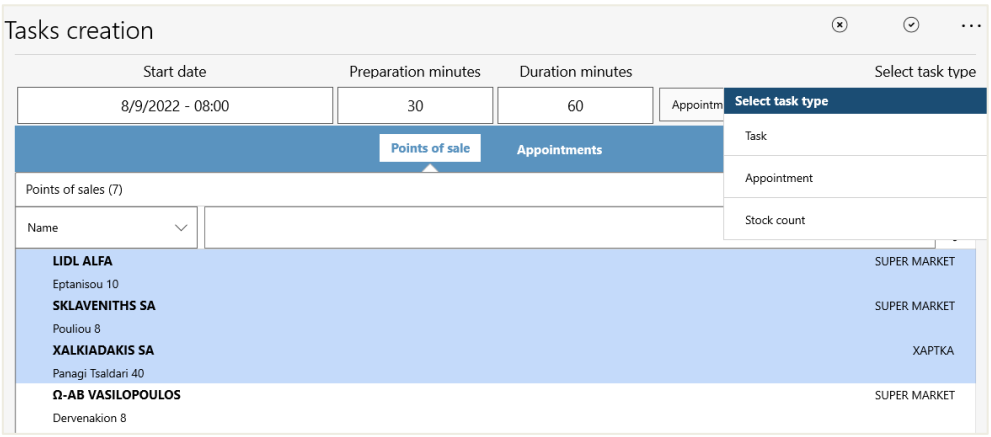
```
<TaskListForm Assembly="Entersoft.Mobile.ESSalesForce"
     Type="Entersoft.Mobile.ESSalesForce.FormCreatorCommand">
  <Params>
  <FormID Type="System.String" Value="CalendarTasksForm" />
  <BaseSelect Type="System.String" Value="
                select ...,
                case when task.UserID=r.UserID then 'FF8C00'
                else tt.CalendarTextColor end TextColor"/>
  </Params>
</TaskListForm>
```



Functionality

Bulk import tasks

The -New button on the Calendar screen allows the user to bulk import tasks by selecting alternative scenarios of entry selection from a point of sales list or an appointments list. Beyond the task creation time frames (start date-time, preparation & duration minutes), it is also possible to select the task type to be imported. The available task types can be specified from the back office and by adjusting the “Show in Calendar” field with available values: 0-No, 1-Show without time commitment & 2-Show and time commitment. Regarding the configuration of the CalendarTaskSettings file details, related to the bulk import tasks, the following apply.



Property	Comment
NewAppFromSiteVisitPlanCommand	The command that triggers the task import by selecting from a point of sales list. Using special command typeSQLCommand is required. The default command from the ESMobile application is NewAppFromSiteVisitPlan.
NewAppFromAppVisitPlanCommand	The command that triggers the task import by selecting from an appointments list. Using special command typeSQLCommand is required. The default command from the ESMobile application is NewAppFromAppVisitPlan.
VisitPlanCommand	Specify different alternative entry selection scenarios. Using special command type VisitPlanCommand is required. The default command from the ESMobile application is VisitPlanCommand.

Note that

Especially on the iOS Platform, enabling this functionality requires that mobile parameter Appointment_creator_enable is set to value 1-Yes. Note that in order to be able to select a task type to import, the AppTodoAsTask company parameter value must also have value 1-Yes.

Bulk import tasks

Specifically for the iOS platform and for compatibility purposes with earlier versions of the ESMobile app, a limited flexibility scenario bulk import tasks is still in place. The main limitation of this scenario is that the process is only available for the Appointment, Task, Collection & Service task types. Regarding the configuration of the CalendarTaskSettings file details related to this scenario, the following apply.

Property	Comment
NewAppointmentEnabled	The Appointment task type is available in the bulk import process (true) or not (false).
AppointmentPersonList	Concerns the display of the entries selection list. Use of an InvFromCreatorCommand-type command is required. The default command from the ESMobile application is AppointmentSiteInvForm.
AppointmentNewCommand	The command that triggers an appointment to be imported in case only one entry has been selected. The default command from the ESMobile application is AppointmentSiteNewForm.
NewMultiAppointment	The command that triggers appointments to be imported in case multiple entries have been selected. Using special command typeSQLCommand is required. The default command from the ESMobile application is NewMultiAppointment.

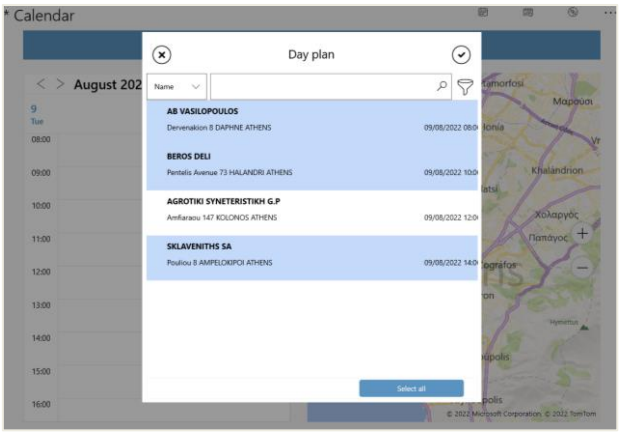
* These properties concern the Sales appointment task type. A matching set of properties also exists for the Sales task (ToDo), Collection & Service task (SOS, ROS & PRM) types.

Note that

To activate this functionality, both the AppTodoAsTask company parameter and the Appointment_creator_enable mobile parameter should be have value to 0-No.

Appointment plan

The -Plan button of the Calendar screen allows the user to bulk import appointments based on a default plan. Regarding the configuration of the CalendarTaskSettings file details related to this process, the following apply.



Property	Comment
NewAppFromVisitPlanCommand	Triggers appointment importing. Using special command typeSQLCommand is required. The default command from the ESMobile application is NewAppFromSiteVisitPlan.
SVisitPlanCommand	Concerns the display of the entries selection list. Use of an InvFromCreatorCommand-type command is required. The default command from the ESMobile application is VisitCalendarListForm. Note that filling in this property results in adding the -Plan button on the upper right of the Calendar screen.

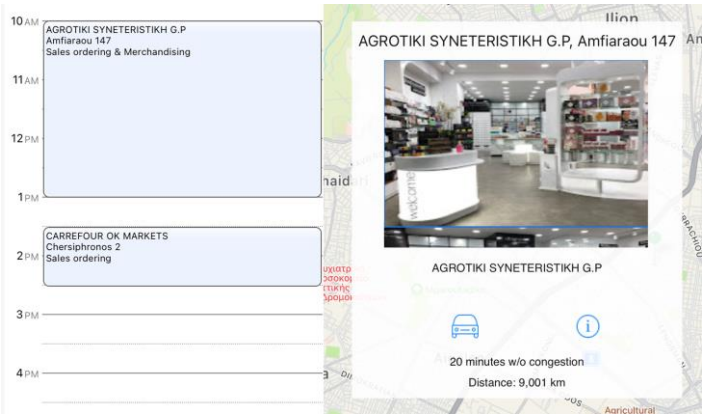
Bulk copy tasks

The -Copy button on the Calendar screen allows the user to bulk copy tasks by selecting entries from a list of tasks that meet the default interval criterion. Regarding the configuration of the CalendarTaskSettings file details related to this process, the following apply.

Property	Comment
CopyAppListFormCommand	Concerns the display of the entries selection list. Use of an InvFromCreatorCommand-type command is required. The default command from the ESMobile application is CopyAppListForm. Note that filling in this property results in adding the -Copy button on the upper right of the Calendar screen.
CopyAppFromAppCommand	Triggers appointment importing. Using special command typeSQLCommand is required. The default command from the ESMobile application is CopyAppFromApp.
CopyAppCheckForHolidays	Enable checks for holiday days (true), or not (false).
CopyAppCheckForConflicts	Enable checks for overlapping time limits (true), or not (false).

Pin details

By focusing on a map pin, a pop-up screen appears, with the details of the selected point of sales. In case ES.PHOTO-Photo type tasks exist with the “Point of sales” attribute, the screen is enhanced with photos of the point.



At the same time, it’s possible to display the distance in cm between the user's current position and the selected point of sales. Specifically for the UWP & Android platforms, this information is available through a specific Google service (Distance Matrix). In order to display it, the service’s activation key should be assigned in company parameter “Password for use of Google mapping service” (GoogleKey).

Finally, pressing the ⓘ-Information button redirects the user to the Dashboard screen of the point of sales, while pressing the 🚗-Routing button redirects them to a specialized Maps application, with the starting and destination points automatically filled in.

Attachments

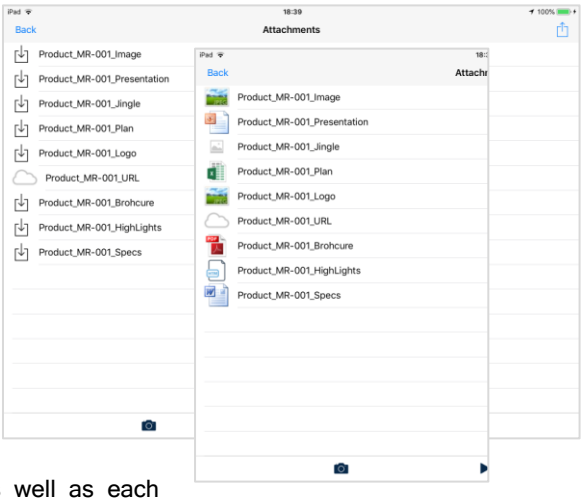
The Attachments screen is used to manage attachments on a file entry. From the attachment management screen, it is possible to download attachments from the back office, to attach files from the device and to preview the contents of an attachment. The attachments functionality is available for the entities: Item, Person-Customer-Address, Task, Document & Expense list.

Note that

- In order to be able to send to the server attachments that are primarily added by the user of the device, an automatically generated counter must be set from the back office for the attachments entity.
- In order to be able to manage attachments as non-blob, the following settings are required:
  - ✓ Set company parameter “Save attachments to server” (SRVISBLOB) to value Yes.
  - ✓ Set area …ESMobileData\ESSync\Memos of the IIS Server to company parameter "Folder on Application Server for saving attachments" (SRVRELATEDOCSPATH).

  These settings ensure that both non-blob attachments from the back office can be downloaded, as well as that device attachments can be sent to the back office as non-blob.

Download attachments



Access to the full, regardless of entity, attachment management list is provided via the “Attachments” option of the “Synchronization” menu. Furthermore, by pressing the -Attachments button of an entity’s Dashboard screen (e.g. Item entity), a list of all attached documents related to the selected entry appears. Regardless of the application part from where the user will call the attachment management screen, pressing the -Actions button, allows the user to download the attachment files from the back office to the memos application folder. When the download process is completed, the icon marking the documents to be downloaded (icon) is also automatically replaced with an icon that corresponds to the specialized type of each document. The available document types to download, as well as each individualized, by document type, icon, are:

DOC	PDF	WAV
XLS	HTML	URL address
PPT	JPG or PNG	Other

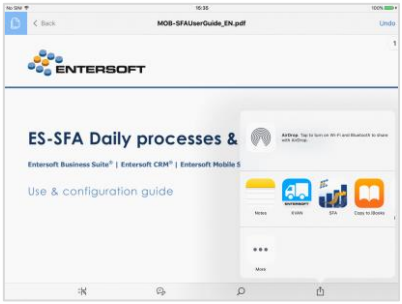
Attaching a file

By pressing the corresponding buttons-options of the attachment management screen, it is possible to add an attachment of type image or audio.

- Image. The image-type file is attached either by selecting an existing photo or by taking a new photo. When the user is done taking a photo it is also possible to fill in some information (Description, Category & Group) on the attachment. Note that specifically for iOS platforms, by setting mobile parameter Memo_Disable_FolderButton to value 1-Yes, the option to select an existing photo is disabled.
- Audio. Attaching an audio type file is only possible by performing an audio recording.

Attach other file types

Specifically for iOS platforms, it is also possible to attach a file of another type through the interface of the corresponding, to the file type, application. In this case, firstly activate the preferred application (e.g. Acrobat app), focus on the file to be attached and press the “Open in…” action of the “Actions” button. Then, by selecting the representative icon of the ESMobile application from the screen, a list with the available ESMobile application screens is displayed. Finally, by focusing on the preferred screen, a list of its detailed entries is displayed, from which the user selects the entry to which they wish to attach the file.



The ESMobile ListForm screens tin which this feature is available are default. However, by means of an appropriate setting, it is also possible to extend the default list of screens. The following applies regarding the necessary settings.

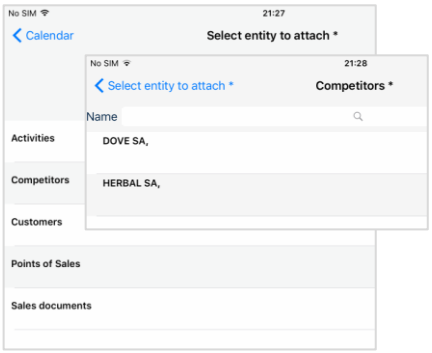
- List configuration. The screen list can be configured in the OpenUrlListForm command. To add a new screen to the list, it is necessary to extend this command’s select query.
- Enable extension. The functionality on the new screen can be activated by adjusting the EntityType property at a ListForm command level, with available values: 0-Task, 3-Document, 6-Person & 7-Address, and the EntityGIDfield property, in which the user should assign the select query column of the ListForm command, which is the entry’s unique identification key.

Example

Suppose, that we wish to also enable the attachment of other file types for the “Competitors” list (command CompetitorListForm).

```
<OpenUrlListForm Assembly="Entersoft.Mobile.ESMobile"
  Type="Entersoft.Mobile.ESMobile.ListFormCreatorCommand">
  <Params>
    <FormID Type="System.String" Value="OpenUrlListForm" />
    <Title Type="System.String" Value="Select entity to attach"/>
    <BaseSelect Type="System.String" Value="
          select 'CustomerListForm' ID, 'Customers' Name
          union
          …
          union
          select 'CompetitorListForm' ID, 'COMPETETORS' Name"/>
    <OrderBy Type="System.String" Value="Name" />
  </Params>
</OpenUrlListForm>
```

```
<CompetitorListForm Assembly="Entersoft.Mobile.ESMobile"
    Type="Entersoft.Mobile.ESMobile.ListFormCreatorCommand">
  <Params>
    <FormID Type="System.String" Value="CompetitorListForm"/>
    <Title Type="System.String" Value="Competitors" />
    …
    <ParamList Type="System.Collections.Hashtable">
      <EntityType Type="System.Int16" Value="6" />
      <EntityGIDfield Type="System.String" Value="PersonGID"/>
    </ParamList>
  </Params>
</CompetitorListForm>
```



Manage attachment

By focusing on a specific entry of the attachments management screen, the user is redirected to the attachment overview screen, depending on the document type. Here it is also possible to send the document via email or preview it via the interface of another application (e.g. Acrobat application).

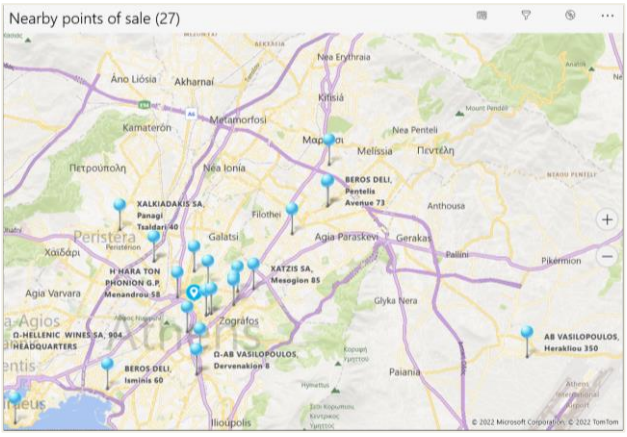
An attachment can also be deleted from the attachments management screen. The delete button appears by selecting the attachment to be deleted and drifting to the left. More specifically, for the iOS platform, the middle "Delete" button should have been pressed first.

Note that

Deleting an attachment results in (a) the file being deleted from the device's Memos folder and (b) the corresponding entry being deleted from the device's ES00Attachment table. Of course, in case the attachment has been sent to the back office, it must be ensured that it is deleted from the back office.

Nearest customers

The Nearest customers screen is used to display in the form of list, as well as a map pin, the points of sales that are located within a specific distance from the device user's current location. The default km radius can be specified in the relevant field of the "Settings" screen (screen: Settings/ Services profile/ Map) but, by from this specific screen, it is also possible to limit or expand the radius. At the same time, it is possible to directly call, from the list of points of sales that meet the radius criterion, the bulk import appointments process.



The Nearest customers screen is implemented using special command type NearestCustomersCommand, where the data & display format of the screen are default.

Data / Special settings

It is possible, by means of an appropriate setting, to differentiate the default data to be displayed. The following applies regarding the necessary settings.

- Screen configuration The data to be displayed can be designated using a "classic" ListForm screen. However, in order to be able to reduce the data based on the km distance it is necessary, firstly that the select query of the command has columns Latitude & Longitude and that command property Filter includes the variables named [LATITUDE], [LONGITUDE] & [RADIUS].

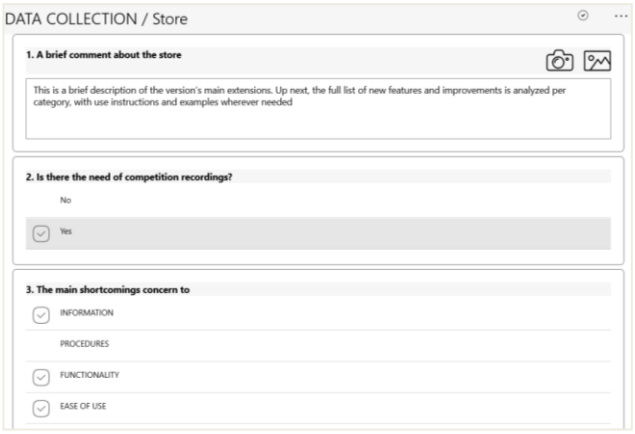
```
<MyNearestSiteListForm Assembly="Entersoft.Mobile.ESMobile"
                       Type="Entersoft.Mobile.ESMobile.ListFormCreatorCommand">
 <Params>
  <Filter Type="System.String" Value="
            p.Inactive = 0 and
            ESDistance([LATITUDE],[LONGITUDE],s.Latitude,s.Longitude) &lt;= [RADIUS]"/>
  <ESQueryID Type="System.String" Value="SiteList" />
 </Params>
</MyNearestSiteListForm>
```

- Screen activation To activate this screen, simply specify the ListForm command in the NearestSiteListCommand property of special command type NearestCustomersCommand.

```
<NearestCustomersCommand Assembly="Entersoft.Mobile.ESSalesForce"
                         Type="Entersoft.Mobile.ESSalesForce.NearestCustomersCommand">
 <Params>
   <NearestSiteListCommand Type="System.String" Value="MyNearestSiteListForm" />
 </Params>
</NearestCustomersCommand>
```

Questionnaire

The Questionnaire screen is used as a tool to collect predefined information, either from company customers or anonymous third parties.



The Questionnaire screen is implemented using special command type NewQuestionnaireCommand, where the data & display format of the screen are default.

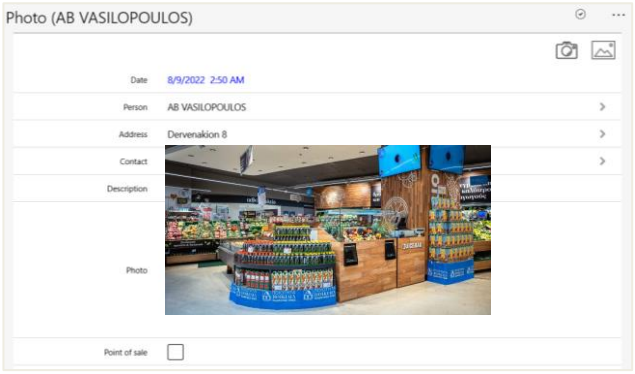
Menu button (ActionsCommand)

The only option to expand the Questionnaire screen is to add menu button - Actions. This extension covers the need for immediate action execution this screen's interface. The desired actions to be executed appear as distinct options in the menu button.

To configure the -Actions menu button, the exact same apply as described in the corresponding section for screen type EditForm.

Photo capture

The Photo capture screen is used to capture in image format information collected from the company's customers.



