HP Asset Manager

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Tailoring

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Introduction

What is the aim of this guide?

This guide explains how to customize Asset Manager:

- At the level of the client workstation
- At the level of the database

Who is this guide intended for?

This guide is intended for the following persons:

- Asset Manager end users wishing to customize the user interface
- Asset Manager administrators who wish to customize an Asset Manager database

Contents of this guide

Chapter Customizing a Windows client

This chapter explains how to customize the Asset Manager user interface at the level of the client machines:

- Modules activated

- Toolbar
- Tabs
- General options
- Buttons

Chapter Using Views

This chapter explains how to create, display, delete, or modify views and how to associate them with buttons.

Chapter Customizing the database

This chapter explains how to customize an Asset Manager database:

- Customizing existing objects
- Creating new objects
- Preparing a customization in a test database
- Managing the tailoring process as a team

Chapter Database options

This chapter explains how to configure the database options.

These options are common to all client computers connecting to the database.

Conventions used in this guide

What follows is a list of the conventions that we use in this guide

Convention	Description
`Java Script Code`	Example of the code or command
`Fixed-width characters`	DOS command, function parameter or data format
...	Portion of omitted code or command.
Note: Extra information	Informative note
Important: Be careful...	Important information for the user
Tip: User tip	Tip to help you use the application
Warning: Exercise caution	Extremely important information for the user

Convention	Description
Object	Asset Manager interface object: menu, menu entry, tab or button.

The following conventions are also used:

- The steps that we ask you to follow in a specific order are shown as a numbered list. For example:
  1. First step
  2. Second step
  3. Third and last step
- All the figures and the tables are numbered according to the chapter in which they are found, and the order in which the appear in the chapter. For example, the title of the fourth table in chapter two will be prefixed by **Table 2-4**.

I Customizing databases

1 Customizing the database

Asset Manager Application Designer enables you to customize the database in order to tailor it to the needs of your enterprise.

This level of customization is restricted to an administrator.

Modifications are visible to Asset Manager users. All users view the database in the same way, as defined by the administrator. When the administrator modifies the name of a field or a link, the new name appears whenever it is used in Asset Manager, in particular in the list screens, detail screens, and when building queries.

The following sections provide a detailed explanation of how to customize the various objects in the Asset Manager database (tables, fields, links, indexes, screens, etc.):

- Existing objects.
- New objects.

Development best practices

Use a test functional domain to customize database objects

Recommendation

We recommend that you associate a new object or a new version of an object (a page or screen, for example) with a test functional domain before making it visible.

You can also mask the test functional domain to keep objects that are being developed hidden from users.

Justifications

As long as an object is incorrect, the functional domain to which it is linked is not generated as a Web service for Asset Manager Web.

Consequently, all objects (even valid ones) linked to the functional domain disappear from the Web services exposed by Asset Manager Web.

Implementation

To associate an object to a test functional domain:

1. Start the Windows or Web client.
2. Display the functional domains (**Administration/ Functional domains** link on the navigation bar).
3. Create the test functional domain by clicking New.

   To ensure that no Web service is generated for this functional domain, populate the **Web Service** (seWebService) field with the value **none**.

   Note the SQL name of the test functional domain.
4. Start Asset Manager Application Designer.
5. Select the new object or the object to modify.
6. Link this object to the test functional domain by entering the SQL name of the test functional domain in the object's **Domain** field.
7. Once the object has been tested and validated, link it to the appropriate exposed functional domain.

Tag the Web services

How applications other than the Windows client access the Asset Manager database

The Web services let applications other than the Asset Manager Windows client to query or modify the contents of the Asset Manager database.

These applications (Asset Manager Web, or tailored applications) interact with the database via functions provided by the Web services.

These functions are described in a WSDL document.

Note:

WSDL (Web Services Description Language) is a language that describes how to access an application's Web services.

A WSDL document describes each of the available services in XML format: Operations that can be performed, messages used, data types used, and communication protocols used.

The WSDL document is generated on the fly (it is not saved as a viewable file).

An application can read the WSDL document to determine which functions are available on the server.

This application can then use SOAP to call one of the functions listed in the WSDL document.

The WSDL document exposes the current database functions as well as the functions that were available at specific moments if the database was tagged at those specific moments.