The Photo capture screen is implemented using special command typePhotoCommand, where the data & display format of the screen are default and changing them is not possible. Note here that the Photo capture screen data is stored in the Task entity, using ES.PHOTO-Photo task type, while the image files are stored in the device Photos folder, The task-image link is made through the unique identification code (GID field) of the task entry.

Bulk management screen (ModalForm)

Example SampleModalForm

The bulk management screen (ModalForm) displays data as a list and is used as a tool for bulk action execution on the selected entries of a list. Note that the action to be performed is called by pressing the -Select button, displayed on the top-right of the ModalForm screen.

The elements required to implement a ModalForm type of screen are:

Element	Comment
Command	The user is required to use an InvFormCreatorCommand type of command Regarding the elements defined at a command level (data, sorting & searching), overall the same applies as described for a ListForm type of screen. This section shall briefly, as well as by means of a specific example, present both the points that differ and therefore require special attention when implementing a ModalForm type of screen.
Form	In order to implement the screen's display format, it is necessary to use an AdvancedList.xml file. Regarding the definition method of thedata area display elements, the exact same apply as described for a ListForm type of screen.

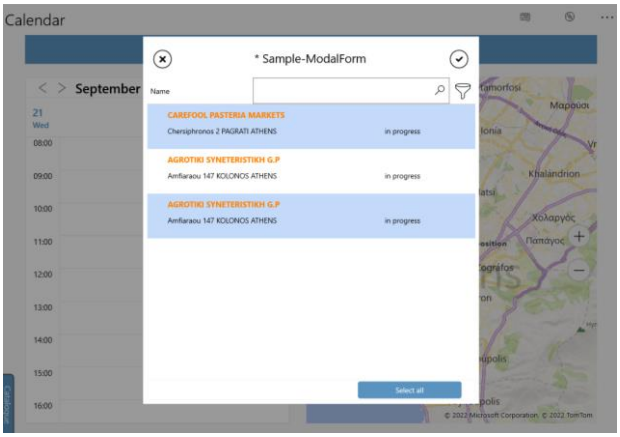
Example

Suppose that we wish to implement a screen that displays open tasks, while also allowing the task “Status” field to be bulk updated. Suppose also that the bulk update action has been implemented through the SampleModalFormAction command.

```
<SampleModalFormAction Assembly="Entersoft.Mobile.ESMobile"
                       Type="Entersoft.Mobile.ESMobile.SQLCommand">
  <Params>
    <SQL Type="System.String" Value="
                            Update ESTMTask
                            set State = 2
                            where GID = '[CURRENT]'"/>
    <Current Type="System.String" Value="" />
    <AskMessage Type="System.String" Value="Update status on selected tasks?" />
    <RefreshParent Type="System.Boolean" Value="True" />
    <OnStartValidation Type="System.String" Value="" />
  </Params>
</SampleModalFormAction>
```

```
<SampleModalForm Assembly="Entersoft.Mobile.ESMobile"
                         Type="Entersoft.Mobile.ESMobile.InvFormCreatorCommand">
  <Params>
    <FormID Type="System.String" Value="SampleModalForm" />
    <Title Type="System.String" Value="Sample-ModalForm" />
    <Filter Type="System.String" Value="tt.InternationalID in ('es.stk')" />

    <Modal Type="System.Boolean" Value="true" />
    <MultiSelect Type="System.Boolean" Value="true" />
    <SelectaAllEnabled Type="System.Boolean" Value="true" />
    <OnSelectCommand Type="System.String" Value="SampleModalFormAction" />
    <DoneButtonTitle Type="System.String" Value="OK" />
    <BaseSelect Type="System.String" Value="" />
    <ESQueryID Type="System.String" Value="SampleSearchPanelQR" />
  </Params>
</SampleModalForm>
```



Data / Special settings

Regarding settings at a command level, in conjunction with those applicable to a ListForm-type screen, the following apply as well.

- Type. An InvForm CreatorCommand type of command must be used.
- Data. The first column of the select query must constitute the unique identification key of a list entry, and it should me named GID. For our example, a column named GID must be present in the select query, referring to the GID field of the ESTMTask table.
- Command properties.

Property	Comment
Model	Specify value “true”.
MultiSelect	Value “true” must be assigned, to enable the selection of multiple entries.
SelectaAllEnabled	Specify value “true” for the option to mass select entries.
OnSelectCommand	The command that concerns the action to be performed. Using special command typeSQLCommand is required. The special feature of this type of command is that it allows for an insert, update or delete query to be called. For our example, the SampleModalFormAction command should be designated.
DoneButtonTitle	Specify the desired label to rename the -Select button. Concerns the iOS platform only.

Note that

The additional requirements that must be met to enable the special ModalForm screen features are:

- Direct call of the screen from an option in the main menu or dashboard screen. Specifically in case of a main menu call, the “false” value should be specified in the PopToRoot property.
- Do not add the ExtraLayoutParams.xml file to the ModalForm folder.
- Specifically for iOS, a distinct RowTemplate must be assigned to the form AdvancedList file for the selected entry (Selected RowTemplate).

Photo gallery screen (CollectionView)

The photo gallery screen (CollectionView) is typically used to display data as an image, while simultaneously providing, by focusing on an entry, the following features:

- Redirection to another screen for additional information.
- Immediate execution a series of actions.

The CollectionView screen can operate either as a stand-alone screen, or as a search & select tool for entries, in order to insert them in the task-document lines. The elements required to implement a CollectionView type of screen are:

Element	Comment
Command	Using special command type CollectionViewCommand is required. However, the special feature of this type of command is element Gallery, through the individual properties of which, both the functionality and the display format of the CollectionView screen can be determined.

Note that

The detailed implementation instructions for CollectionView screens exceed the limits of the present manual and are provided in the MOB-PhotoGallery manual that comes with the ESMobile app.

Website

Example SampleWebSite

The Website screen is used as a tool to directly switch, through the ESMobile app interface to a default website.

The Website screen is implemented using special command type WebViewCommand. The special feature of this type of command is that it allows to directly call a specific web address. The properties of the command to be configured are:

Property	Comment
Title	The label displayed as the screen title.
URL	The URL of the desired website (e.g. http://www.entersoft.gr). Specifically in case the command is called is called from an item list, the URL can be dynamically composed based on the selected item code. In this case, the syntax should look like this `<Url Type="System.String" Value="http://MyURL/{0}.html"/>` where part {0} is populated dynamically with the select item code.
LocalFile	Website detection on the device (true) or on the web (false).
NavigationBarHidden	The website screen fully covers the ESMobile application screen (true) or not (false). In this case, to exit the website screen and return to the ESMobile application interface, simply “triple click”. Concerns the iOS platform only.

Business rules

The Business Rules tool (BRs) allows the definition of special rules, aimed at extending the product function of ESMobile application, in relation to entities Task or Document.

The BRs are implemented in special type files that follow a specific nomenclature and are located in a default folder of the ESConfig or CSConfig area. In particular, the following apply per entity:

Entity	Folder	Nomenclature
Task	BusinessRules/ Tasks	InternationalID_Rules.xml where the InternationalID part should be the same as the international ID of the task type, to which we want the BR to apply. Special attention should be paid so that the InternationalID is always indicated in lower case characters (e.g. es.mdh_Rules.xml for Measurement type task).
Document	BusinessRules/ Documents	ID_Rules.xml where the ID part should be the same as the international ID of the task type, to which we want the BR to apply (e.g. 1_Rules for Order type document).

Note that

The ESMobile application is accompanied by an appropriately configured wizard, providing the user with system guidance during the Business Rule implementation.

BR syntax

The BR functionalities, as well as the details to be configured, vary considerably depending on the type of BR. The available BR types are:

- 0-Assign. This BR results in value assignment to a field of a header or line of the entity in question. The required settings are set in the OnChangeField element.
- 1-Check. This BR results in a validation check being enabled on the data of the entity in question, that can either display a warning message, or interrupt the process. The required settings are set in the Validate element.
- 2-Execute. This BR results in a process to be executed being instantly called, by saving the entity in question. The required settings are set in the Execute element.

This section initially presents a summary of the available, by BR type, elements to configure and some general "principles" for configuring them, followed by detailed instructions for all types of BR implementation.

Action		Activation	ScriptType
The Action property determines the type of, BR with available options:		The Activation property determines the "event" that causes BR to run, with available options:	The ScriptType property works in conjunction with the Script property and specifies the BR result, with available options:
0-Assign	<BusinessRule Title="…" Entity="" **Action="0"** Activation="">** <ExecutionConditions/> <OnChangeField** Entity="" Field="" ScriptType="" Script="" AssignToHeader="" AssignField=""/> </BusinessRule>	0-OnChangeField 2-OnSave 1-OnAddLine 3-OnLoad 4-OnLoadDetail 7-OnAboutToSave	0-Formula 1-SQL 2-Constant value
1-Check	<BusinessRule Title="…" Entity="" **Action="1"** Activation="">** <ExecutionConditions/> <Validate** Entity="" Field="" ScriptType="" Script="" Operator="" ErrorType="" Caption=""/> </BusinessRule>	2-OnSave 5-OnEdit	1-SQL 3-Validation script 4-Regular expression 5-Duplicate line values check 6-Validate same values 7- Validate any values of 9-Validate Subtotals
2-Execute	<BusinessRule Title="…" Entity="" **Action="2"** Activation="">** <ExecutionConditions/> < Execute** Entity="" ScriptType="" Script="" </BusinessRule>	6-AfterSave	1-SQL 8-Command

General principles

BR entities

Available for use in BRs are the following entities:

- Header of task & document (ESFISalesDocument & ESTMTask respectively).
- Line of task & document (ESTMTaskItem & ESFISalesDocLineItem respectively).

BR script syntax

- The content of BR script is case sensitive.
- When defining a BR script, references to entity fields should be of the form [TableName].[FieldName].
- Besides entity fields, the following special functions are also available when defining a BR script:
  - ESSSum. The ESSum function calculates the sum of a field's values. The function's syntax should be as follows: ESSum | [TableName].[FieldName] |
  - ESSumWhere. The ESSumWhere function calculates the sum of a field's values (1st part) for all entries that have, in a specific field (2nd part), a specific value (3rd part). The function's syntax should be as follows: ESSumWhere | [TableName].[FieldName] | [TableName].[FieldName] | Value |
  - ESCountWhere. The ESCountWhere function calculates the number of entries that have, in a field (1st part), a specific value (2nd part). The function's syntax should be as follows:
    ESCountWhere | [TableName].[FieldName] | Value |
- Specifically for the case of BR script type 1-SQL, it is possible to define a stand-alone script used by more than one BRs. This feature requires the defining a stand-alone script in section BusinessScripts and defining its ID in the ScriptID property of the BR in question. The stand-alone BR script can be called from any element of a BR (OnChangefield, Validate, Execute & ExecuteConditions). Note that, in such a case, the Script property must be empty.

```
<Rules>
  <BusinessScripts>
     <BusinessScript ID="CommonScript"
        Script="select i.Discount from ESFIItem i where i.GID = '[ESTMTaskItem].[fItemGID]'"/>
  </BusinessScripts>
  <BusinessRules>
     <BusinessRule Title=""
        Entity="ESTMTask"
        Activation="1"
        Action="0"
       <OnChangeField
        Entity="ESTMTaskItem"
        ScriptType="1"
        ScriptID="CommonScript"
        AssignField="ExtNumericField2"/>
     </BusinessRule>
  </BusinessRules>
</Rules>
```

Action: 0-Assign

The BR of type 0-Assign results in a value assignment to a field of the header or line of the entity in question, and its settings are set in the OnChangeField element. The implementation principles of this type of BR vary considerably, depending on the Activation type.

Activation 0-OnChangeField

Property	Comment
Action	
Activation	Specify value 0. Specifying this value results in the BR being executed at any change indicated in the Field property.
Entity	Entity **Header** or entity **Line** can be specified.
Activation	
Entity	It should match the entity specified in Action.
Field	The field that triggers BR execution when changed. One of the fields in the Activation entity must be assigned. Note here that the non store fields of the Line entity are also available for use (fields: ExtNumericField1 - 5, ExtDateField1 - 5 & ExtStringField1 - 10).
AssignField	The field to which the value is assigned. One of the fields in the Activation entity must be assigned. Note that, • Available for use are also the non store fields of the Line entity (fields: ExtNumericField1 - 5, ExtDateField1 - 5 & ExtStringField1 - 10). • It is possible to assign a value from a Line field to a Header field. To utilize this feature, simply specify in propertyAssignToHeader value “true”. • It is also possible to differentiate by condition the field to which the value is assigned. To utilize this feature, it is necessary to assign value 1 in property AssignFieldScriptType and also assign the desired SQL assignment query in property AssignField.

ScriptType & Script	The “scenario” based on which the value is assigned. Note that the content and syntax method of the Script property greatly varies, based on the value selected for property ScriptType. The available options are:
	• ScriptType: **0-Formula**
	Mathematical operation that uses the entity field and symbols +, -, /, *, (), “.
	 
	`Entity="ESTMTaskItem"`
	`Field="Quantity"`
	`ScriptType="0"`
	`Script="[ESTMTaskItem].[Quantity]*2"`
	`AssignField="OrderQuantity"/>`
	• ScriptType: **1-SQL**
	SQL query that returns an entry with a column.
	 
	`Entity="ESTMTaskItem"`
	`Field="Quantity"`
	`ScriptType="1"`
	`Script="`
	`Select case when [Quantity] < 10 then i.MinimumOrderQty`
	`else i MinimumOrderQty*2 end`
	`from ESFIItem i`
	`where i.GID = '[ESTMTaskItem].[fItemGID]'"`
	`AssignField="OrderQuantity"/>`
	• ScriptType: **2-Constant value**
	Fixed value
	 
	`Entity="ESTMTaskItem"`
	`Field="Quantity"`
	`ScriptType="2"`
	`Script="20"`
	`AssignField="OrderQuantity"/>`

ScriptID	The stand-alone script ID. The required property settings are described in the section with the general script syntax principles.

Example-Header entity

Suppose we wish to implement a BR that meets the following specifications:

- Compose a text consisting of a fixed label and the header's "Address" field. The result shall be assigned to the header's "Task" field.
- The composition & assignment process must be performed at each change of the header's "Address" field.

```
<BusinessRule Title=""
    Entity="ESTMTask"
    Activation="0"
    Action="0">
   <OnChangeField
    Entity="ESTMTask"
    Field="fAddressGID"
    ScriptType="1"
    Script="select
            'Stock count ' || '- ' ||s.Address
            from ESGOSites s
            inner join ESGOPerson p on p.GID = s.fPersonGID
            where s.GID = '[ESTMTask].[fAddressGID]'"
    AssignField="Subject"/>
</BusinessRule>
```

Example-Line entity

Suppose we wish to implement a BR that meets the following specifications:

- Calculate an amount resulting from the line's "Quantity" field and the item's "Minimum order quantity" field. The result shall be assigned to the line's "Order quantity" field.
- The composition & assignment process must be performed at each change of the line's "Quantity" field.

```
<BusinessRule Title=""
    Entity="ESTMTaskItem"
    Activation="0"
    Action="0">
   <OnChangeField
    Entity="ESTMTaskItem"
    Field="Quantity"
    ScriptType="1"
    Script="select
            case when [Quantity] &lt; 10 then i.MinimumOrderQty
            else i.MinimumOrderQty*2 end
            from ESFIItem i
            where i.GID = '[ESTMTaskItem].[fItemGID]'"
    AssignField="OrderQuantity"/>
</BusinessRule>
```

Example-AssignToHeader

Suppose we wish to implement a BR that meets the following specifications:

- Calculation of the "Quantity" field sum of the lines. The result shall be assigned to the header's "Number-1" field.
- The composition & assignment process must be performed at each change of the line's "Quantity" field.

```
<BusinessRule Title=""
    Entity="ESTMTaskItem"
    Activation="0"
    Action="0">
   <OnChangeField
    Entity="ESTMTaskItem"
    Field="Quantity"
    ScriptType="0"
    Script="ESSum|[ESTMTaskItem].[Quantity]|"
    AssignField="NumericField1"
    AssignToHeader="true"/>
</BusinessRule>
```

Example-AssignFieldScriptType

Suppose we wish to implement a BR that meets the following specifications:

- Calculation of the "Quantity" field sum of the lines per item group. The result of each group shall be assigned to another field of the line.
- The composition & assignment process must be performed at each change of the line's "Quantity" field.

```
<BusinessRule Title=""
    Entity="ESTMTaskItem"
    Activation="0"
    Action="0">
   <OnChangeField
    Entity="ESTMTaskItem"
    Field="Quantity"
    ScriptType="1"
    Script="select
            ESSumWhere|[ESTMTaskItem].[Quantity]|[ESTMTaskItem].[ItemGroupCode]|[ESTMTaskItem].[ItemGroupCode]|"
    AssignFieldScriptType="1"
    AssignField="select
            case
             when '[ESTMTaskItem].[ItemGroupCode]' = 'HARDWARE' then 'ExtNumericField1'
             when '[ESTMTaskItem].[ItemGroupCode]' = 'SOFTWARE' then 'ExtNumericField2'
            else 'ExtNumericField3' end "/>
</BusinessRule>
```

Activation 1-OnAddLine

Property	Comment
Action	
Activation	Specify value 1. Specifying this value results in the BR being executed when inserting a line.
Entity	Specify entity **Header**.
Activation	
Entity	Specify entity **Line** (naturally, the one related to the Header entity of the Action).
Field	Property not available.
AssignField	The field to which the value is assigned. The configuration options are the exact same as those described for an Activation of type 0-OnChangeField of a BR 0-Assign type.
ScriptType & Script	The “scenario” based on which the value is assigned. The configuration options are the exact same as those described for an Activation of type 0-OnChangeField of a BR 0-Assign type.
ScriptID	The stand-alone script ID. The required property settings are described in the section with the general script syntax principles.

Activation 2-OnSave

Property	Comment
Action	
Activation	Specify value 2. Specifying this value results in the BR being executed when save the entity.
Entity	Specify entity **Header**.
Activation	
Entity	Entity **Header** or entity **Line** can be specified. Keep in mind, that by designating the Line as an Activation entity, the BR is performed sequentially for each of the lines of the entity that is being saved.
Field	Property not available.
AssignField	The field to which the value is assigned. The configuration options are the exact same as those described for an Activation of type 0-OnChangeField of a BR 0-Assign type. An exception is the ability to assign a value from a Line field to a Header field (AssignToHeader property), that is not available in an Activation of this type.
ScriptType & Script	The “scenario” based on which the value is assigned. The configuration options are the exact same as those described for an Activation of type 0-OnChangeField of a BR 0-Assign type.
ScriptID	The stand-alone script ID. The required property settings are described in the section with the general script syntax principles.

Activation 3-OnLoad

Property	Comment
Action	
Activation	Specify value 3. Specifying this value results in the BR being executed when viewing an already stored entity.
Entity	Entity **Header** or entity **Line** can be specified.
Activation	
Entity	Property not available.
Field	Property not available.
AssignField	The field to which the value is assigned. Specifying a field of the Header entity is mandatory.
ScriptType & Script	The “scenario” based on which the value is assigned. The configuration options are the exact same as those described for an Activation of type 0-OnChangeField of a BR 0-Assign type.
ScriptID	The stand-alone script ID. The required property settings are described in the section with the general script syntax principles.

Activation 4-OnLoadDetail

Property	Comment
Action	
Activation	Specify value 4. Specifying this value results in the BR being executed when viewing an already stored line. Note that this type of Activation is mainly useful when the value is being assigned to a non store field of the Line entity.
Entity	Specify entity **Header**.
Activation	
Entity	Specify entity **Line** (naturally, the one related to the Header entity of the Action).
Field	Property not available.
AssignField	The field to which the value is assigned. The configuration options are the exact same as those described for an Activation of type 0-OnChangeField of a BR 0-Assign type.
ScriptType & Script	The “scenario” based on which the value is assigned. The configuration options are the exact same as those described for an Activation of type 0-OnChangeField of a BR 0-Assign type.
ScriptID	The stand-alone script ID. The required property settings are described in the section with the general script syntax principles.