What are the prerequisites for accessing the WSDL document?

- A valid HP AutoPass license for Asset Manager must be installed to be able access the Web services.
  - Asset Manager **Administration** guide, chapter **Installing License Keys**.
- Asset Manager Automated Process Manager must be started and the **Signal presence of database server** module (UpdateToken) must be enabled.

What objects are manipulated by the Web services?

The Web services functions can manipulate the following objects:

- Fields, links, indexes and screens of the database's tables
- Script and wizard type actions
- Filter queries for database table records

What tag identifier is used for the current version of the Web services?

The current version is identified as **HEAD**.

Why tag the Web services?

Tagging is done in order to track the state of the objects manipulated by the Web services at a given moment in time.

Using tagging, you can force applications that access the database, but do not do so via the Windows client, to use objects that correspond to the state of the database at a given moment in time.

This enables you to avoid any problems such as the following:

You are creating new query filters

You create the queries in the current database.

These queries are transmitted to the Web services (WSDL document tagged **HEAD**).

If you configured Asset Manager Web to access the database via the Web services tagged as **HEAD**, users will have immediate access to the query that you have just created.

If execution time for this query is very long, you may hinder the performance of the Web client.

If you configured Asset Manager Web to access the database via the Web services that were tagged when the database was stable, users will be able to access the database in a more stable state.

How do I tag the Web services at a given moment in time?

Once the structure of the database is in a state that you want to save:

1. Start Asset Manager Application Designer.
2. Connect to the database (**File/ Open.../ Open existing database** menu).
3. Tag the Web services (**Action/ Tag web service...** menu).

   Note:

   If you re-tag the Web services with an identifier that has already been used, the definition of the stored Web services is updated. If you recompile the code that uses the Web services in your development environment, the errors that are displayed will underscore the incompatibilities with the previous tagged version.

4. If any error messages indicate that inconsistencies exist between the objects manipulated by the Web services and the database structure, correct these inconsistencies and then try to tag the version again.

   Correcting inconsistencies requires you to perform one of the following operations:

   - Modify objects that are not consistent with the database structure
   - Modify the structure of the database that is not consistent with the objects

5. ▸ Perform the operations described in section How to ensure that the tagged Web services are not corrupt in relation to the database structure [page 21].

6 ▸ Perform the operations described in section How can make an application use another tagged version of the Web services? [page 22].

Tagging lets you track the state of the database in the WSDL document and assign an identifier to this state.

The Asset Manager Web Service instances generate a WSDL document automatically when they access the Asset Manager database.

How to ensure that the tagged Web services are not corrupt in relation to the database structure

Asset Manager provides an administrative tool for validating or debugging tagged Web services. This wizard checks customized features (such as pages, screens or wizards) for selected functional domains. As such, it is a recommended Best Practice to use it on a regular basis in conjunction with development of features for the Web client.

1 Start Asset Manager.
2 Connect to the database.
3 Start the **Check definitions of the Web services...** (sysCoreWebServiceCheck) wizard (**Administration/ Check definitions of the Web services...** link on the navigation bar).
4 Select one or more functional domains (from the list of stand-alone Web services).
5 Click **Finish**.
6 The wizard generates the Web service, analyzing all related elements and properties. If the list of messages contains any errors (preceded by the ⛔ icon), the corresponding object needs to be edited to correct the error.
7 Once all functional domains have been tested without producing errors, tag the Web services again (▸ How do I tag the Web services at a given moment in time? [page 20]).

Examples of errors that may be detected by the wizard:

- A button that is part of a screen referencing a non-existent action: Add the action or modify the button
- A page that contains a field or link that no longer exists: Add the field or link or modify the page
- For the same page, there are several instances of the **LinkEdit** control, and the same link is used by more than one of these instances: You need to distinguish them using the **ApiName** parameter
- An **AQL** type calculated field (supported by the Windows client but not the Web client)
- A page that is visible associated with a functional domain that is not exposed: In the detail of the functional domain or of its parent functional domains,

the value of the **WEB service** (seWebService) fields prevents the functional domain from being exposed in the Web services.