Activation 7-OnAboutToSave

Property	Comment
Action	
Activation	Specify value 7. Specifying this value results in the BR being executed when preparing to save an entity.
Entity	Specify entity **Header**.
Activation	
Entity	Entity **Header** or entity **Line** can be specified. Keep in mind, that by designating the Line as an Activation entity, the BR is performed sequentially for each of the lines of the entity that is being saved.
Field	Property not available.
AssignField	The field to which the value is assigned. The configuration options are the exact same as those described for an Activation of type 0-OnChangeField of BR of type 0-Assign. An exception is the ability to assign a value from a Line field to a Header field (AssignToHeader property), that is not available in an Activation of this type.
ScriptType & Script	The “scenario” based on which the value is assigned. The configuration options are the exact same as those described for an Activation of type 0-OnChangeField of a BR 0-Assign type.
ScriptID	The stand-alone script ID. The required property settings are described in the section with the general script syntax principles.

Action: 1-Check

A BR of type 1-Check results in a validation check activation regarding the data of the entity in question, that can either display a warning message, or interrupt the process. It can be configured in the Validate element. The implementation principles of this type of BR vary considerably, depending on the Activation type.

Activation 2-OnSave

Property	Comment
Action	
Activation	Specify value 2. Specifying this value results in the BR being executed when save the entity.
Entity	Entity **Header** or entity **Line** can be specified.
Activation	
Entity	Entity **Header** or entity **Line** can be specified. Keep in mind, that if the Header is designated as an Action entity, by designating the Line as an Activation entity the BR is executed sequentially for each one of the lines of the entity that is being saved. In such a case, the value that the check returns also depends on the Operator of the lines (Operator property).
Field	The field to which the BR check applies. One of the fields in the Activation entity must be assigned. Fill in only in case ScriptType 4-Regular expression is used.
ScriptType & Script	The "scenario" based on which the validity check runs. Note that the content and syntax method of the Script property greatly varies, based on the value selected for property ScriptType. The available options are:

- ScriptType: **1-SQL**

  An SQL query that returns an entry with a column that has a value of 0 (fail) or 1 (success).

```
Entity="ESTMTaskItem"
Field=""
ScriptType="1"
Script= "select
         case when StringField2 is null then 0 else 1 end
         from ESFIItem i
         where i.GID = '[ESTMTaskItem].[fItemGID]'"
Operator="0"
ErrorType="0"
Caption="Item's StringField2 cannot be null"/>
```

- ScriptType: **3-Validation script**

  A formula checked on whether it returns 0 (fail) or 1 (success).

```
Entity="ESTMTaskItem"
Field=""
ScriptType="3"
Script= "[ESTMTaskItem].[OrderQuantity] &gt;= 10"
Operator="0"
ErrorType="0"
Caption="Line's OrderQuantity cannot be less than 10"/>
```

- ScriptType: **4-Regular expression**

  A Regular expression based on which the content of the field to which BR applies is checked.

```
Entity="ESTMTask"
Field="StringField1"
ScriptType="4"
Script= "/^w+[+.w-]*@([w-]+.)*w+[w-]*.([a-z]{2,4}|d+)$/i"
Operator="0"
ErrorType="1"
Caption=" Header's StringField1 is not a valid E-mail address."/>
```

- ScriptType: **5-Duplicate line values check**

  Checks if there are lines with the exact same elements. If there are, the check returns 0 (fail). It is also possible to define a criterion to limit the lines involved in the check.

  The script's syntax should be as follows: Part-1|Part-2|Part-3, where:

Part-1	A comma-separated list of fields that comprise the common elements (maximum of 4 fields).
Part-2 & Part-3	The field (Part-2) and the field's content (leg-3), that constitute the criterion for limiting the lines involved in the check.

```
Entity="ESTMTaskItem"
Field=""
ScriptType="5"
Script="fItemGID,fItemMUGID|ItemGroupCode|SERVICE"
Operator="0"
ErrorType="0"
Caption="For SERVICE items,
         Lines with the same ITEM and the same MEASUREMENT UNIT
         should appear only once."/>
```

- ScriptType: **6-Validate same values**

  Checks whether there are lines which, while belonging to the same "category", do not have common content in the field to be checked. If there are, the check returns 0 (fail). It is also possible to define a criterion to limit the lines involved in the check.

  The script's syntax should be as follows: Part-11, Part-12|Part-2|Part-3, where:

Part-1	A comma-separated list with the field constituting the "category" (part-11) and the field checked for its content (Part-12).
Part-2 & Part-3	The field (Part-2) and the field's content (leg-3), that constitute the criterion for limiting the lines involved in the check.

```
Entity="ESTMTaskItem"
Field=""
ScriptType="6"
Script="Quantity,OrderQuantity|ItemGroupCode|SERVICE"
Operator="0"
ErrorType="0"
Caption="For SERVICE items,
         all Lines with the same COUNT QUANTITY
         should also have the same ORDER QUANTITY."/>
```

- ScriptType: **7- Validate any values of**

  Checks if the content of the field to be checked already exists in one of the existing lines. If it does not, the check returns 0 (fail). The field to be checked is indicated in the Script property.

```
Entity="ESTMTaskItem"
Field=""
ScriptType="7"
Script= "StringField2"
Operator="0"
ErrorType="0"
Caption="The content of Line's field STRINGFIELD2 should be non-unique."/>
```

- ScriptType: **9-Validate Subtotals**

  This check is essentially performed in two steps. In the first step, the total is calculated per line "group" and in the second one, the calculation result is checked to determine whether it returns value 0 (fail) or 1 (success).

  Pay special attention when composing the script, as it is mandatory that:

  - the script total is enclosed in brackets.
  - each script property and its value are enclosed in double quotes.
  - the property is separated from each value by a colon.
  - the individual script properties are separated from each by commas.

  The properties to configure are:

GroupByField	Acts are a line grouping criterion.
SummaryField	The filed where the total is calculated per "group".
SummaryValueToken	The variable where the calculation result is assigned. Keep in mind that the definition must be of [token] form, where token should be the name we wish the variable to have.
ScriptType & Script	The "scenario" based on which the validity check is performed, with the following ScriptType options available: 1-SQL & 3-Validation script.

In order to compare the measurement quantity per item group against the corresponding sales quantity of the current year,

```
Entity="ESTMTaskItem"
Field=""
ScriptType="9"
Script= "{
&amp;quot;GroupByField&amp;quot; : &amp;quot;ItemGroupCode&amp;quot;,
&amp;quot;SummaryField&amp;quot; : &amp;quot;Quantity&amp;quot;,
&amp;quot;SummaryValueToken&amp;quot; : &amp;quot;[MyVariable]&amp;quot;,
&amp;quot;ScriptType&amp;quot; :&amp;quot;1&amp;quot;,
&amp;quot;Script&amp;quot; : &amp;quot;
       Select
           case when [MyVariable] &amp;gt; sum(pr.Quantity) then 0 else 1 end
       From ESFIPeriodics pr
       Inner Join ESGOFiscalPeriod fp on fp.GID = pr.fFiscalPeriodGID
       Inner Join ESFIItem i on i.GID = pr.fItemGID
       Inner Join ESFITradeAccount ta on ta.GID = pr.fTradeAccountGID
       Where
         fp.StartDate &amp;gt;= date('now','-12 month')
         and i.fItemGroupCode = '[ESTMTaskItem].[ItemGroupCode]'
         and ta.fPersonGID = '[ESTMTask].[fPersonGID]'
       Group by i.fItemGroupCode
&amp;quot;}"
Operator="0"
ErrorType="0"
Caption="The GROUP-LEVEL Count Quantity
         exceeds the corresponding annual Sales Quantity"/>
```

ScriptID	The stand-alone script ID. The required property settings are described in the section with the general script syntax principles.
Operator	The Operator of the entity lines. The available options are: • 0-And. The check returns value 1 (success), only when all the lines fulfill the condition. • 1-Or. The test returns value 1 (success), when at least one line fulfills the condition.
ErrorType	The type of check. The available options are: • 0-Error. Displays a message and immediate cancels the action. • 1-Warning. Displays a message that gives the option of executing (OK button) or canceling (Cancel button) the action. • 2-Info. Displays a message and immediately executes the action. • 3-Complex password. Displays a message that prohibits the execution of the action until approval is received by a back office-authorized user. Note that the message text must also contain label {0}. Concerns the iOS platform only.
Caption	The message that appears in case of invalidity.

Activation 5-OnEdit

Property	Comment
Action	
Activation	Specify value 5. Specifying this value results in the BR being executed while editing -via LineEditing- a field of the Line entity.
Entity	Specify entity **Line**.
Activation	
Entity	Property not available.
Field	The field that triggers BR execution when changed. One of the Line entity fields must be assigned.
ScriptType & Script	The “scenario” based on which the validity check runs. The configuration options are the exact same as those described for an Activation of type 2-OnSave of BR type 1-Check. Note that using ScriptType 4-Regular expression is not possible.
ScriptID	The stand-alone script ID. The required property settings are described in the section with the general script syntax principles.
Operator	Property not available.
ErrorType	The type of check. The configuration options are the exact same as those described for an Activation of type 2-OnSave of a BR of type 1-Check.
Caption	The message that appears in case of invalidity.

Action: 2-Execute

The BR of type 2-Execute results in a process to be executed being instantly called, by saving the entity in question. The required settings are set in the Execute element. The implementation principles of this type of BR vary considerably, depending on the Activation type.

Activation 7-AfterSave

Property	Comment
Action	
Activation	Specify value 7. Specifying this value results in the BR being executed after saving the entity.
Entity	Specify entity **Header**.
Activation	
Entity	Entity **Header** or entity **Line** can be specified. Keep in mind, that by designating the Line as an Activation entity, the BR is performed sequentially for each of the lines of the entity that is being saved. This feature is only available if using ScriptType 1-SQL.

ScriptType & Script	The "scenario" based on which the process to be executed is called. Note that the content and syntax method of the Script property greatly varies, based on the value selected for property ScriptType. The available options are:
	• ScriptType: **1-SQL**
	An SQL query that describes the process to be performed.
	 
	`Entity="ESTMTaskItem"`
	`ScriptType="1"`
	`Script="delete from ESTMTaskItem`
	`where GID = '[ESTMTaskItem].[GID]'`
	`and Quantity = 0 and OrderQuantity = 0" />`
	• ScriptType: **8-Command**
	Button calling the command to be executed. Note that the variable [CURRENT] or [PARENT] required to run the command is automatically fed with the GID of the entity being saved.
	 
	`Entity="ESTMTaskItem"`
	`ScriptType="8"`
	`Script="New#MyCommand" />`

ScriptID	The stand-alone script ID. The required property settings are described in the section with the general script syntax principles.

BR execution conditions

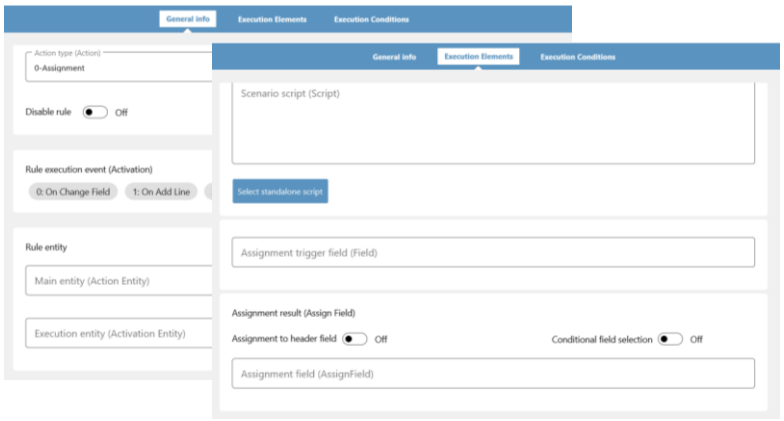
By indicating value true in property Inactive, a BR can be completely disabled. At the same time, by appropriately configuring the ExecutionConditions element, it is possible to perform a BR under certain conditions. The following applies regarding the implementation principles of the BR execution condition.

Property	Comment
Entity	Entity **Header** or entity **Line** can be specified. Keep in mind, that if the Header is designated as an Action entity, by designating the Line or condition as an ExecutionConditions entity, the BR is executed sequentially for each one of the entity lines. In such a case, the value that the check returns also depends on the Operator of the lines (Operator property).
ScriptType & Script	The "scenario" based on which the execution check runs. The configuration options are the exact same as those described for an Activation of type 2-OnSave of BR type 1-Check. Note that using ScriptType 4-Regular expression is not possible.
ScriptID	The stand-alone script ID. The required property settings are described in the section with the general script syntax principles.
Operator	The Operator of the entity lines.The available options are: • 0-And. The check returns value 1 (success), only when all the lines fulfill the condition. • 1-Or. The test returns value 1 (success), when at least one line fulfills the condition.
ZeroLinesValue	The value returned by the check, in case there are no lines found that fall under the condition scenario. The available options are: • 0-Fail. • 1-Success.

BRs Wizard

As mentioned above, to receive system guidance when implementing a BR, the ESMobile app is accompanied by an appropriately configured Business Rules Wizard (BRs Wizard). Note that, due to the specialized implementation required for BRs, this wizard is not available on "mobile" devices and utilizing it requires installation of the UWP ESMobile application in a desktop interface.

Access to the BRs Wizard is provided via the relevant option of the "Settings" screen (Settings/ System Administration - DB/ Auxiliary tasks). Calling this option initially displays a list with the available document types (Documents page) and task types (Tasks page) for the current installation, and then, by focusing on a list entry, the already existing BRs of the select task-document type appear. Finally, either by selecting a specific BR, or by pressing New, the user is redirected to the BR syntax screen.



The BR syntax process consists of three steps and each one corresponds to a distinct page of the BR syntax screen.

Step 1 / Main data

The Type, Event and Entity elements are defined. Via the “Fully disable rule” option, the user can configure the BR execution or lack thereof, while via the “Run rule under conditions” option, the user can enable or disable the page related to the condition definition for BR execution (page: Running conditions). Note that the “Rule running event” area is adjusted automatically based on the “Rule type” detail.

Step 2 / Running data

The page is automatically adjusted based on what is selected in the “Main data” page. This adjustment concerns both the data displayed and the options available when entering this data. More specifically, the selection list for the “Scenario type” detail is adjusted automatically based on the “Rule type” detail. The data selection list where an entity field is specified (e.g. enable assignment field) is adjusted automatically based on the “Running entity” detail.

Step 3 / Running conditions

This step is optional. Activating the page or not depends on the setting of the “Run rule under conditions” detail of the “Main data” page. Via the “Successful check in case of no lines found” option, the user can configure the value returned by the running condition in case there are no lines relevant to the condition scenario found.

When BR syntax is complete, pressing -Save executes the validity check for the current BR syntax. If there is any erroneous definition found, the saving process fails and a relevant error message pops up. Otherwise, the saving process generates an xml file that includes the total BRs of the current task-document and saves the generated file in the appropriate folder of the CSConfig.

Note that

- When writing a script in the BRs Wizard interface, mentioning special characters is possible by directly using each character and not by using the special form required by the xml language. For example, “larger” is represented by the > character and not in the > form.
- At any stage of the BR syntax process, pressing -Email allows the user to send the current BR via E-mail.

App customization

This section presents issues related to the extension capabilities, at a customization level, regarding the product implementation of the ESMobile application. These extensions apply to both the data and the application's functionality & display format.

Entity Data

Master entity

User-defined fields

The master entities managed by the ESMobile application are: Person (ESGOPerson), Address (ESGOSites), Customer (ESFITradeaccount) & Item (ESFIItem). The user-defined fields of the EBS app for these entities are available in their entirety in the ESMobile application also. These fields are fully supported by the product implementation of the ESMobile application and therefore no changes are required, when it comes to the application's customization.

Task entity

User-defined fields

The user-defined fields of the EBS app for parts Header (ESTMTask) and Contents (ESTMTaskItem) of the Task entity are available in their entirety in the ESMobile application also. These fields, in terms of database and the data synchronization process (from_ & to_ data packages), are fully supported by the product implementation of the ESMobile application. However, since the product implementation of the Data entry screens does not support all of these fields, field utilization that is not already available on the screen requires changes, at an application customization level, in DetailView (for the Header part), and in AdvancedList (for the Contents part) files of the DocForm task screen.

Attention

The user-defined fields of entity Task are not default, they are "dynamically" formed by the EBS application interface. Therefore, to ensure the smooth operation of the data delivery process, the preferred fields must be added to the user-definable fields of the activity type. Specifically for the case of zoom table fields, designating a list with the available table values is required.

Task types

The ESMobile application is accompanied by specific types of tasks, through which the product scenarios for task management have been implemented. At the same time, however, in order to meet the particular needs of an installation, additional scenarios can be implemented at the application customization level. To utilize this feature, the following settings are required.

EBS application

Add a task type of class General task. Out of all the configuration elements for task types, special attention should be paid to:

- International ID. The international ID must be indicated in Latin characters. It is recommended that, to easily tell apart product-custom task types, the international ID of customer types should start with label CS.
- Task groups. Define group Mobile_Custom group (for applications ES-SFA, ES-xVan, ES-Service) or PharmaIndyCustom (for application ES-MedRep). Defining this group is necessary to make the custom task type available on the local database of the ESMobile application.
- Assignment rules. Match the task type roles with those of the ESMobile app resource-user. More specifically, if the task type has been defined by assigning "To the selected resources", this match is necessary to also make the custom task type available at a level of a specific ESMobile application user-resource.

ESMobile application

- Data entry screen. Implement a Data entry screen for the new task type, to allow for to inserting-viewing tasks of that type through the ESMobile application interface. Detailed implementation instructions for the Data entry screen are provided above, in the section Master-detail entity (DocForm).

- Task status. Add the desired statuses of the new task type to the corresponding table (ESTMStatus table). This can be added by modifying the InitializeData.txt file of the ESFiles/SQLiteFiles/x.xx area of the IIS Server, where x.xx is the current version number.

Document Entity

User-defined fields

The user-defined fields of the EBS app for parts Header (ESFISalesDocument) and Contents (ESFISalesDocLineItem) of the Document entity are available in their entirety in the ESMobile application also. These fields, in terms of database and the data synchronization process (from_ & to_ data packages), are fully supported by the product implementation of the ESMobile application. However, since the product implementation of the Data entry screens does not support all of these fields, field utilization that is not already available on the screen requires changes, at an application customization level, in DetailView (for the Header part), and in AdvancedList (for the Contents part) files of the DocForm document screen.

Database schema

The ESMobile app database contains the tables and fields that are absolutely necessary for the product implementation of the application's functionality. At the same time, however, in order to meet the particular needs of an installation, extension of the schema of the database is possible at an application customization level. Note that, regardless of whether the extension relates to adding a table or adding a field on a product table, the exact same arrangements are needed to implement it.

Define table

- Tables can be added in file InitializeSchema.txt file of the ESFiles/SQLiteFiles/x.xx area of the IIS Server, where x.xx is the current version number. It is recommended that, to easily tell apart product-custom tables, the customer table name should start with label CS. The definition method of the individual table fields varies depending on the field type.

	Type	Size	Not Null	Collate	Default
GID	nvarchar	36		NOCASE	
String	nvarchar	xxx		NOCASE	
Date	nvarchar	36		NOCASE	
Numeric	real		True	BINARY	0.0
Flag	smallint		True	BINARY	0

  Keep in mind that, apart from defining the desired table fields, it is also necessary to define both the Primary and the Foreign keys of the table. These should be defined using the field name.

- Tables can be added in file TablesOrdered.txt file of the ESFiles/SQLiteFiles/x.xx area of the IIS Server, where x.xx is the current version number.
- Tables can be added in file Sync.txt file of the ESFiles/SQLiteFiles/x.xx area of the IIS Server, where x.xx is the current version number. Keep in mind that, in addition to defining the table, it is also necessary to define the Date & Number type fields. These should be defined using the field SEQ.NO (index minus 1) and by firstly indicating the Date type fields and then the Number type fields.

Update table data

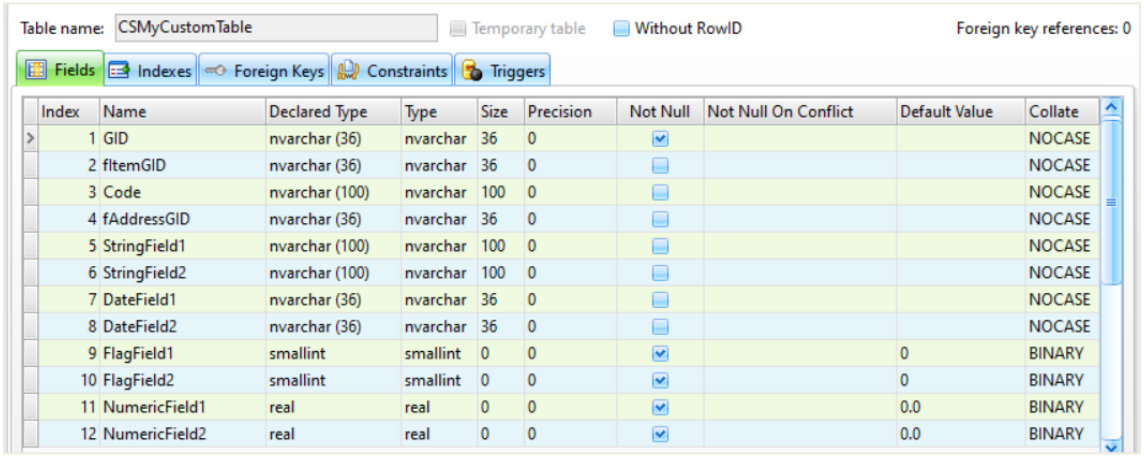
Add to a scenario to the data package, via which the new ESMobile application table can be updated with EBS application data. Special attention should be paid so that the generated file name is of Table_.txt format. This addition is enough to have the data update through the data initialization process.

Specifically, if we want the update to also happen via the differential data synchronization process, the following additional settings are required:

- Create a copy of the SyncPullTablesOrdered.ini product file from the ESConfig/ Sync area in the CSConfig/ Sync are and add the new table to this file. Keep in mind that, in addition to defining the table, it is also necessary to define the Date & Number type fields, as well as the field that constitutes the table's Primary key. These should be defined using the SEQ.NO field (index minus 1), by firstly indicating the Number type fields, then the Date type fields and finally the Primary key.
- Create a copy of the SyncPullTablesOrdered.xml product file from the ESConfig/ Sync area in the CSConfig/ Sync area and add the new table to this file.
- Run the create custom version process, to update the devices with extension of the above files.

Example-1

Suppose that we wish to implement a custom table that is updated, during the initialization process, with data from the application EBS “Serial number” table. Suppose also we want this table to be named CSMyCustomTable and, in addition to the basic identification elements of a serial number, to also include 2 user-defined fields of all types.



Index	Name	Declared Type	Type	Size	Precision	Not Null	Not Null On Conflict	Default Value	Collate
1	GID	nvarchar (36)	nvarchar	36	0	☑			NOCASE
2	fItemGID	nvarchar (36)	nvarchar	36	0	☐			NOCASE
3	Code	nvarchar (100)	nvarchar	100	0	☐			NOCASE
4	fAddressGID	nvarchar (36)	nvarchar	36	0	☐			NOCASE
5	StringField1	nvarchar (100)	nvarchar	100	0	☐			NOCASE
6	StringField2	nvarchar (100)	nvarchar	100	0	☐			NOCASE
7	DateField1	nvarchar (36)	nvarchar	36	0	☐			NOCASE
8	DateField2	nvarchar (36)	nvarchar	36	0	☐			NOCASE
9	FlagField1	smallint	smallint	0	0	☑		0	BINARY
10	FlagField2	smallint	smallint	0	0	☑		0	BINARY
11	NumericField1	real	real	0	0	☑		0.0	BINARY
12	NumericField2	real	real	0	0	☑		0.0	BINARY

InitializeSchema.txt

```
Create Table CSMyCustomTable(
  "GID" nvarchar (36) NOT NULL COLLATE NOCASE,
  "fItemGID" nvarchar (36) COLLATE NOCASE,
  "Code" nvarchar (100) COLLATE NOCASE,
  "fAddressGID" nvarchar (36) COLLATE NOCASE,
  "StringField1" nvarchar (100) COLLATE NOCASE,
  "StringField2" nvarchar (100) COLLATE NOCASE,
  "DateField1" nvarchar (36) COLLATE NOCASE,
  "DateField2" nvarchar (36) COLLATE NOCASE,
  "FlagField1" smallint NOT NULL COLLATE BINARY DEFAULT 0,
  "FlagField2" smallint NOT NULL COLLATE BINARY DEFAULT 0,
  "NumericField1" real NOT NULL COLLATE BINARY DEFAULT 0.0,
  "NumericField2" real NOT NULL COLLATE BINARY DEFAULT 0.0,
PRIMARY KEY
  ([GID]),
FOREIGN KEY
  ([fItemGID]) REFERENCES [ESFIItem]([GID]),
FOREIGN KEY
  ([fAddressGID]) REFERENCES [ESGOSites]([GID])
```

Sync.txt

```
…
ESTMVisitPlanAccount$[7][15][16]$
ESTRTerritoryAccountRelation$[7]$
ESTRTerritoryItemRelation$$
CSMyCustomTable$[6][7]$[10][11]
```

Example-2

Suppose, that we want to extend the data synchronization process, so that the custom CSMyCustomTable table can also be updated during the differential data synchronization process.

SyncPullTablesOrdered.xml

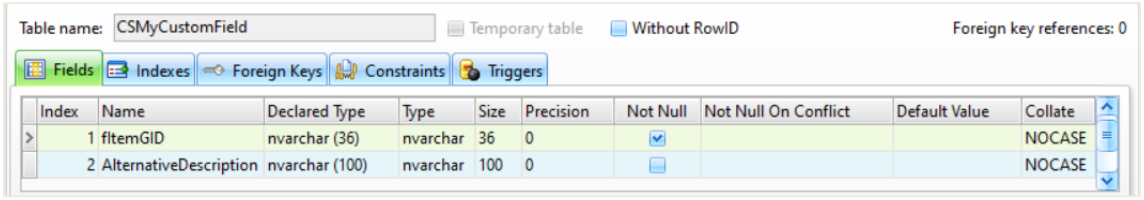
```
<ESMMSerialNumber>
  <singular>
    Serial number
  </singular>
  <plural>
    Serial numbers
  </plural>
  <select>
    Select
      GID, Code
      from CSMyCustomTable
      where GID in ('[values]')
  </select>
</ESMMSerialNumber>
```

SyncPullTablesOrdered.ini

```
…
ESGOContactType$$$[0]
ESTMZSRSeverity$$$[0]
ESMMZCatalogueItemGroup$$$[0]
CSMyCustomTable$[10][11]$[6][7]$[0]
```

Example-3

Suppose we wish to extend the product implementation of the ESMobile app “Inventory item” table, by adding the “Alternative description” field. Suppose also we want the custom table in which the extra field is defined to be named CSMyCustomField.



InitializeSchema.txt

```
Create Table CSMyCustomField (
  "fItemGID" nvarchar (36) NOT NULL COLLATE NOCASE,
  "AlternativeDescription" nvarchar (100) COLLATE NOCASE,
PRIMARY KEY
  ([fItemGID]),
FOREIGN KEY
  ([fItemGID]) REFERENCES [ESFIItem]([GID])
```

Sync.txt

```
…
ESTMVisitPlanAccount$[7][15][16]$
ESTRTerritoryAccountRelation$[7]$
ESTRTerritoryItemRelation$$
CSMyCustomTable$[6][7]$[10][11]
CSMyCustomField$$
```

Data synchronization scenarios

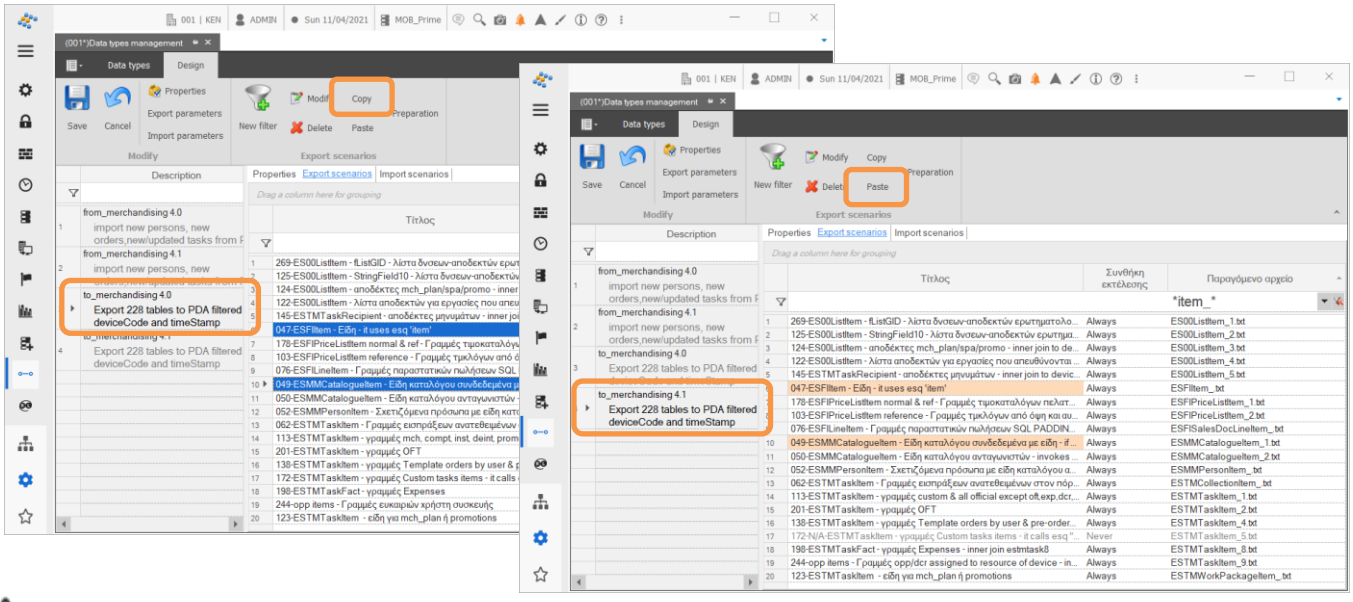
The ESMobile application comes with data type files (espak files), in which the data synchronization product scenarios between the EBS & ESMobile applications have been implemented. Using the Data Interchange tool, it is possible to modify the product scenarios at an application customization level. Note that the scenarios that have received any kind of modification are made distinct by means of a particular color marking (-pink background color).

At the same time, and in order facilitate the process of upgrading ESMobile application, it is possible to bulk transfer custom scenarios for importing or exporting data from a previous version of the application to the current version. The steps required to utilize this feature are:

(1) Install the new version data types.

(2) Go to the data types of the very last version, bulk select the custom scenarios and press the “Copy” button.

(3) Go to the new version data types and press “Paste”.



Attention

- This functionality is available on data types of version 4.0 or later, and as long as the following conditions are met:
  - product data types are used, instead of one of their potential copies.
  - the modification of data product types has been done by a user other than the user with the esdev password
- By choosing to copy custom scenario from a previous version, any differences in new version in the corresponding product scenario automatically become unavailable. Be reminded that, in order to facilitate the detection of differences between custom - product scenario, they can be viewed at the same time.

IIS server Settings

Create custom version

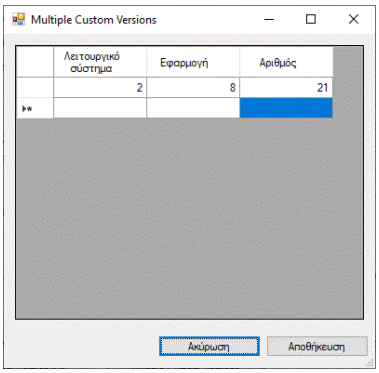
The create custom version process varies, depending on whether there is common customization for all platforms or not. The appropriate case-by-case process is:

Common custom version

Creating a custom version number is done by pressing the "Create custom version iOS" button of the Web Configurator tool.

Custom version per platform & application

Creating a custom version number is done by pressing the "Multiple Custom Versions" button of the Web Configurator tool. On the screen that appears, specify the following elements:



- Operating system. Specify the platform code. The available values are: **2**-iOS, **3**-Android and **4**-UWP.
- Application. Specify the application code. The available values are: **8**-SFA/Merchandising, **32**-xVan, **2**-Service and **1024**-MedRep.
- Number. Specify the desired version number

Send device settings

In order to facilitate the process of setting up the installation devices, it is now possible to update the settings of an application using a file. To make use of this feature, it is necessary to:

- Designate the data to be setup in the settings.json file. Out of all the available data, define only those to which we wish to apply specific configuration.
- Place the settings.json file in the device. The file should be placed in the ESConfig or CSConfig folder of the ESMobile application.
- Login the user to the ESMobile application. Upon login to the ESMobile app, first the app settings are updated, based on the data designated in the file. The file is then deleted from the device.

The following “Settings” screen data is available in the settings.json file:

Element	Value
AppLanguage	Available values: el-GR / en-US / ro-RO / bg-BG / sq-AL / es-ES / pl-PL / sr-SP Corresponds to the “Application language” field.
ServerUrl	Indicates the full URL, as composed by the Name, Port & ESMobileServices subcomponents of the “Server Settings” page. e.g. http://192.168.50.199:8080/ESMobileServices_4.4/smartservices.asmx
AutoSetUrl	Available values: true / false Corresponds to the “Automatic setting” field of the “Server settings” page.
SelectedPrinter	Indicates the name of one of the available printers. Corresponds to the “Printer” field.
DeviceOrientation	Available values: Landscape / Portrait Corresponds to the “Device orientation” field. Concerns the Android platform only.
UseBiometetricAuthentication	Available values: true / false Corresponds to the “Biometric authentication” field.
UseGrayscaleTheme	Available values: true / false Corresponds to the “Gray scale style” field.
IsCalendarIso8601	Available values: true / false Corresponds to the “ISO 8601 Calendar” field. Concerns the iOS platform only.
NearestCustomerRadius	The user assigns a number. Corresponds to the “Search radius (km)” field of the “Map” page.
NearestCustmerMaxPins	The user assigns a number. Corresponds to the “Maximum number of pins” field of the “Map” page.
ShowWeatherOnMap	Available values: true / false Corresponds to the “Show weather forecast” field on the “Map” page. Concerns the iOS platform only.
EnableAutoVersionCheck	Available values: true / false Corresponds to the “Automatic version check” field of the “Auxiliary tasks” page.
ShowDataToSend	Available values: true / false Corresponds to the “Automatic version check” field of the “Auxiliary tasks” page. Concerns the iOS platform only.
EnableDebugMode	Available values: true / false Corresponds to the “Debug mode” field of the “Auxiliary tasks” page.
DebugUseCache	Available values: true / false Corresponds to the “Use XML cache (AdvancedList)” field of the “Auxiliary tasks” page. Concerns the iOS platform only.

Example

For example, we wish to configure (a) the data of connection to the server and (b) the default printer data, using the settings.json file.

```
{
   "ServerUrl": "http://192.168.50.199:8080/ESMobileServices_4.4/smartservices.asmx",
   "SelectedPrinter": "BIXOLON SPP-R410",
}
```

Multi-company operation

The multi-company operation scenario aims to cover those installations which

- use more than one ESMobile application
- wish to manage the individual ESMobile applications from the same device
- have developed the data of each ESMobile app in a different company of the EBS application.

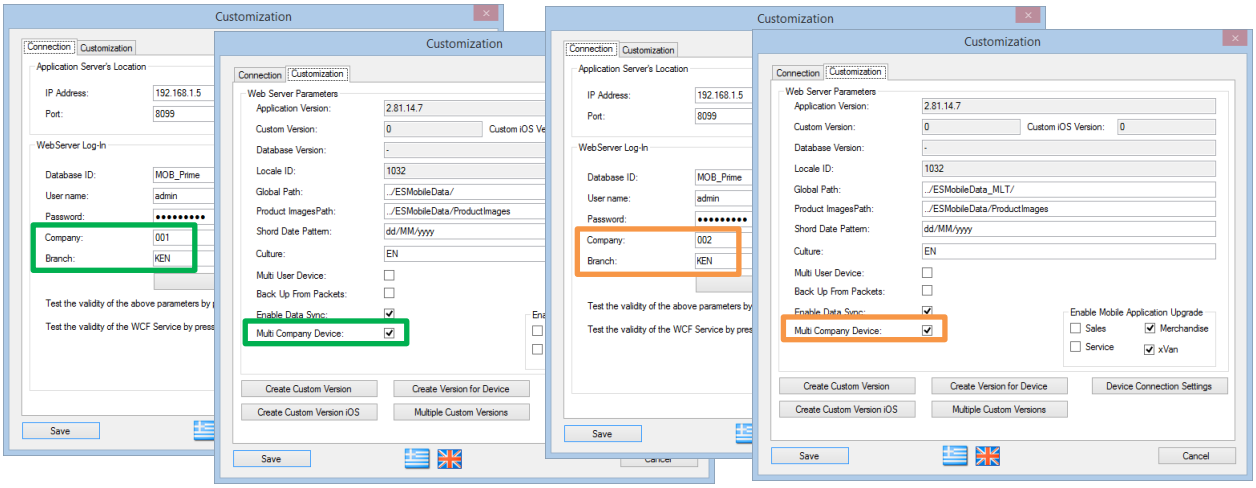
Since under the operating specifications of the ESMobile application a device is always connected to a specific EBS application company, the settings required to cover the multi-company operation are:

- The device user should be entered as a distinct user-resource-salesperson in each company.
- On the IIS Server, one site per company should be created. These sites should have the option Multi Company Device enabled.
- Using properties ES_CENTRAL_COMPANY & ES_CENTRAL_BRANCH of the data interchange tool, the necessary link of nodes to a company-branch should be created.

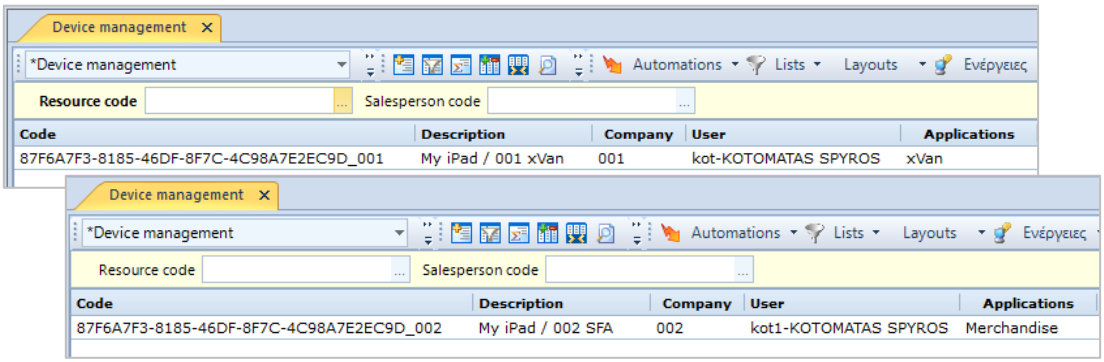
Example

Suppose that we want to be able to run the ES-xVan & ES-SFA applications from the same device. Suppose also that the data on these applications have been developed accordingly, in the application EBS companies 001 & 002.

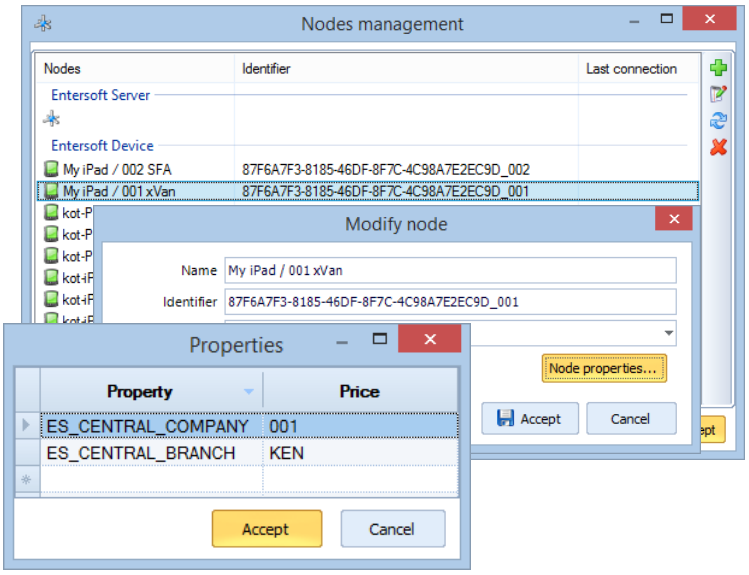
- Create one site for company 001 and one 002 and activate the "Multi Company Device" option in both sites.