How to ensure that the tagged Web services will operate properly

1. The operations in the following sections must have been performed without any errors, immediately one after the other (in the order that you choose):
   - How to ensure that the tagged Web services are not corrupt in relation to the database structure [page 21]
   - How do I tag the Web services at a given moment in time? [page 20]
2. Start an instance of the Web client and check to see if you can connect with a browser (navigator).

Where is tagged version saved?

All tagging information is stored in the **Configurations and preferences** (amSysConfig) table of the Asset Manager database.

The WSDL document can be automatically generated from this information when Asset Manager Web Service accesses the database.

How can make an application use another tagged version of the Web services?

Once you have tagged the Web services with Asset Manager Application Designer, if you want Asset Manager Application Designer to use this tagged version to access the Asset Manager database:

If you are using Asset Manager Web

Configure the Asset Manager Web Tier instances to communicate with the Asset Manager Web Service using the tagged version that you have chosen.

Modify the **WebService.Version** parameter in the `package.properties` by following the instructions in the **Installation and upgrade** guide, chapter **Installing, configuring, removing and updating Asset Manager Web**, section **Installing Asset Manager Web Tier**.

If you are using an application that you have developed

Generate new stubs from the given tagged version's WSDL document and modify your application as needed if it uses objects manipulated by the Web services that were modified.

In what instances can using a tagged version of the Web services be problematic?

If the changes to the database since the last tagging operation involve:

- The modification of a field type
- The deletion of a table, field, link, index, itemized list value, page, screen or query

And the Web service tries to access one of these objects, an error will occur and the user will be notified.

In what instances should the version be tagged as **HEAD**?

When you develop query filters or actions, for example, it is useful to use the **HEAD** tag in order for these queries or actions to be automatically available via the Web client for you to test them.

Displaying the WSDL document

1. Start Internet Explorer.
2. Go to the following URL:

```
http://<Name or IP address of the Asset Manager Web Service server>:<As
set Manager Web Service port>/AssetManagerWebService
```

   For example: `http://MyServer:8080/AssetManagerWebService`
3. Internet Explorer displays available tagged versions, available functional domains for each version and operations that can be performed on the database for each functional domain.

Here is another, however less legible, way to view the tags:

1. Start the Asset Manager Windows client.
2. Connect to the database.
3. Display the **Configurations and preferences** (amSysConfig) table (**Administration/ List of screens...** menu).
4. Records whose **Section** (CfgSection) field is equal to **DocumentDesc** describe the functions of the Web services for each "functional domain/tag/language" group.

Checking the functional domains associated with Web service objects

Web service objects are associated with a functional domain.

Some of the objects are called when the database connection is established or when the associated screen is displayed. These objects are linked to a functional domain.

These objects call a screen or a wizard in the database and expect this screen or wizard to be from the same functional domain as the domain that is linked to the object.

If the screen or wizard is not found in the expected functional domain, an error occurs.

This happens if a screen or wizard is associated with another functional domain as the result of one of the following changes:

- In the detail of a functional domain, you modify the **WEB Service** (seWebService) or **SQL name** (SQLName) field.
- You modify a screen's **Domain** field using Asset Manager Application Designer.

You must also make the changes in Asset Manager Web Tier's `web.xml` file and redeploy Asset Manager Web Tier:

1. Edit Asset Manager Web Tier's `package.properties` file: ▸ **Installation and upgrade** guide, chapter **Installing Asset Manager Web**, section **Installing Asset Manager Web Tier**.
2. Search for the SQL name of the screen that changed functional domains.

   Tip:

   This SQL name is found right after the **AssetManager.WS.** string.
3. Modify the parameter that is found by replacing the previous SQL name used for the functional domain with the new SQL name.

   For example, replace:

   ```
   WebService.Service.Currency=Currency
   ```

   With:

   ```
   WebService.Service.Currency=Finance
   ```
4. Reinstall Asset Manager Web Tier: ▸ **Installation and upgrade** guide, chapter **Installing Asset Manager Web**, section **Installing Asset Manager Web Tier**.

Customizing existing objects

Asset Manager Application Designer authorizes only limited customizations of the existing database objects. In order to avoid any problems while using Asset Manager, the permissions on certain object values and objects are set to read-only.

To customize an object in the database, edit the database description file (`gbbase.xml`).

Two distinct forms of database customization are handled by Asset Manager Application Designer:

- Customization before creating the database.
- Customization after creating the database.