- Install applications ES-xVan & ES-SFA to the device. Enabling option "Multi Company Device" in both sites triggers the creation, upon the application installation, of one device entry per company with an ID of form DeviceID_CompanyCode. Note that, in case a device entry for the specific device already exists, it is necessary to delete this entry prior to the installation process.



- Link each node to the relevant company-branch. The link is made by assigning in properties ES_CENTRAL_COMPANY & ES_CENTRAL_BRANCH of each node the appropriate company-branch and it is necessary in order for the data synchronization processes to function properly.


Nodes management
Nodes
Identifier
Last connection
Entersoft Server
Entersoft Device
My iPad / 002 SFA
87F6A7F3-8185-46DF-8F7C-4C98A7E2EC9D_002
My iPad / 001 xVan
87F6A7F3-8185-46DF-8F7C-4C98A7E2EC9D_001
Modify node
Name
My iPad / 001 xVan
Identifier
87F6A7F3-8185-46DF-8F7C-4C98A7E2EC9D_001
Node properties...
Accept
Cancel
Properties
Property
Price
ES_CENTRAL_COMPANY
001
ES_CENTRAL_BRANCH
KEN
Accept
Cancel

Ideas & Solutions

User interface

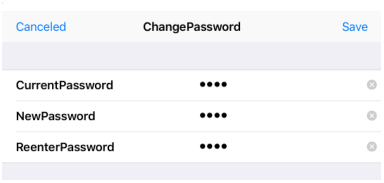
Login screen

It is possible to set a png image file that displays the company logo. The image is displayed at the bottom-right of the login screen and occupies a space proportional to its dimensions. To utilize this feature, simply name the desired image file CompanyLogo.png and place it in the ESMobile application CSConfig folder.

User identification

The device user can opt for an identification method in order to access the ESMobile application.

Identification by code



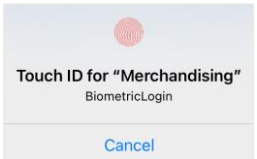
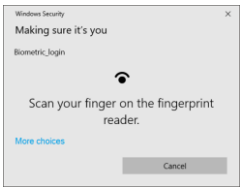
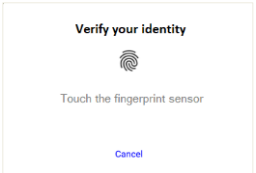
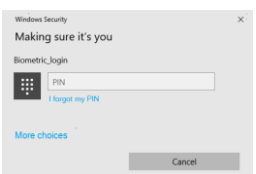
In this case, the password in the ESMobile application is the same as for the EBS application. But it is also possible to change password through the ESMobile application interface. This is possible by selecting the corresponding option on the “Settings” screen (menu: Settings/ Services profile). Note that, to be able to save the new password, there must be a connection to the back office.

Biometric identification

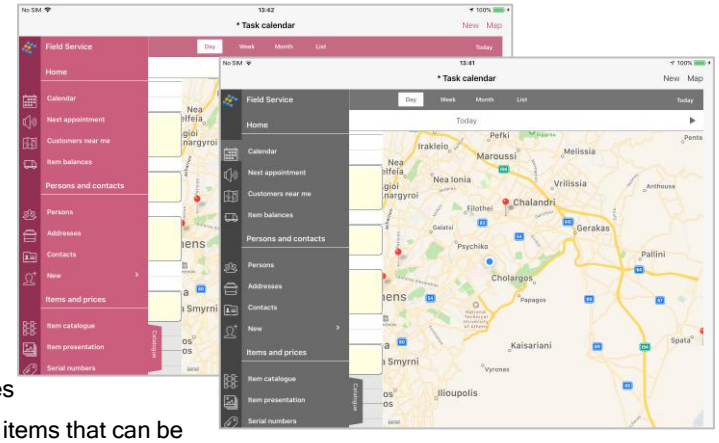
Selecting the biometric Identification option of the “Settings” screen (menu: Settings/ Services profile), allows the device user to be identified either by using a fingerprint, or by using a personal Identification code (PIN). Note that, in order to allow for biometric identification, fingerprint scanning should be supported by the device, or alternatively, a personal Identification code (PIN) should have been set.

Having enabled this option, upon logging in to the ESMobile application, the system attempts to identify the user via fingerprint or - if there is no fingerprint - via PIN. In any case, at least one successful entry to the ESMobile application is required, using a fingerprint or PIN, to "verify" the user's biometric identification.

Cancellation of the biometric identification process is caused either automatically, following repeated erroneous identification attempts, or by pressing the "Cancel" button on the biometric identification screen. In this case, the user identification process via the “standard” password to the ESMobile application is activated.

	iOS	UWP	Android
Finger print			
PIN			

Application style



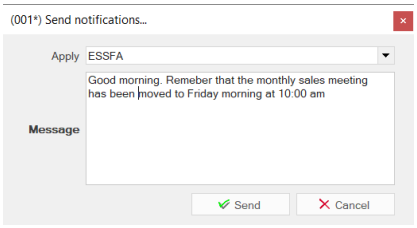
Through the gray scale style option of the “Settings” screen (menu: Settings/ Services profile), the device user can change the default style of each ESMobile application. This setting has an effect on the menu, lists, management screens and generally on the entire user interface of the application. The activation of these settings will be viewable after restarting the ESMobile application.

In addition, some other elements of the ESMobile app can be adjusted regarding their color & font. This feature requires copying the Theme .xml product file in the CSConfig area. The items that can be configured in this format are:

Element	Comment
Settings	The Settings screen Concerns UWP & Android platforms only.
SfSchedule	The Calendar screen Concerns UWP & Android platforms only.
MainMenu	The main menu of the application.
Navigator	The area where the screen title is displayed. Concerns UWP & Android platforms only.
TabMenu	The area of the dashboard & data entry screen pages.
PopUpMenu	The application menu buttons (e.g. the “Actions” button).
SearchPanel	The search criteria area. Concerns UWP & Android platforms only.
ESKeyboard	The pop-up numeric keypad.
DetailView	The data entry screen of type DetailView. Concerns UWP & Android platforms only.
SFList	Screens with the SFListForm features (e.g. Add lines list, Contents part of the DocForm screen). Concerns UWP & Android platforms only.
ColorSize	The color-size dimensions designation screen. Concerns UWP & Android platforms only.

Notification messages

It is possible for a notification to be sent from the EBS application to the ESMobile application user. By calling the “Device manager” screen from the back office (menu: Sales/ Mobile devices), the list of available devices appears. From this list, the user can select the devices they wish and call the Send notification action. On the screen that appears, the user assigns the ESMobile app, the message to be sent and press “Send”. The message is immediately displayed to the device user, regardless if they’re in the ESMobile application environment at that specific moment.



Note that

To be able to send a notification to a device, the device notification ID must be designated in the back office. The notification ID is automatically assigned by the system upon the initial installation of ESMobile. Alternatively, the "Prepare to send notification" automation allows the notification ID to be manually assigned. Note that the notification ID information associated with each application-device is provided by the corresponding field in the “Settings” screen of the ESMobile application.

Integration with OneDrive

It is possible to integrate, via the ESMobile application interface, with the OneDrive service. The alternative methods to utilize this feature are:

- Specify from the back office an attachment of URL address type

- Using the special command type OneDriveCommand, where essentially only the e-mail address of the file to be called is indicated.

```
<SampleOneDrive Assembly="Entersoft.Mobile.ESMerchandize"
                Type="Entersoft.Mobile.ESMerchandize.OneDriveCommand">
  <Params>
    <Url
       Type="System.String"
       Value="https://entersoftgr-my.sharepoint.com/.../EcDcDHvUQE5Ov47FNcbxCH0BFFKLOK7TN4TAWaVHgCwMw"/>
  </Params>
</SampleOneDrive>
```

DocForm screen type

Line grouping

It is possible to use a field from a related entity -that means a field not listed in the line's available fields- as the grouping factor of task-document lines. To utilize this feature, simply specify, using the Business rules tool, the desired value assignment rule in the non store GroupField of the task-document line. Keep in mind that the value assignment should take place both when adding a line (Activation: 1-OnAddLine), as well as when loading the Data entry screen (Activation: 4-OnLoadDetail).

Example

Suppose that we wish to implement a Data entry screen which can be used to create a document of type 1-Order. Suppose also that we want the "Description" field of the "Item group" zoom table as a line grouping criterion.

```
<BusinessRule Title="Assign to GroupField"
     Entity="ESFISalesDocument"
     Activation="1 4"
     Action="0"
     Inactive="false">
  <ExecutionConditions/>
  <OnChangeField
     Entity="ESFISalesDocLineItem"
     Field=""
     ScriptType="1"
     Script= "
        Select IG.Description
        From ESFIItem i
        Inner Join ESFIZItemGroup ig on ig.Code=i.fItemGroupCode
        Where i.GID = '[ESFISalesDocLineItem].[fItemGID]' "
     AssignField="GroupField"/>
</BusinessRule>
```

Be reminded that it is also necessary to fill in mobile parameter Doc_GroupField with the field that constitutes the grouping criterion, for example with the GroupField field.

Line sorting

Given that the task-document line sorting action manages all fields as text fields, for the sorting by a numeric field to be accurate, it is necessary to use a line non store field to “convert” a number to text. The conversion rule is defined using the Business Rules tool. Keep in mind that the conversion should take place both when adding & modifying a line (Activation: 1-OnAddLine& 0-OnChangeField respectively), as well as when loading the Data entry screen (Activation: 4-OnLoadDetail).

Example

Suppose that we wish to implement a Data entry screen which can be used to create a document of type 1-Order. Suppose also that we want to be able to use the "% Discount-2" field as one of the alternative criteria for sorting lines.

```
<BusinessRule Title="Assign to ExtStringField2"
     Entity="ESFISalesDocument"
     Activation="1 4"
     Action="0"
     Inactive="false">
  <ExecutionConditions/>
  <OnChangeField
     Entity="ESFISalesDocLineItem"
     Field=""
     ScriptType="1"
     Script= "
      Select
      substr('000000'||cast(printf('%.2f',[ESFISalesDocLineItem].[Disc2]) as
      varchar),length('000000'||cast(printf('%.2f',[ESFISalesDocLineItem].[Disc2]) as varchar))-5,6)"
     AssignField="ExtStringField2"/>
</BusinessRule>
<BusinessRule Title="Assign to ExtStringField2"
     Entity="ESFISalesDocLineItem"
     Activation="0"
     Action="0"
     Inactive="false">
  <ExecutionConditions/>
  <OnChangeField
     Entity="ESFISalesDocLineItem"
     Field="Disc2"
     ScriptType="1"
     Script= "
      Select
      substr('000000'||cast(printf('%.2f',[ESFISalesDocLineItem].[Disc2]) as
      varchar),length('000000'||cast(printf('%.2f',[ESFISalesDocLineItem].[Disc2]) as varchar))-5,6)"
     AssignField="ExtStringField2"/>
</BusinessRule>
```

Bulk edit line elements

It is now possible to bulk update the numeric field value of a document's lines. To enable this feature, simply modify the Actions file of the document's DocForm screen and in the ToolbarActions section add the BatchUpdate command.

e.g. to bulk update the quantity of already added document lines

```
<ToolbarActions>
   …
   <DocToolbarAction Caption="Μαζική μεταβολή ποσότητας" Command="BatchUpdate#Quantity" ESCaptionID=""/>
</ToolbarActions>
```

Discount value allocation

The ESMobile application provides the ability to bulk assign in document lines a discount value that results from the allocation of the total discount amount specified by the user. To enable this feature, simply modify the Actions file of the document's DocForm screen and in the ToolbarActions , section add the AllocateDiscount command.

e.g. To bulk assign the corresponding amount in field Discount value-1 of the document lines.

```
<ToolbarActions>
   …
   <DocToolbarAction Caption="Επιμερισμός έκπτωσης" Command="AllocateDiscount#Disc1" ESCaptionID=""/>
</ToolbarActions>
```

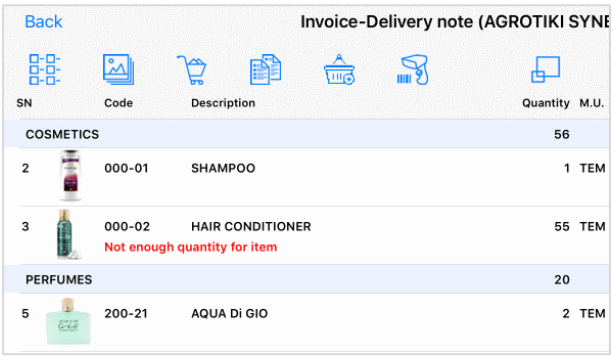
Line total discount %

It is possible to display the total discount % of a document line. This percentage results from the three individual field discounts of the line, with the following calculation: Total discount value / (Quantity * Price). To display this information, simply add in the AdvancedList file of the document's DocForm screen a new element of type TextCell that in property CellSource has value DiscountPercent.

```
<Cell Type="Resco.Controls.AdvancedList.TextCell">
   <Property Name="TextFont" Value="Tahoma, 8pt, style=Bold" />
   <Property Name="Bounds" Value="95,10,20,16" />
   <Property Name="CellSource" Value="DiscountPercent" />
   <Property Name="FormatString" Value="{0:0.##\%}" />
</Cell>
```

Balance limit excess

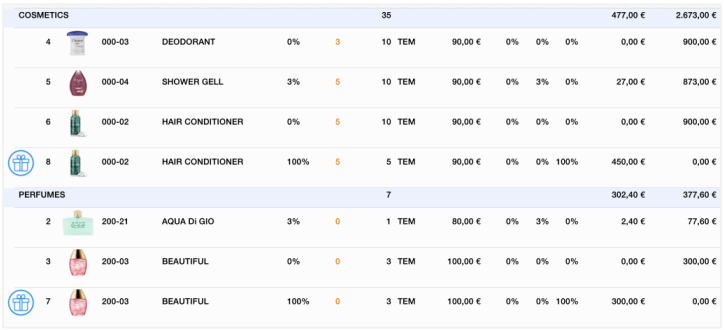
It is possible to mark the lines of a document, where the available balance is exceeded. To display this information, simply add in the AdvancedList file of the document's DocForm screen a new element of type TextCell that in property CellSource has value ItemBalanceErrorMessage.




```
<Cell Type="Resco.Controls.AdvancedList.TextCell">
  <Property Name="Bounds" Value="23,25,180,16" />
  <Property Name="Alignment" Value="Left"/>
  <Property Name="ForeColor" Value="red"/>
  <Property Name="CellSource" Value="ItemBalanceErrorMessage"/>
</Cell>
```

Gift lines

The ESMobile application allows the user to implement an action that is called on a selected document line to add an exact copy of the selected line, with quantity 1 in the base measurement unit of the item and 100% discount. Note that this feature is only available for iOS.



At the same time, it is possible to label these lines as “gift” with the desired icon. To implement this action, it is necessary to apply the following modifications to the AdvancedList file of the document’s DocForm screen.

- Add, in the RowTemplate for the selected entry, an element of type ButtonCell that in property Name has value NewByCopyGiftButton.

```
<RowTemplate>
  <Property Name="Name" Value="SelectedRowTemplate" />
  …
  <Cell Type="Resco.Controls.AdvancedList.ButtonCell">
    <Property Name="Bounds" Value="200,44,40,40" />
    <Property Name="ImageDefault" Value="iVBORw0KGg..." />
    <Property Name="Name" Value="NewByCopyGiftButton" />
    <Property Name="Selectable" Value="true" />
    <Property Name="CellSource" Value="&quot;-1&quot;" />
  </Cell>
</RowTemplate>
```

- To label these lines as gifts, simply add one more element of type ButtonCell that in property Name has value ConditionalButton and in property CellSource the value IsGift. Finally, in property TrueImageFile specify the area of the icon you wish to use.

```
<Cell Type="Resco.Controls.AdvancedList.ButtonCell">
   <Property Name="TrueImageFile" Value="CSImages/Gift.png" />
   <Property Name="CellSource" Value="IsGift" />
   <Property Name="Bounds" Value="1,1,10,32" />
   <Property Name="Name" Value="ConditionalButton" />
</Cell>
```

Note that

Assigning a 100% discount is done at the line discount field, where mobile parameter Doc_GiftDiscount_Field has been specified.

Change collection type button

It is now possible to define a conversion button for the type of an already added line of collection. To enable this feature, simply add to the Actions file of the collection's DocForm screen a button that refers to command ConvertLineButton.

e.g. to define a button that directly converts a line type to “Transfer”

```
<Actions>
   …
   <ActionButton ImagePath="…" Name="ConvertLineButton#ColPayTransferCode" Width="30" Height="30"/>
</Actions>
```

Auto generate task

Example SampleAutoTask

It is possible to implement an action called on a selected entry of a person and as a result display the Task entity's Data entry screen with pre-populated elements in the header and the lines, based on a user-defined select query. To utilize this feature, a NewTaskCommand type command is required, where the desired query for the header & lines is defined in properties CreateHeaderQuery & CreateLinesQuery respectively.

Example

Suppose that we wish to implement a Data entry screen which can be used to create a task of ES.MCH-Measurement type. Suppose also that we want the auto generation of a Count task which includes all items that current year's sales exceeds the 5 units updating at the same time the "Quantity to order" with the relevant sales quantity.

```
<SampleAutoTask Assembly="Entersoft.Mobile.ESMerchandize"
                Type="Entersoft.Mobile.ESMerchandize.NewTaskCommand">
  <Params>
     <TaskType Type="System.String" Value="es.mch" />
     <CreateHeaderQuery Type="System.String" Value="
          Select
             p.GID Assign_fPersonGID,
             ta.GID Assign_fTradeAccountGID, s.GID Assign_fAddressGID,
             s.fContactPersonGID Assign_fContactPersonGID,
             'MCH for year -' || strftime('%Y', 'now') Assign_StringField1
          From ESGOPerson p
          Inner Join ESGOSites s on
                        (s.fPersonGID = p.GID and s.IsMainAddress = 1)
          Left Join ESFITradeAccount ta on ta.fPersonGID = p.GID
          Where p.GID = '[PARENT]'" />
     <CreateLinesQuery Type="System.String" Value="
          Select
             i.GID Assign_fItemGID, 1 Quantity, '' fItemMUGID,
             i.Code Assign_ItemCode, i.Description Assign_ItemDescription,
             sum(pr.Quantity) Assign_OrderQuantity
          From ESFIPeriodics pr
          Inner Join ESFITradeAccount ta on (ta.GID = pr.fTradeAccountGID)
          Inner Join ESFIItem i on (i.GID = pr.fItemGID)
          Inner Join ESGOFiscalPeriod fp on (fp.GID = pr.fFiscalPeriodGID)
          Where
             fp.StartDate &gt;= date('now','-12 month')
             and ta.fPersonGID = '[PARENT]'
             and pr.Quantity &gt;= 5
          Group by i.GID"/>
     <PostSaveCommand Type="System.String" Value="" />
     <SaveMenu Type="System.String" Value="1,2,3" />
  </Params>
</SampleAutoTask>
```

Auto generate document

Example SampleAutoDocument

It is possible to implement an action called on a selected entry of a person and as a result display the Document entity's Data entry screen with pre-populated elements in the header and the lines, based on a user-defined select query. To utilize this feature, a NewDocumentCommand type command is required, where the desired query for the header & lines is defined in properties CreateHeaderQuery & CreateLinesQuery respectively.

Example

Suppose that we wish to implement a Data entry screen which can be used to create a document of type 1-Order. Suppose also that we all items where sales of the current year exceed 5 pieces to be automatically inserted to the Contents part of our screen, while also updating the sales volume in the "Quantity" field.

```
<SampleAutoDocument Assembly="Entersoft.Mobile.ESMobile"
                    Type="Entersoft.Mobile.ESMobile.NewDocumentCommand">
  <Params>
    <CreateHeaderQuery Type="System.String" Value="
      Select
        ta.GID Assign_fTradeAccountGID,
        s.GID Assign_fAddressGID,s.fContactPersonGID Assign_fContactPersonGID,
        'Gifts document for year -' || strftime('%Y', 'now') Assign_StringField1
      From ESFITradeAccount ta
      Inner Join ESGOSites s on
                    (s.fPersonGID = ta.fPersonGID and s.IsMainAddress = 1)
      Where s.fPersonGID = '[PARENT]' " />
    <CreateLinesQuery Type="System.String" Value="
      Select
        i.GID Assign_fItemGID, 1 Quantity, '' fItemMUGID, i.GID fItemGID,
        i.Code Assign_ItemCode, i.Description Assign_ItemDescription,
        sum(pr.Quantity) Assign_Quantity
      From ESFIPeriodics pr
      Inner Join ESFITradeAccount ta on (ta.GID = pr.fTradeAccountGID)
      Inner Join ESFIItem i on (i.GID = pr.fItemGID)
      Inner Join ESGOFiscalPeriod fp on (fp.GID = pr.fFiscalPeriodGID)
      Where
        fp.StartDate &gt;= date('now','-12 month')
        and ta.fPersonGID = '[PARENT]'
        and pr.Quantity &gt;= 5
      Group by i.GID"/>
    <DocType Type="System.String" Value="1" />
    <NullCustomer Type="System.Boolean" Value="false" />
    <AutoSave Type="System.Boolean" Value="false" />
  </Params>
</SampleAutoDocument>
```

Auto add analysis line

It is possible to extend the add lines process in a document so that, if the line to be added has the Color-Size information populated, the corresponding analysis line is also added automatically. To utilize this feature, simply assign, when adding the document line, the desired Color-Size value to the non store fColorCode and fSizeCode fields, respectively. Note that a necessary prerequisite to auto add an analysis line is that in field “Same item behavior” of the document type value 1-Add new line has been assigned.

Example

Suppose, that we have configured the measurement input screen so that the measurement & to “order” quantities are defined at a color-size level. Suppose also that the color-size information is specified in fields Text-3 & Text-4 of the measurement line. Finally, suppose that we wish, when creating an order from a measurement, to also automatically add the analysis lines based on the “to order” quantity specified in the measurement.

```
<NewDocumentFromMchTask Assembly="Entersoft.Mobile.ESMerchandize"
            Type="Entersoft.Mobile.ESMerchandize.NewDocumentFromTaskCommand">
  <Params>
    <TaskGID Type="System.String" Value=""/>
    <DocType Type="System.String" Value="1" />
    <CreateLinesQuery Type="System.String" Value="
        select
          i.GID, i.GID fItemGID,
          max(ti.OrderQuantity) OrderQuantity, max(ti.OrderQuantity) Quantity,
          ti.fItemMUGID fItemMUGID, '' Itemgroupfield, ti.fCatalogueItemGID,
          ti.StringField3 Assign_fColorCode, ti.StringField4 Assign_fSizeCode
        from ESTMTaskItem ti
        inner join ESTMTask t on t.GID = ti.fTaskGID
        ...
        " />
  </Params>
</NewDocumentFromMchTask>
```

Split document

Example/ SampleSplitGiftDocument

The ESMobile application provides the ability to implement, via the Business rules tool, a rule that activates, the execution of a query or command after saving the current entry.

Example

Suppose for example that we want to automatically issue, when saving an order that has gift lines, a gift document including all gift lines, while at the same time deleting these lines from the original document.

Issue gift document

- Create a NewDocumentCommand type of command (e.g. command SampleSplitGiftDocument) that defines the elements required to generate a gift document. The header & lines details are defined in properties CreateHeaderQuery & CreateLinesQuery respectively.

```
<SampleSplitGiftDocument Assembly="Entersoft.Mobile.ESMobile"
                         Type="Entersoft.Mobile.ESMobile.NewDocumentCommand">
   <Params>
     <CreateHeaderQuery Type="System.String" Value="
        Select
           h.fTradeAccountGID Assign_fTradeAccountGID,
           h.fAddressGID Assign_fAddressGID
        From ESFISalesDocument h
        Where h.GID = '[PARENT]' " />
     <CreateLinesQuery Type="System.String" Value="
        Select
           l.fItemGID fItemGID, l.fItemMUGID fItemMUGID,
           l.Quantity Quantity, l.fTaskItemGID Assign_fTaskItemGID,
           l.Price Assign_Price,
           l.Disc1 Assign_Disc1, l.Disc2 Assign_Disc2, l.Disc3 Assign_Disc3
        From ESFISalesDocLineItem l
        Where l.fDocumentGID = '[PARENT]' and l.TotalValue = 0 " />
     <DocType Type="System.String" Value="9" />
     <NullCustomer Type="System.Boolean" Value="false" />
     <ShowDocument Type="System.Boolean" Value="false" />
   </Params>
</SampleSplitGiftDocument>
```

- Modify the Business rules file of the order to add a rule that is activated after saving (Activation: 6-AfterSave) and results to the execution (Action: 2-Execute) of the above command (ScriptType: 8-Command). Note that, regarding the 8-Command script type syntax, the same apply as those described above for the syntax of action button and that variables [PARENT] or [CURRENT] are fed with the GID of the entity specified in the business rule.

```
<BusinessRule Title = "Create Gift Document / 6-AfterSave"
     Entity = "ESFISalesDocument"
     Activation = "6"
     Action = "2"
     Inactive = "false">
  <ExecutionConditions
     Entity = "ESFISalesDocLineItem"
     Operator = "1"
     ScriptType = "3"
     Script = "[ESFISalesDocLineItem].[TotalValue] = 0"/>
  <Execute
     Entity = "ESFISalesDocument"
     ScriptType = "8"
     Script = "New#SampleSplitGiftDocument" />
</BusinessRule>
```

Delete gift lines from order

Modify the Business rules file of the order to add a rule that is activated after saving (Activation: 6-AfterSave) and results to the execution (Action: 2-Execute) the delete query of the gift lines (ScriptType: 1-SQL). More specifically, in case the original document updates the van warehouse stock (e.g. Invoice document), the Business rule should also make the appropriate inventory update.

```
<BusinessRule Title = "Delete Gift Lines / 6-AfterSave"
     Entity = "ESFISalesDocument"
     Activation = "6"
     Action = "2"
     Inactive = "false">
  <ExecutionConditions
     Entity = "ESFISalesDocLineItem"
     Operator = "1"
     ScriptType = "3"
     Script = "[ESFISalesDocLineItem].[TotalValue] = 0"/>
  <Execute
     Entity = "ESFISalesDocLineItem"
     ScriptType = "1"
     Script = "
        update ESMMItemBalance set
               LastUpdate = datetime('now', 'localtime'),
               BranchBalance =
                        (select ib.BranchBalance + li.BasicQuantity
                        from ESMMItemBalance ib
                        inner join ESGOCompany com on ib.fWarehousegid = com.fcurrentWarehousegid
                        inner join ESFISalesDocLineItem li on li.fitemGID = ib.fitemGID
                        where li.GID = '[ESFISalesDocLineItem].[GID]' and li.TotalValue = 0 )
        where fitemGID in
                        (select fitemGID
                        from ESFISalesDocLineItem
                        where GID = '[ESFISalesDocLineItem].[GID]' and TotalValue = 0 )
        and fwarehouseGID in (select fcurrentWarehousegid from ESGOCompany);
        delete from ESFISalesDocLineItem
        where GID = '[ESFISalesDocLineItem].[GID]' and TotalValue = 0" />
</BusinessRule>
```

Stock update

Note that

In the scenario of automatic document generation by “splitting”, it is not possible to display the document generated. This means that the document must be signed and printed at a later time.

Online business policy

Match document fields

When calling the online business policy application process, all “named” fields of the current document are sent to & received by the server. To add user-defined header of document header or line to the information exchanged, it is necessary to add commands describing the desired field mapping (OnLineSaveMapping command to send to the server & OnLineSaveRetaking to download from the server) and save these commands to the folder of the document management form (e.g. CSForms\GenericDocForm\6 area for a sales invoice type document).

e.g. to send information “Table-1” of the document header to the server

command: OnLineSaveMapping

```
<OnLineSaveMapping>
  <Header>
     <Columns>
        <Column ServerName="fADTableField2Code" LocalName="fADTableField2Code" Type="System.String"/>
     </Columns>
  </Header>
  <Line>
     <Columns>
     </Columns>
  </Line>
</OnLineSaveMapping>
```

e.g. to receive information “Number-1” of the document header from the server

command: OnLineSaveMapping

```
<OnLineSaveMapping>
  <Header>
     <Columns>
        <Column ServerName="ADValueField1" LocalName="NumericField1" Type="System.Decimal"/>
     </Columns>
  </Header>
  <Line>...
</OnLineSaveMapping>
```

command: OnLineSaveReturnMapping

```
<OnLineSaveMapping>
  <Header>
     <Columns>
        <Column ServerName="ADValueField1" LocalName="NumericField1" Type="System.Decimal"/>
     </Columns>
  </Header>
  <Line>...
</OnLineSaveMapping>
```

Auto apply

The ESMobile application provides the ability to configure the automatic activation of the online business policy process, either on a point of sales basis, or on a conditional basis. The following settings are required:

- Activate on a point of sales basis. The document's type "Auto apply online business policy" flag must be activated, the address's entity field (e.g. NumericField1) to be used by the process must be defined in the "Doc_AutoApplyCommercialPolicy_SiteField" mobile parameter and finally, the specific field must be updated with value 1 or 0 for activation or not activation, respectively.
- Activate conditionally. The document's type "Auto apply online business policy" flag must be deactivated, while, via the Business rules tool, an assignment rule updating the document's header field AutoApplyOnlinePolicy must be specified. The assignment must take place when saving the document (Activation: 7-OnAboutToSave).

  e.g. auto apply online business policy, only when the document includes composite items

```
<BusinessRule Title = "Assignment to Auto apply CC / 7-OnAboutToSave"
    Entity = "ESFISalesDocument"
    Activation ="7"
    Action = "0"
    Inactive = "false">
  <ExecutionConditions
    Entity = "ESFISalesDocLineItem"
    Operator = "1"
    ScriptType = "3"
    Script = "ESCountWhere|[ESFISalesDocLineItem].[ItemAssemblyType]|2| &gt; 0 "/>
  <OnChangeField
    Entity = "ESFISalesDocument"
    ScriptType = "2"
    Script = "True"
    AssignField = "AutoApplyOnlinePolicy"/>
</BusinessRule>
```

  e.g. auto apply the online business policy, only when the receipt includes transfer note lines

```
<BusinessRule Title = "Assignment to Auto apply CC / 7-OnAboutToSave"
    Entity = "ESTMCollection"
    Activation ="7"
    Action = "0"
    Inactive = "false">
  <ExecutionConditions
    Entity = "ESTMCollectionItem"
    Operator = "1"
    ScriptType = "3"
    Script = "'[ESTMCollectionItem].[PaymentMethodCode]' = '##ColPayTransferCode'"/>
  <OnChangeField
    Entity = "ESTMCollection"
    ScriptType = "2"
    Script = "True"
    AssignField = "AutoApplyOnlinePolicy"/>
</BusinessRule>
```

Appendix

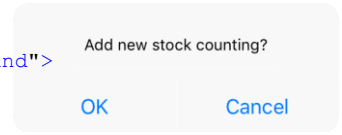
Command / Properties

This appendix lists the properties to be configured at an order level. Some "classic" properties are available for use on all types of screens. However, for certain types of screens, the list of available properties is now enhanced with additional ones.

All types of screens

AskMessage (String)
Displays, when calling an action, a warning message via which the user can execute the action (button: OK) or cancel its execution (button: Cancel).

e.g. to execute an ad hoc Count action and display a warning message




```
<MerchandisingSiteNewForm Assembly="Entersoft.Mobile.ESMerchandize"
                          Type="Entersoft.Mobile.ESMerchandize.NewTaskFromSiteCommand">
    <Params>
      …
      <AskMessage Type="System.String" Value="Add new stock counting?" />
    </Params>
</MerchandisingSiteNewForm>
```

BaseSelect (String)
The screen's main select query.

CacheSearchPanel (Boolean)
Maintains the content of entry search criteria (true), or clears them the screen is closed (false).

ESQueryID (String)
The name of the file where the base select query has been defined. It is automatically filled-in only in the case where, for the purpose of re-using the select query, it's meant to be defined in an independent file. In such a case, the BaseSelect property must be empty.

ⓘ Note that the independent criteria file should be located in the SearchPanels sub-folder of the ESConfig or CSConfig area.

ⓘ Variable [WHERE] activates all filtering criteria defined in property "Filter" of the main command.

e.g. to use **PersonList** as a common select query in screens "Distributors" & "Competitors"

```
<ESQuery
     ID = "PersonList"
     SQL ="select ... from ESGOPerson p [WHERE]"/>

<DistributorListForm Assembly="Entersoft.Mobile.ESMobile"
                     Type="Entersoft.Mobile.ESMobile.ListFormCreatorCommand">
    <Params>
      …
      <Filter Type="System.String" Value="p.Distributor = 1 and p.Inactive = 0" />
      <ESQueryID Type="System.String" Value="PersonList" />
    </Params>
</DistributorListForm>

<CompetitorListForm Assembly="Entersoft.Mobile.ESMobile"
                    Type="Entersoft.Mobile.ESMobile.ListFormCreatorCommand">
    <Params>
      …
      <Filter Type="System.String" Value="p.Competitor = 1 and p.Inactive = 0" />
      <ESQueryID Type="System.String" Value="PersonList" />
    </Params>
</CompetitorListForm>
```

ExecuteCondition (String)
Allows configuring, via the definition of a query, whether an action will be executed (value: 1) or not (value: 0). If the first entry returned by the query has value 0, the action is not executed.

e.g. to execute an ad hoc Count action, only if the current shift is active

```
<MerchandisingSiteNewForm Assembly="Entersoft.Mobile.ESMerchandize"
                          Type="Entersoft.Mobile.ESMerchandize.NewTaskFromSiteCommand">
    <Params>
      …
      <ExecuteCondition Type="System.String" Value="
              select
              case when date(StartDate)=date('now') and EndDate is null then 1
              else 0 end
              from ESTMShift
              order by StartDate desc" />
```

```
    </Params>
</MerchandisingSiteNewForm>
```

ExtraCommand (String)
Allows the extension of the command's main queries (e.g. extended by the addition of further joins)

Filter (String)
The "static" filtering criteria. The user can use:

- a column defined in the base select query
  π.χ. `<Filter Type="System.String" Value="p.Distributor = 1 and p.Inactive = 0"`
- one of the predefined variables
  π.χ. `<Filter Type="System.String" Value="p.GID = '[CURRENT]'"`
- a combination of column & variable
  π.χ. `<Filter Type="System.String" Value="p.PersonKind = 0 and p.GID = '[CURRENT]'"`

FormID (String)
The CSForms folder, referring to the form associated with the specific command.

GroupBy (String)
The screen's data grouping factors.

OnStartValidation (String)
Allows configuring, via the definition of a query, of the condition required in order for the command's execution to be feasible. When the query results to at least one entry, the action is not executed and the content of the 1st column-line appears as an error message.

e.g. to prevent an ad hoc Count action being added, when the current shift is not active

```
<MerchandisingSiteNewForm Assembly="Entersoft.Mobile.ESMerchandize"
                          Type="Entersoft.Mobile.ESMerchandize.NewTaskFromSiteCommand">
    <Params>
      …
      <OnStartValidation Type="System.String" Value="
            select 'No active shift. Add new stock counting is not allowed.' from ESTMShift
            where date(StartDate)=date('now') and EndDate is not null" />
    </Params>
</MerchandisingSiteNewForm>
```

OrderBy (String)
The screen's data sorting criteria.

ⓘ The default way of defining the sorting criteria is by using the SortBy property.

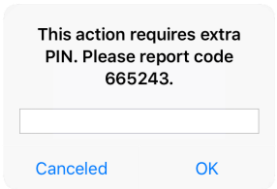
PostSaveCommand (String)
Used to define the command to be executed after saving a entry.

RefreshParent (Boolean)
Provides the ability to refresh dashboard screen data, after executing an SQLCommand.

RequiresExtraPin (Boolean)
Displays, when calling an action, a screen to enter the provided, by a back office-authorized user, PIN to approve the execution of said action.

e.g. to request approval by a back office-authorized user in the ah hoc Count action

```
<MerchandisingSiteNewForm Assembly="Entersoft.Mobile.ESMerchandize"
                          Type="Entersoft.Mobile.ESMerchandize.NewTaskFromSiteCommand">
    <Params>
      …
      <RequiresExtraPin Type="System.Boolean" Value="true" />
    </Params>
</MerchandisingSiteNewForm>
```

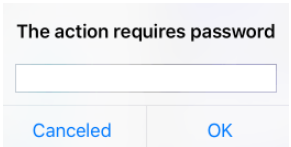


ⓘ The required PIN is generated in the back-office, via a specific EBS automation (PermissionRequest tool).

RequiresPassword (Boolean)
Displays, when calling an action, a screen to input the user's password.

e.g. to request the user password when adding an ad hoc Count

```
<MerchandisingSiteNewForm Assembly="Entersoft.Mobile.ESMerchandize"
                          Type="Entersoft.Mobile.ESMerchandize.NewTaskFromSiteCommand">
    <Params>
      …
      <RequiresPassword Type="System.Boolean" Value="true" />
    </Params>
</MerchandisingSiteNewForm>
```



SaveMenu (String)
The save button options. The typical options are: 1-Save, 2-Complete, & 3-Cancel.

SearchPanelFilter (String)
The screen's data alternative search criteria

SearchPanelID (String)
The name of the file where the alternative search criteria were defined. It is automatically filled-in only in the case where, for the purpose of re-using the search criteria, they're meant to be defined in an independent file. In such a case, the SearchPanelFilter property must be empty.

Note that the independent criteria file should be located in the SearchPanels sub-folder of the ESConfig or CSConfig area.

ShowMessage (String)
Allows to configure, by defining of a query, the condition required in order for a message display to be feasible. When the query results in at least one entry, a message appears, with the content of the query's 1st column-line.

e.g. to display a message when adding a Count action to a customer with open collection orders

```
<MerchandisingSiteNewForm Assembly="Entersoft.Mobile.ESMerchandize"
                          Type="Entersoft.Mobile.ESMerchandize.NewTaskFromSiteCommand">
   <Params>
      …
      <ShowMessage Type="System.String" Value="
           select 'Have in mind that the customer has pending collection orders.'
           from ESTMCollection where state=0 and fAddressGID ='[PARENT]'" />
   </Params>
</MerchandisingSiteNewForm>
```

SortBy (SortBy)
The screen's data alternative sorting criteria

Title (String)
The command's relevant screen caption.

ValidateDataEnabled (Boolean)
Property disabled for the ESMobile application.

Selection screens

FilterBy (String)
Provides the ability to limit the data of a list, based on the value of other Data entry screen fields.

ImageColumn (String)
The column linking a list entry to an image file.

ImageDirectory (String)
The image files storage folder.

ImageExtension (String)
The type of image files.

LoadDataOnOpenForm (Boolean)
Allows for direct display of data (value: true) or for display/refresh of data after filling in the individual search criteria (value: false).

This property is also available on a ListForm type screen.

SelectaAllEnabled (Boolean)
Allows display of the button related to adding bulk quantity for the total entries. Concerns the iOS platform only.

SelectAllQtyEnabled (Boolean)
Allows display of the button related to adding bulk quantity for the total entries. Concerns UWP & Android platforms only.

Data entry screen: EditForm type

ActionsCommand (String)
The available entries of menu button -Actions. The desired actions are defined using a CommandSelector type of command.

BaseInsert (String)
The screen's main insert query.

BaseUpdate (String)
The screen's main update query.

Editable (Boolean)
Gives the ability to prevent entry editing.

IsParamsPanel (Boolean)
Allows the display of a screen that states the required, for EBS view execution, parameters.

IsTask (Boolean)
Makes it possible to select a save status. Only applicable to the Task entity.

OnCompleteValidation (String)
Allows to configure, by defining a query, the condition required in order to be able to save a task as 2-Complete or 3-Cancel. When the query results in at least one entry, the save action is not executed and displays as error message with the content of the query's 1st column-line.

e.g. to prevent an appointment from being saved/completed, when the current shift is not active

```
<AppointmentEditForm Assembly="Entersoft.Mobile.ESMobile"
                     Type="Entersoft.Mobile.ESMobile.EditFormCreatorCommand">
    <Params>
      …
      <OnCompleteValidation Type="System.String" Value="
            select 'No active shift. Competing the appointemnet is not allowed.'
            from ESTMShift
            where date(StartDate)=date('now') and EndDate is not null" />
   </Params>
</AppointmentEditForm>
```

RelatedFields (String)
Gives the ability of "synchronizing" the value of a field, based on another field's value modifications. The required definition should:
MainField1[,]RelatedField1[=]Relation1[,]RelatedField2[=]Relation2[;]
MainField2[,]RelatedField1[=]Relation1[,]RelatedField2[=]Relation2

e.g. to assign a value in fields "Profession description" & "Discount" of the customer form, from fields "Profession" & "Payment method" respectively

```
<CustomerEditForm Assembly="Entersoft.Mobile.ESMobile"
                  Type="Entersoft.Mobile.ESMobile.EditFormCreatorCommand">
    <Params>
      …
      <RelatedFields Type="System.String" Value="
          fActivityCode[,]ActivityDescription[=]
          select Description,Description from ESGOZActivity where Code = '[fActivityCode]'[;]
          fPaymentMethodGID[,]Discount[=]
          select NumericField1,NumericField1 from ESFIPaymentMethod where GID = '[fPaymentMethodGID]'" />
   </Params>
</CustomerEditForm>
```

RequiredFields (String)
The mandatory fields (comma-separated list). It's also possible to define a condition (using numeric fields), which will render filling in the fields mandatory.