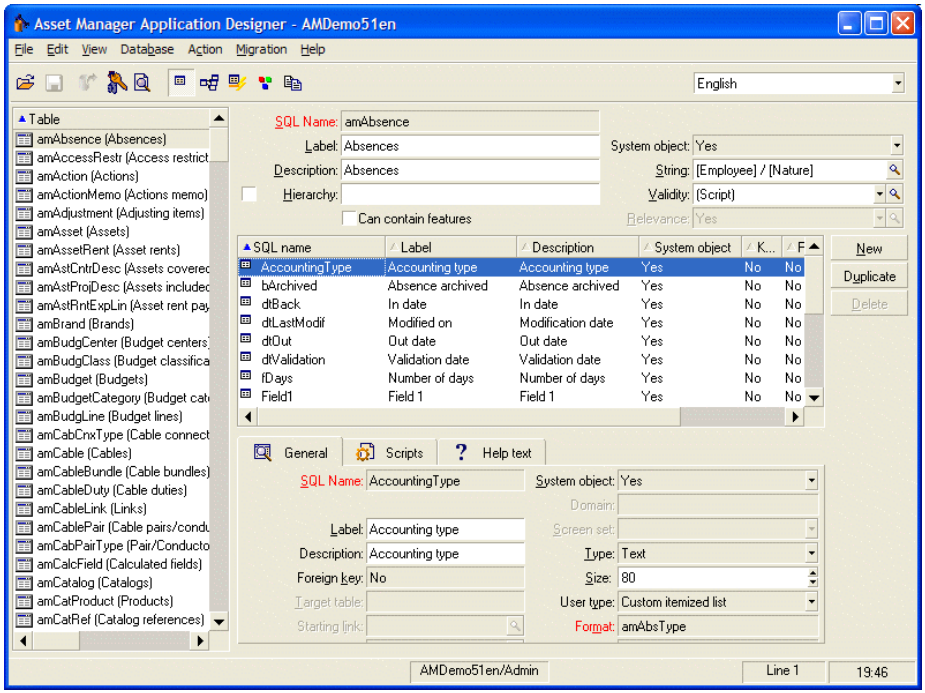
Note:

The difference between these two cases is that you can only modify the size of "Text" fields before creating the database.

For each of these two cases, two levels of customization are possible:

- Customizing a table.
- Customizing objects (fields, links, indexes, screens, pages) of a table.

Figure 1.1. Asset Manager Application Designer - main screen



Precautions

If you modify the database structure, make sure you re-tag the Web services if you have deployed Asset Manager Web.

▸ **Tailoring** guide, chapter **Customizing the database**, section **Development best practices/ Tag the Web services**.

Customizing tables

To customize the table, you can modify:

- The **Description** field.
- The **Label** field, which contains the name of the table as it is displayed in Asset Manager.
- The **String** field, which enables you to build the string which represents a record from this table in Asset Manager.
- The **Validity** field applies to all records of a table in the database. It enables you to define the conditions of validity of creation or modification of a record in the table.
  - If this field is set to **Yes**, a record in the table can always be created or modified.
  - If this field is set to **No**, a record in the table can never be created or modified.
  - If this field is set to **Script**, you can define a script conditioning the validity of creation or modification of a record in the table.

    For example, for **Numerical** type features, if is possible to restrict the creation of a feature if its value is outside certain limits. The following script concerns the "Validity" field in the "amFeature" table:

```
if [seDataType] = 1 and [fMin] > [fMax] Then
Err.Raise(-1, "The value of the 'minimum' field must be less than th
e value of the 'maximum' field.")
RetVal = FALSE
Else
RetVal = TRUE
End If
```

Note:

When creation or modification of a record is invalidated by the value of the "Validity" field for the table concerned, it is good practice to raise an explicit error message via the standard Basic function "Err.Raise" in order to warn the user. If you do not do this, the user will not necessarily be able to understand why it is not possible to modify or create the record.

The "SQL name" field cannot be modified; it contains the table's SQL name.

- The **Can contain features** option enables you to include features in a table.

  This operation is irreversible.

Customizing objects

The second part of this customization pane enables you to list all objects of a given type.