⊗ Obsolete property, it is recommend that its use be avoided. This functionality is now available via an appropriate configuration of the DetailView file of the EditForm screen (property Required).

TaskType (String)
The task's type. For the tasks Sales appointments & Sales task, a value of 1 & 3 is indicated, respectively. For any other type of task the corresponding InternationalID is indicated. Only concerns NamedTask type screens.

Data entry screen: DocForm type

AllowZeroLines (Boolean)
Allows the insertion of a document -based on task- that has no lines. Only applicable to the Document entity.

AutoSave (Boolean)
Allows the simultaneous creation & saving of an auto generated document. Only applicable to the Document entity.

CreateHeaderQuery (String)
The query that assigns values to the fields of a header of an auto generated task-document.

CreateLinesAnalysisQuery (String)

The query that assigns values to the analysis line fields of an auto generated document. Only applicable to the Document entity.

CreateLinesQuery (String)
The query that assigns values to the line fields of an auto generated task-document.

CreateTaskItemSQL (String)
The query that assigns values to the auto generated task's line fields. Only applicable to the Task entity.

This property is available only in NewTaskFromCampaign type commands.

DetailRelatedFields (String)
Gives the ability of "synchronizing" the value of a field, based on another field's value modifications. Only applicable to the Task entity.

Obsolete property, it is recommend that its use be avoided. This functionality is now available through the use of the Business Rules tool (Activation: 0-OnChangeField).

DetailRequiredFields (String)
The mandatory fields. Only applicable to the Task entity.

Obsolete property, it is recommend that its use be avoided. This functionality is now available through the use of the Business Rules tool (Activation: 2-OnSave).

DocType (String)
The document's type. Defining this property is necessary only in cases where the document's type does not result from the configuration of the action's call button. Only applicable to the Document entity.

HasValidData (String)
Allows to configure, by defining a query, the condition required in order to be able to create a new document. When the query returns no entries, the action is not executed. Only applicable to the Document entity.

e.g. to execute an add new Order action, only if the current shift is active

```
<NewDocumentfromSite                                                    Assembly="Entersoft.Mobile.ESMobile"
Type="Entersoft.Mobile.ESMobile.NewDocumentFromSiteCommand">
    <Params>
      …
      <HasValidData Type="System.String" Value="
           select 0
           from ESTMShift
           where date(StartDate)=date('now') and EndDate is null" />
    </Params>
</NewDocumentfromSite>
```

HeaderRelatedFields (String)
Gives the ability of "synchronizing" the value of a field, based on another field's value modifications. Only applicable to the Task entity.

Obsolete property, it is recommend that its use be avoided. This functionality is now available through the use of the Business Rules tool (Activation: 0-OnChangeField).

HeaderRequiredFields (String)
The mandatory fields.

Obsolete property, it is recommend that its use be avoided. This functionality is now provided, either through the appropriate DetailView file configuration of the Docform screen (property Required), or through the Business Rules tool (Activation: 2-OnSave).

NoDetail (Boolean)
In the case of a task where lines cannot be managed (e.g. Appointment)m specifying value "true" is mandatory. Only applicable to the Task entity.

NullCustomer (Boolean)
In the case of an item movement document type (e.g. Stock delivery note) the property must be declared as true. Only applicable to the Document entity.

ShowDocument (Boolean)
Allows to show or hide an auto generated document. Only applicable to the Document entity.

TaskType (String)
The task's type. Specify the InternationalID of the task type. Only applicable to the Task entity.

ModalForm screen type

DoneButtonTitle (String)

The caption regarding the screen's "Accept" button.

ⓘ This property only works if the screen is directly called from a menu option.

Modal (Boolean)
Gives the ability to display a screen as a modal window.

ⓘ This property only works if the screen is directly called from a menu option.

MultiSelect (Boolean)
Enables multiple selection of a list's entries.

OnSelectCommand (String)
Define the action being executed by pressing "Select". The action is performed on the list's selected entries.

ⓘ This property only works if the screen is directly called from a menu option.

Command / Variables

This appendix lists the variables available for use in properties of the command, where syntax of a query is required (properties: BaseSelect, BaseInsert, Filter, etc). Some "classic" variables are available for use on all types of screens. However, for certain types of screens, the list of available variables is now enhanced with additional ones. Note that, regardless of the type of screen and property, the variable to be used should be declared in brackets (e.g. [CURRENT])

All types of screens

[CURRENT]
[PARENT]
[USERID]
[APPLICATIONID]
[BRANCHGID]
[CAMPAIGNGID]
[FITEMGID]
[FCATALOGUEITEMGID]
[TASKBEGINDATE]
[TASKENDDATE]

Screen type: Add lines list (e.g. AddLineForm)

[FADDRESSGID]
[DOCTYPE]
[FCAMPAIGNGID]
[PRODUCTPROPOSALGID]
[LEVEL]
[MULTIPLIER]

[FIELD] The variable is fed directly with the field value of the Header part of the DocForm screen, from which the line add lines list is called, i.e. from a field of the ESTMTask table for the Task entity, or the ESFISalesDocument table for the Document entity.

e.g. [fTradeAccountGID] to be fed from the “Trade account” field of the task or document header

Screen type: Local report (DataGridReport)

[PERIOD]
[SALESPERSON]
[UDFFIELD1]
[UDFFIELD2]
[UDFFIELD3]
[UDFFIELD4]
[UDFFIELD5]

Mobile parameters

The mobile parameters can be configured from the back office. It is possible to differentiate the parameter value, both at an ESMobile application level and a specific user level. The parameters are transferred to the local database via the data initialization process.

This appendix lists the available mobile parameters having grouped them based on the "area" of the ESMobile application to which they provide a functionality. Note that most of the parameters apply to all ESMobile applications. The parameters that, by way of exception, concern a specific application, are marked accordingly.

General

Administrator_Email
The email address where application error messages are sent. e.g. admin@wwf.gr

AllCustomers
Enables the user rights to send the full customer list, via the data synchronization process. 0-No or 1-Yes
ⓘ This parameter can be configured using the "All customers" option of the "Communication permissions" field of the device.

AllowReceive
Configure the call permission for the attachment delivery process when communication takes place via the “mobile data” service. 0-No or 1-Yes
ⓘ This parameter can be configured using the "Allow download" option of the "Communication permissions" field of the device.

AllowSend
The call permission for the data delivery process can be configured when communication takes place via the “mobile data” service. 0-No or 1-Yes
ⓘ This parameter can be configured using the "Allow delivery" option of the "Communication permissions" field of the device.

AllowSyncPushLargeFiles
The call permission for the attachment delivery process can be configured when communication takes place via the “mobile data” service. 0-No or 1-Yes
ⓘ This parameter can be configured using the "Send attachments" option of the "Communication permissions" field of the device.

AttachedSitePhotoCategory
The category code that characterizes the image files (attachments) of the point of sales. e.g. SITE_PHOTO
ⓘ This parameter can be configured from company parameter «Attachment category for site photos».

AttachmentPath
⊗ Parameter disabled for the ESMobile application.

AutoCheckVersion
Enables the feature of the automatic, upon user login, compatibility check for the version installed on the device with the version installed on the IIS server. 0-No or 1-Yes

CallBefore
⊗ Parameter disabled for the ESMobile application.

CradleCommand
⊗ Parameter disabled for the ESMobile application.

Culture
Configures the display format for localization elements (dates & numbers). Concerns the iOS platform only. e.g. el-GR

CurrencyNegativePatern
Display format for fields of type “Currency value” with a negative value. e.g. 15
ⓘ The available options are:

0	($n)	4	(n$)	8	-n $	12	$ -n
1	-$n	5	-n$	9	-$ n	13	n- $

2	$-n	6	n-$	10	n $-	14	($ n)
3	$n-	7	n$-	11	$ n-	15	(n $)

CurrencyPositivePattern

Display format for fields of type “Currency value” with a positive value. e.g. 3

The available options are:

0	$n	1	n$	2	$ n	3	n $

CurrencySymbol

The currency symbol. To hide the symbol, specify character “empty”’. e.g. € or EUR

ES_TAXISNET_PUBLICAFM

The login credentials for the VAT identification service of taxis.

This parameter can be configured via the relevant company parameter.

fDamagedGoodsWHGID xVan

The W/H that’s been marked as the damaged goods warehouse.

This parameter can be configured from field «Damaged goods» of the user’s services profile.

Googlekey

The key to use Google's map service.

This parameter can be configured via the relevant company parameter.

GPS_State

Configure the feature that tracks the user’s position. The actions during which position is tracked are default by the ESMobile application and listed in the table below. In case the device GPS is turned off, the GPS-disabled detection is recorded as a distinct event in the device event file. This recording is performed once per day. 0 & 1 Track, 2-No trace

Entry type	Action
14	Sales appointment-Start
6	Sales appointment-Complete
11	Sales task-Complete
10	Collection-Complete
19	Other task-Complete
20	Work on site-Arrival
21	Work on site-Start
15	Work on site-Complete
16	Replace on site-Complete
17	Preventive maintenance-Completion
7	Sales order
12	Quotation
22	Sales return note
23	Other - Sales document
24	Transfer document
26	Open attachment

This parameter can be configured by field “Trace method” of the device.

GPS_TimeOut

The standby time for GPS position tracking (in seconds). Concerns UWP & Android platforms only. e.g. 5

HybridOnlineReports_BridgeID

The Bridge link to the ESAnalyzer application.

HybridOnlineReports_Host

The ESAnalyzer server.

HybridOnlineReports_SubscriptionID

The ESAnalyzer application subscription code.

HybridOnlineReports_SubscriptionPassword

The ESAnalyzer application password.

HybridOnlineReports_Version
The ESAnalyzer app version number.

KeyboardMainLanguage
Parameter disabled for the ESMobile application.

Lists_RecordCount
Displays the "Number of entries" information in the data lists. Concerns UWP & Android platforms only. 0-No or 1-Yes

MailClient
The application that sends E-mails. Concerns the iOS platform only. 0-Native iOS or 1-MS Outlook
To be able to send an E-mail containing an attached file, a specify value 0-Native iOS.

MailMergeMode
Configures the behavior for the task-document delivery via E-mail process 0-HTML, 1-PDF, 2-PDF/Speech or 3-Inactive

Map_NearestSiteRadius
The default value for the search km radius of screen "Nearest customers". e.g. 10

Memo_Disable_FolderButton
Disables the ability to attach an image file by selecting an existing photo. Concerns the iOS platform only. 0-No or 1-Yes

MessageOnLoginCommand
The command that specifies the data in the message list to the user. E.g. UnreadUserMessageListForm

MobileDataBasedOn
Enables the ability to assign a customer list based on territory. 0-No or 1-Yes
This parameter can be configured via the relevant company parameter.

ModalNumericKeyboard
Enables the ability of closing the keypad screen only through the “OK” or “Cancel” buttons. Concerns the iOS platform only. 0-No or 1-Yes

NumberDecimalSeparator
The character used to separate the decimal digits of a number. Note that this parameter indicates the character with which the numeric fields are saved in the database.
In case the comma character is designated, a relevant adjustment is also required in the txt files of the data import scenarios (“Decimal point” field of the “Source info” screen)

NumberGroupSeparator
The character used to separate thousands in numbers. Note that this parameter indicates the character with which the numeric fields are saved in the database.

NumericKeyboardSizeFactor
The size of the numeric keypad screen. Default values from 1.1 to 1.8. Concerns the iOS platform only. e.g. 1.3

OnlineServices
Configure the call permission for online printing when communication takes place via the “mobile data” service. 0-No or 1-Yes
This parameter can be configured using the "Online services" option of the "Communication permissions" field of the device.

PanicSMSnumber
Parameter disabled for the ESMobile application.

Photo_Url
The URL area where image files related to photo captures are saved. e.g.http://192.168.1.195/ESMobilePhotos/
This parameter is configured by company parameter «Photos from mobiles - Save in folder».

ReceiveNewVersion

Configure the call permission for the version downloading process when communication takes place via the “mobile data” service. 0-No or 1-Yes

This parameter can be configured using the "Download new version" option of the "Communication permissions" field of the device.

SFList_GroupFieldCustomer
The criterion used to group the data of a list related to the Customer entity. Concerns UWP & Android platforms only.

SFList_GroupFieldItem
The criterion used to group the data of a list related to the Item entity. Concerns UWP & Android platforms only.

ShiftFunctionality xVan
The functionality assigned to the shift. Selecting options 1 or 2 results to the automatic activation, when entering the application and provided that there is no active shift, of the shift starting process. Selecting option 2 also results to the automatic activation of several checks related to issuing documents and data synchronization. 0-Nothing 1-Display on login or 2-Full control.

ShiftOnLoginCommand xVan
The command executed upon login to the application, to call the “Start shift” process. Works in conjunction with the ShiftFunctionality parameter. e.g. ShiftOnLoginCommand

Sync_ReplaceInvalidContext
Determines whether, in case of discrepancy between the form-command of an EditForm screen, the content of the incompatible fields will be replaced with value “null”, 0-No or 1-Yes

Main entities

CatalogueItemFieldImageName
Parameter disabled for the ESMobile application.

DaysNewPerson MedRep
Number of days to qualify a customer as a new entrant to the device user’s territory. e.g. 7

GPS_AskPinSite
Activates, when entering a new address, the functionality related to the identifying the current geographical position. 0-No or 1-Yes

ImageFileExtension
The type of image files. In order for the item-item image linking to be feasible, folder ProductImages must contain relevant image files of the specific type. e.g. jpg

Item_ShowThumbs
Enables the display of an image column in search lists. Concerns the iOS platform only. 0-No or 1-Yes

Item_URL_first_part
Parameter disabled for the ESMobile application.

ItemFieldImageName
Parameter disabled for the ESMobile application.

LegalSiteTypeDefaultCode
The default, when entering a new address, address type. e.g. HEAD OFFICE

The parameter’s content must match the entry code of an “ESGOZSiteType” table.

PhysicalSiteTypeDefaultCode
The default address type, when entering a new contact person. e.g. RESIDENCE

The parameter’s content must match the entry code of an “ESGOZSiteType” table.

PreferredCountryInternationalID
The default country code, when entering a new address. e.g. GR

ⓘ The parameter's content must match the entry code of an "ESGOZCountry" table entry.

Site_IBAN_ValidationField
The address field where the bank account's IBAN is indicated. e.g. StringField1

Task entity

App_Days_Edit_Allowed
The number of days during which the uesr can edit a past appointment. By specifying value 0, the check is completely deactivated. e.g. 7

Appointment_ContextActions_Disabled
⊗ Parameter disabled for the ESMobile application.

Appointment_creator_enable
The scenario of bulk insert entries via the "New" button of the "Calendar" screen. Concerns the iOS platform only. 0-Simple or 1-Full

Appointment_is_Container
Hide the add new task or document actions from the customer & point of sales interface. 0-No or 1-Yes

AppointmentInternationalID
The International ID of "Sales appointment" task type. e.g. ES.SAP
ⓘ This parameter can be configured via the relevant company parameter.

AppointmentStartControl
Activates a check when calling the "Start" action on an appointment. If an active appointment already exists, at the start of another appointment, a prohibitive message appears. 0-No or 1-Yes
ⓘ Prerequisite: company parameter "The sales meeting and sales task act as all other task types" (AppTodoAsTask) must have value 1-Yes.

AppointmentStartControlRange
The check range when calling the "Start" action on an appointment. Works in conjunction with the AppointmentStartControl parameter and only when that has a value of 1-Yes. 0-Today or 1-Any time
ⓘ Prerequisite: company parameter "The sales meeting and sales task act as all other task types" (AppTodoAsTask) must have value 1-Yes.

AppointmentTargetFieldName
The appointment field where the budgeted turnover of the appointment is assigned. Concerns the iOS platform only. e.g. NumericField1

AppTodoAsTask
Enables the ability to manage ES.SAP-Sales apppointment and ES.STK-Sales tasks types of tasks as "general" tasks. Concerns the iOS platform only. 0-No or 1-Yes
ⓘ This parameter can be configured by company parameter "The sales meeting and sales task act as all other task types".

Calendar_show_closed_tasks
Displays the completed or canceled appointments on the Calendar screen 0-No or 1-Yes

CaseInternationalID
The International ID of "Case" task type. e.g. ES.CASE
ⓘ This parameter can be configured via the relevant company parameter.

ComplaintInternationalID
The International ID of "Complaint" task type. e.g. ES.COM
ⓘ This parameter can be configured via the relevant company parameter.

DefaultMinutesAppToEnd
⊗ Obsolete parameter, it is recommend that its use be avoided. The functionality of this parameter is now provided by configuring the "Usual duration" field of the task type in question.

DefaultMinutesAppToPrepare

Obsolete parameter, it is recommend that its use be avoided. The functionality of this parameter is now provided by configuring the "Preparation time" field of the task type in question.

DefaultMinutesPRMToEnd

Obsolete parameter, it is recommend that its use be avoided. The functionality of this parameter is now provided by configuring the "Usual duration" field of the task type in question.

DefaultMinutesROSToEnd

Obsolete parameter, it is recommend that its use be avoided. The functionality of this parameter is now provided by configuring the "Usual duration" field of the task type in question.

DefaultMinutesSOSToEnd

Obsolete parameter, it is recommend that its use be avoided. The functionality of this parameter is now provided by configuring the "Usual duration" field of the task type in question.

DefaultMinutesTskToEnd

Obsolete parameter, it is recommend that its use be avoided. The functionality of this parameter is now provided by configuring the "Usual duration" field of the task type in question.

DefaultWinLossCode

The default, upon competion of a sales opportunity, win-loss reason. e.g. PRICE

The parameter's content must match the entry code of an "ESTMZOppWonLost" table.

EndWorkingTime

The end time of working hours. The information is used by the bulk add appointment processes. e.g. 17:00

ESTMTaskItemExtended

Activates the functionality that extends the task lines table, 0-No or 1-Yes

MorningZoneEndTime

The morning zone end time. This information is used to define the non-grayed area of the calendar screen. e.g. 14:00

MorningZoneStartTime

The morning zone starting time. This information is used to define the non-grayed area of the calendar screen. e.g. 09:00

OpportunityInternationalID

The International ID of "Sales opportunity" task type. e.g. ES.OPP

This parameter can be configured via the relevant company parameter.

Photo_PreferredQuality

The image files' degree of compression. Specifies the file size in bytes. e.g. 70

Photo_PreferredSize

The default dimensions for image type files. Concerns the iOS platform only. e.g. 346.245

Photo_PreferredSize_Cross

The % of size reduction for image-type files. Concerns UWP & Android platforms only. e.g. 70

POS_related_property_set_code

The code of "Collect data" property group related to the questionnaire designed for point-of-sales status tracking. e.g. RDC_POSStatus

This parameter can be configured "POS related property set code (Mobile RDC)".

Questionnaire_Rate_Decimals

Parameter disabled for the ESMobile application.

Questionnaire_Rate_Maximum

Parameter disabled for the ESMobile application.

Questionnaire_Rate_Minimum

Parameter disabled for the ESMobile application.

Service_PRM_fTermServiceGID — Service

The service used when entering an ES.PRM-Preventive maintenance task.

Service_ROS_fTermServiceGID — Service

The service used when entering an ES.ROS-Swap on site task.

This parameter can be configured via the relevant company parameter.

Service_show_document_created_by_SOS — Service

Automatic display of the sales delivery note issued in the context of a specific service task. — 0-No or 1-Yes

This parameter can be configured via the relevant company parameter.

Service_SOS_fTermServiceGID — Service

The service used when entering an ES.SOS-On site task.

This parameter can be configured via the relevant company parameter.

Service_van — Service

Activates the functionality related to van warehouse monitoring. — 0-No or 1-Yes

SOS_AskUpdateActualStartDateMessage

Parameter disabled for the ESMobile application.

SOS_AskUpdateArrivalDateMessage

Parameter disabled for the ESMobile application.

SOS_ReadOnlyControl — Service

Obsolete parameter, it is recommend that its use be avoided. This parameter's functionality is now provided by configuring the "Deny intervention level" field of the task type in question.

SOSInternationalID — Service

The international ID of “Task on site” task type. — e.g. ES.SOS

This parameter can be configured via the relevant company parameter.

StartWorkingTime

The start time of working hours. The information is used by the bulk add appointment processes. — e.g. 09:00

Task_BarcodeSaveField

The task line field where the barcode, used during item selection, is assigned. — e.g. StringField1

Task_failure_status

The caption referring to status option (3). — e.g. Canceled

Task_in_progress_status

The caption referring to status option (1). — e.g. In Progress

Task_MCH_GroupField

Obsolete parameter, it is recommend that its use be avoided. This parameter’s functionality is now provided by configuring the "Grouping field" field of the task type in question.

Task_MCH_OrderQuantityFormula

Obsolete parameter, it is recommend that its use be avoided. This parameter's functionality is now available by using the Business Rules tool.

Task_mch_ShelfShareCategory

The item grouping field used by the “Shelf share” task type. — 0-Family or 1-Group or 2-Category or 3-Subcategory

Task_open_status

The caption referring to status option (0).	e.g. Open

Task_OrderBy_Definition

Obsolete parameter, it is recommend that its use be avoided. This parameter's functionality is now provided through an appropriately configured of the SortBy section of the DocForm screen Actions file.

Task_RDC_CopyLastSurvey

Activates, when entering a new “Collect data” questionnaire, the functionality of auto populating the responses based on the most recent responses.	0-No or 1-Yes

Task_SavePerLine

Saves the task as “temporary” (RecordState 3) with each new line being added.	0-No or 1-Yes

Task_success_status

The caption referring to status option (2).	e.e. Succesful

TaskItem_IsFocusedField

Parameter disabled for the ESMobile application.

TaskItem_PrevCountQty_Field

Parameter disabled for the ESMobile application.

TaskItem_PrevSoldQty_Field

Parameter disabled for the ESMobile application.

TaskItemInstDateField

The task line field used as the deinstallation date in an “Installation” task type.	e.g. DateField1

TaskItemInstSNField

The task line field used as a serial number in an “Installation” task type.	e.g. StringField1

ToDoInternationalID

The International ID of “Sales task” task type.	π.χ. ES.STK

This parameter can be configured via the relevant company parameter.

VisitPlanSelectionEnabled

Enables, in the bulk create appointment based on plan process, the ability to select meetings.	0-No or 1-Yes

YammerClientID

Obsolete parameter, it is recommend that its use be avoided.

YammerConversationURL

Obsolete parameter, it is recommend that its use be avoided.

YammerEnabled

Obsolete parameter, it is recommend that its use be avoided.

YammerGroupID

Obsolete parameter, it is recommend that its use be avoided.

YammerRedirectURL

Obsolete parameter, it is recommend that its use be avoided.

YammerSecret

Obsolete parameter, it is recommend that its use be avoided.

Document / Sales entity

ApplyInvoicePolicy

Configure the call permission for the online business policy application process when communication takes place via the “mobile data” service.	0-No or 1-Yes

ⓘ This parameter can be configured using the "Apply invoicing polity" option of the "Communication permissions" field of the device.

ApprovalRequestInternationalID xVan
The international ID of “Request for exceeding credit limit” task type.

Barcode_AddItemAfterScan
The mode of operation of the barcode scanning area. 0-Nothing or 1-Insert line

Barcode_AutoQnt
Simultaneous addition of an item & quantity of the barcode scanning area. 0-No or 1-Yes

Barcode_ClearAfterScan
Clears the barcode scanning area after adding a line. 0-No or 1-Yes

Barcode_LogNotFound
Records atttempts to find an item via barcode to the “failed” events log. 0-No or 1-Yes

Barcode_SearchMethod
The order in which the barcode identification check is performed. e.g. 1-2

ⓘ The available options are:
1-field “Item code” of table Items (ESFIItem)
2-field “Barcode” of the table Items (ESFIItem)
3-field “Barcode” of the Multiple item codes table (ESMMItemcodes)
4-check the combined table for barcode check based on a formula in the BarcodeProcessor.xml file (ESMobile\ESConfig device area). The individual properties of the file should be designated as follows: Start,Length.

e.g. for barcodes related to Item, Quantity, Color, Size with the following specifications

Item	6 characters	The search is first attempted with the code and then with the item barcode
Quantity	4 characters	
Decimals	2 characters	
Color	1 characters	The search is attempted with the color code
Size	1 characters	The search is attempted with the size code

```
<BarcodeProcessor Assembly="Entersoft.Mobile.ESMobile"
                  Type="Entersoft.Mobile.ESMobile.BarcodeProcessorCommand">
   <Params>
      <ItemDefinition Type="System.String" Value="0,6" />
      <QuantityDefinition Type="System.String" Value="6,4" />
      <QuantityDecimalsDefinition Type="System.String" Value="10,2" />
      <ColorDefinition Type="System.String" Value="12,1" />
      <SizeDefinition Type="System.String" Value="13,1" />
      <SQL Type="System.String" Value="" />
   </Params>
</BarcodeProcessor>
```

e.g. for barcodes related to Item, Quantity, Lot with the following specifications

Item	6 characters	The search is first attempted with the code and then with the item barcode
Quantity	2 characters	
Lot	5 characters	The search is attempted with the lot code

```
<BarcodeProcessor Assembly="Entersoft.Mobile.ESMobile"
                  Type="Entersoft.Mobile.ESMobile.BarcodeProcessorCommand">
   <Params>
      <ItemDefinition Type="System.String" Value="0,6" />
      <QuantityDefinition Type="System.String" Value="6,2" />
      <QuantityDecimalsDefinition Type="System.String" Value="" />
      <ColorDefinition Type="System.String" Value="" />
      <SizeDefinition Type="System.String" Value="" />
      <LotDefinition Type="System.String" Value="8,5" />
      <SQL Type="System.String" Value="" />
   </Params>
</BarcodeProcessor>
```

Barcode_UseCamera
Enables the use of the camera as a barcode scanner device. 0-No or 1-Yes

Barcode_UseKeyboard
Displays the keyboard in a barcode scanning area. 0-No or 1-Yes

cce_duration_days xVan

The default duration of validity for exceeding limit requests (in days).	e.g. 3

CompetitionScroller

Parameter disabled for the ESMobile application.

CountCatalogueItems xVan

Determines whether the stock count quantity concerns a catalogue item. Used in calculation algorithms for the Marketing program targets. Concerns the iOS platform only. 0-No or 1-Yes

This parameter can be configured in company parameter «Counting in catalogue items».

DOC_ADD_SEPARATOR_Prefix_Series

A prefix-series separator participates in the document code. 0-No or 1-Yes

This parameter can be configured from company parameter «Document Code - Display the separator between the Prefix and the Series».

DOC_ADD_SEPARATOR_Series_Number

Displays the series-number separator in the document code. 0-No or 1-Yes

This parameter can be configured from company parameter «Document Code - Display the separator between the Series and the Document number».

Doc_AllowEditDiscount1

Edit field Discount-1 of the document line. 0-No or 1-Yes

Doc_AllowEditDiscount2

Edit field Discount-2 of the document line. 0-No or 1-Yes

Doc_AllowEditDiscount3

Edit field Discount-3 of the document line. 0-No or 1-Yes

Doc_AllowEditPrice

Edit field Value of the document line. 0-No or 1-Yes

Doc_AllowFreeProductRewards xVan

Enables, during the process of assigning Marketing program rewards, the ability to also integrate “Free item” rewards into the invoice. Concerns the iOS platform only. 0-No or 1-Yes

Doc_AllowSaveSet_WithoutOnlineCommercialPolicy xVan

Enables a check process for a document that contains a composite item. 0-No, 1-Warning, 2-Prohibition

Doc_AllowZeroLines

Add document without lines. 0-No or 1-Yes

Doc_AllowZeroQty

Add line & analysis line entry with zero quantity. 0-No or 1-Yes

Doc_AssignDiscount_Field

The document line field to which a discount is assigned via action «Bulk discount update». Disc1 or Disc2 or Disc3

Doc_AutoApplyCommercialPolicy

Obsolete parameter, it is recommend that its use be avoided. This parameter’s functionality is now provided by configuring the "Auto apply" field of the online business policy.of the document type in question.

Doc_AutoApplyCommercialPolicy_SiteField

Specialize in the auto apply company policy process, at a point of sales level, by defining a specific field of the address entity. The user must have made sure that this field’s value is 0 or 1. e.g. NumericField1

Prerequisite: the document type has the auto apply company policy process enabled.

Doc_AutoOpenBarcodePanel

Auto displays the barcode scanning area. 0-No or 1-Yes

Doc_BarcodeSaveField

The barcode, used during item selection, is assigned to this document line field. e.g. StringField1

Doc_CancelPermissionRequest

Displays, when calling for a document cancellation action, a screen for the authorized user to specify a verification code. 0-No or 1-Yes

Doc_CashCollectionOnCreditExcess xVan

Enables the ability, when issuing an invoice with credit limit excess, to automatically issue a cash receipt with the exceeding amount. 0-No or 1-Yes

Doc_CollectionInCash_AutoHide xVan

Enable the ability to hide the receipt when issuing a cash invoice. Concerns the iOS platform only. 0-No or 1-Yes

Prerequisite: company parameter “Issue Invoice in cash on common document” (Doc_InCash_PaymentInDocument) should have value 0-No.

Doc_ColorSizeSingle

Parameter disabled for the ESMobile application.

Doc_CommercialPolicy_Editable

The degree of editing check to document elements after accepting the results of the online business policy. 0-Nothing, 1-Anything ή 2-Only promotional actions

Doc_CustomCreditControl xVan

Specializes the credit check process, by defining the name of a GetDataCommand type command. e.g. GetCheckListDocuments

Doc_DimensionalGrid_ShowBalance

Displays, in the quantity input screen per color-size, the information concerning the current balance per dimension. It requires balances to be updated via option “Item balances” of the “Synchronization” menu. 0-No or 1-Yes

Doc_DimensionalGrid_ShowDescription

Displays, in the quantity input screen per color-size, the information concerning the dimension description. 0-No or 1-Yes

Doc_DisablePriceList_TAPC

Disables the pricelist application based on the customer pricing group 0-No or 1-Yes

Doc_ESFILineCheckList_TradeAccountSiteField xVan

The field of table ESFILineCheckList where, when executing the online credit policy process, the customer address of the current document is assigned. e.g. UDFString1

Doc_ESFILineCheckList_TradeTypeField xVan

The field of table ESFILineCheckList where, when executing the online credit policy process, the transaction type of the current document is assigned. e.g. UDFString2

Doc_GetTradeTypeCode

Parameter disabled for the ESMobile application.

Doc_GetTradeTypePaymentMethod

Parameter disabled for the ESMobile application.

Doc_GiftDiscount_Field

The document line field where a discount is assigned using action “Gift”. Disc1 or Disc2 or Disc3

Doc_GroupField

The document line field used as a line grouping field. e.g. fItemFamilyCode

Doc_InCash_PaymentInDocument xVan

Enables the ability to issue a cash invoice in a common document. Concerns the iOS platform only. 0-No or 1-Yes

This pamareter can be configured in company parameter «Issue Invoice in cash on common document».

Doc_InvestigateItemLimit

The number of amounts that corresponds to the "Select all" button of the “insert lines list” type screen. e.g. 30

Doc_InvoiceCash_PaymentMethod

Parameter disabled for the ESMobile application.

Doc_InvoiceInCashEditable xVan

Allows the user to directly mark an invoice as “cash”. Specifically in case the invoice customer or payment method have zero credit days, the document is automatically marked as “cash” by the application and the user cannot change it.

0-No, 1-Yes, 2-Only when there is no payment delay

Doc_ItemDiscountField

The field of the document line where an item discount is assigned.

Disc1 or Disc2 or Disc3

Doc_ItemInvForm_DefaultQty

The default quantity that corresponds to the “Select all” button of the “insert lines list” type screen.

e.g. 1

Doc_ItemInvForm_Formula

The column calculation formula of the add lines list of a document, which is calculated dynamically, based on other screen elements.

e.g. to calculate the NetPrice column based on Price & Item discounts

```
[Price]-([Price]*([Disc1]+[Disc2]+[Disc3])/100)@NetPrice
```

where the part @ indicates the name of the calculated column

Please note that all individual elements of the formula should be present as distinct columns in the select query of the add lines list.

```
select
  i.GID GID, i.Code Code, i.Description Description,
  i.Price Price,
0.0 Disc1, i.Discount Disc2, 0.0 Disc3, 0.0 NetPrice,…
```

Doc_ItemInvForm_Show_Discs_Price

Enables the pricelist application on an add lines list type of screen on a document.

0-No or 1-Yes

Doc_LimitForCashCollection xVan

The limit of the sales invoice value, to allow for its collection in cash.

e.g. 5000

Doc_LineItemTotal_GroupByField

Parameter disabled for the ESMobile application.

Doc_max_refers_to_user_discount

The exceeding max discount check exclusively concerns the field of the document line defined in mobile parameter “Doc_AssignDiscount_Field”.

0-No or 1-Yes

Doc_MaxDiscCheck_Exclude_100

Disables the check for exceeding maximum discount based on ordering terms for 100% discount (1-Yes), or does not disable it (0-No).

0-No or 1-Yes

Doc_OrderBy_Definition

Obsolete parameter, it is recommend that its use be avoided. This parameter's functionality is now provided through an appropriately configured of the SortBy section of the DocForm screen Actions file.

Doc_OrderLinesBy

Obsolete parameter, it is recommend that its use be avoided. This parameter's functionality is now provided through an appropriately configured of the SortBy section of the DocForm screen Actions file.

Doc_Pricelist_type

Parameter disabled for the ESMobile application.

Doc_PrintLog

Parameter disabled for the ESMobile application.

Doc_PrintSalesDocumentCommand

Parameter disabled for the ESMobile application.

Doc_RePrintPermissionRequest

Displays, when calling for a document re-print action, a screen for the authorized user to specify a verification code.

0-No or 1-Yes

Doc_SavePerLine
Saves the document as “temporary” (RecordState 3) with each new line being added. Concerns a specialized functionality and it is recommended to be used only in installations where the number of lines per document is usually very large. This feature can not be enabled in documents where the document series has been entered. 0-No or 1-Yes

The status of a document, when it comes to the data synchronization process, is reflected in the RecordState field of the document header. The possible statuses are:

- 0-Local. The document is stored only on the local database. It can be sent to the back office via the data synchronization process.
- 1-Central. The document is stored on the central & local database. It is excluded from the data synchronization process.
- 2-Pending. The document is stored only on the local database. It is excluded from the data synchronization process.
- 3-Temporary. The document is stored only on the local database. It is excluded from the data synchronization process.

Doc_SavePrint
Parameter disabled for the ESMobile application.

Doc_SaveSync
Parameter disabled for the ESMobile application.

Doc_Series_Number_Max_Length
Number of digits in the numerical part of the document code. e.g. 5

This parameter can be configured from company parameter “Digits count in numeric segment of the document code”.

Doc_SetPrintedAtFirstPrintout
Updates the document as “Printed” after printing the first copy. 0-No or 1-Yes

Doc_signature_enabled
Parameter disabled for the ESMobile application.

Doc_SiteDiscountFormula
Parameter disabled for the ESMobile application.

Doc_SiteDiscountPercentField
Parameter disabled for the ESMobile application.

Doc_SiteDiscountValueField
Parameter disabled for the ESMobile application.

Doc_TradeAccountDiscountField
The document line field where the customer discount is assigned. Disc1 or Disc2 or Disc3

Doc_TradeTypeCode
Parameter disabled for the ESMobile application.

Doc_UseCatalogueItems
Enables the list of catalogue items as the first level of the “insert lines list” type screen. Concerns the iOS platform only. 0-No or 1-Yes

Doc_VatInTotals
Calculates the VAT value on the total, per VAT category, net value of the document. 0-No or 1-Yes

DocumentLinePromotionDiscountField xVan
The document line field where the discount value is assigned, via the the Marketing program reward process. Concerns the iOS platform only. e.g. DiscountValue3

This parameter can be configured from company parameter “Document field line for the value discount due to marketing programs”.

eInvoicing_Offline xVan
How to handle a document in case of communication failure with the myDATA service. 0-Stop issuing, 2-Issue offline

eInvoicing_OfflineInvalidDoc xVan
How to handle a document in case of missing-erroneous, based on the myDATA service, data. 0-Stop issuing, 2-Issue offline

ESFISalesDocLineItemExtended
Enables the functionality that extends the document lines table. 0-No or 1-Yes

FISequentialDiscounts
Implementation method for discounts of the document line. 0-Cumulatively or 1-Sequentially

This parameter can be configured from company parameter “Items: application of line item discounts will progressively be "on the result" of the previous discount”.

LTMPPOSInternationalID xVan
The international ID for a task of type “Trade promotion program per POS”. Concerns the iOS platform only. e.g. ES.LTMPPOS

This parameter can be configured from company parameter “Long term marketing program for POS task type International code”.

OrderPerProductProposal
Deletes, when selecting a note, the document lines referring to an item “outside” of the note. 0-No or 1-Yes

PriceDecimals
The number of decimals for numeric value fields of type Value. Note that this parameter indicates the number of decimals saved in the database. Concerns the iOS platform only. e.g. 2

Print_2nd_copy_delay_in_sec
The print delay time between 2 copies (seconds). e.g. 2

Print_InWords_Mode
Parameter disabled for the ESMobile application.

Print_last_copy_delay_in_sec
The delay time after the last copy is printed (seconds). e.g. 2

Print_Mode
Parameter disabled for the ESMobile application.

Print_ZebraMacAddress
Parameter disabled for the ESMobile application.

PrintDialog_ShowCancel
Enables the feature to stop printing a document. 0-No or 1-Yes

ValueDecimals
Number of decimals for fields of type “Value”. e.g. 2

Document / Collections entity

Collection_Default_Note_Type
The default note type, when entering a new Note line. e.g. RECEIVABLES

Collection_DefaultAddLineMethod
The default way to add collection lines 0-Ad hoc and 1-Unpaid invoices list.

Collection_DefaultColPaymentMethod
Parameter disabled for the ESMobile application.

Collection_SaveMenu
Obsolete parameter, it is recommend that its use be avoided. This parameter’s functionality is now provided by configuring the "Save - Options" field of the task type in question.

Collection_ShowPopUpSave
Parameter disabled for the ESMobile application.

CollectionInternationalID

The International ID of “Collection” task type. e.g. ES.COL

This parameter can be configured via the relevant company parameter.

CollectionLimitPerCustomer

The cash collection limit per day & customer. e.g. 500

ColPayCashCode

The code for collection line of type “Cash”. e.g. CASH

The contents of this parameter should match that of the payment method with InternationalID = ES.PM_Cash.

ColPayCheckCode

The code for collection line of type “Note”. e.g. BILL OF EXCHANGE

The contents of this parameter should match that of the payment method with InternationalID = ES.PM_Check.

ColPayTransferCode

The code for collection line of type “Transfer”. e.g. TRANSFER

The contents of this parameter should match that of the payment method with InternationalID = ES.MoneyTransfer.

DefaultMinutesColToEnd

Obsolete parameter, it is recommend that its use be avoided. The functionality of this parameter is now provided by configuring the "Usual duration" field of the task type in question.

Doc_CollectionInCashProposedAmount

Parameter disabled for the ESMobile application. -

Doc_CollectionItem_SetDueDateNull

Parameter disabled for the ESMobile application.

Doc_CollectionItem_ValidateFields

Parameter disabled for the ESMobile application.

Doc_NoCashCollection_NoSeries

Parameter disabled for the ESMobile application.

Doc_PrintCollectionDocumentCommand

Parameter disabled for the ESMobile application.

Doc_SyncedCollectionReadOnly

Parameter disabled for the ESMobile application.