When you select an object in the list, Asset Manager Application Designer displays the description of this object in the third part of the customization pane.

Note:

The red icon identifies the primary key of the table.

The yellow icon identifies a foreign key.

The icon identifies a field belonging to an index.

The icon means that the indexed list of fields must not occur more that once in the table.

The icon means that the indexed list of fields must not occur more that once in the table, except for the "NULL" value, which may be repeated any number of times.

The represents a 1 link.

The icon represents an n link.

Customizing a field, a link or an index

Customization with Asset Manager Application Designer

For this type of object, you can modify:

In the **General** tab

- The **Name** field.
- The **Description** field.
- The **Size** field enables you to specify the size of "Text" type fields. It can only be accessed when customizing a database before creating it or when modifying a database description file. The maximum size is 255 characters.

And in the **Scripts** tab:

Note:

Except where specified, the following attributes are taken into account both by the user interface and external tools when accessing the database.

- The **History** field: indicates whether history is kept for modifications made to the field and under what conditions (using a script).
- The **Read only** field: indicates whether it is possible to modify the field via the user interface and under what possible conditions (using a script).

Note:

This attribute is not taken into account when importing data using external tools. The import module does not take these into account either, as long as the fields are not defined as "Read only" at the level of mappings. On the other hand, if an import script maps a source field to a read-only target field, the read-only field can be modified all the same.

- The **Irrelevance** field conditions the display of the selected record in the detail of a list.
  - **Yes**: deletes the display of the object.
  - **No**: conserves the display of the object.
  - **Script**: indicates that a script is attached to the object to specify its display conditions.

```
If [bDepartment] = 1 Then
RetVal = 1
Else
RetVal = 0
End If
```

  The selected object is not displayed if it is not relevant.
- The **Filter** field is not used in this version of Asset Manager.
- The **Formatting** field: enables you to format the value of the field automatically before storing it in the database.

  For text fields:
  - **Standard**: stores the value as entered.
  - **Uppercase**: converts the value to uppercase before storing it.
  - **Lowercase**: converts the value to lowercase before storing it.
  - **Automatic**: converts the first letter to uppercase before storing the value.

  For numeric fields:
  - **Standard**: accepts all numbers, both positive and negative.
  - **Positive**: rejects negative values. The warning message is displayed.

Note:

If you modify this attribute, existing values in the database will not be converted.

- The **Mandatory** field enables you to define conditions making a field mandatory.

Note:

Making a field mandatory can pose problems if it is not always visible (for example, if its being displayed is determined by the value of a field). Always bear this in mind when configuring a field or writing a script.

- The **Default** field specifies the default value of a field.

  Default values for fields and links are built from a series of:

  Note:

  Asset Manager automatically applies default values when creating a new record. Users creating or modifying the record can modify these values.

  Default values are only applied when a record is created.

  For example, if the default value of field x in record A refers to field y in record B, and if field y or record B is modified, the value stored in field x is unaffected unless record A is created after the modification.

  - Constant values surrounded by "quotation marks".
  - Script functions returning values.
  - References to other database fields.

  Example:

```
RetVal="BL"+AmCounter("Delivery", 2)+AmDate()
```

  - AmDate() provides the date on which the record was created.
  - AmCounter("Delivery, 2) provides the current value of the "Delivery" counter incremented by 1, and expressed in two digits.

In the **Help text** tab, you can customize the extended help concerning a database object. This help is available in Asset Manager via "Shift+F1" (or the **Help/ Help on this field** shortcut menu) and can include up to three sections. By default, these sections are entitled "Description", "Example" and "Precautions". The titles of these sections can be customized by modifying the labels of the links with SQL names "Comment", "Example" and "Warning" in the **Help on fields** table (amHelp).

Note:

The other fields in this section of the database customization screen are shown for informational purposes only and cannot be customized. Configuring the objects in this screen works in the same way as is available via the **Configure object** pop-up menu command.

To be able to define an alarm for a date field

1. Start Asset Manager Application Designer.
2. Connect to the database.
3. Select the table.
4. Select the page.
5. If you want to modify a system page, you must duplicate it first (system pages cannot be modified).
6. Click the **Contents** tab of the page's detail.
7. In the **List of fields** list, append the string **ComboAlarm-** to the beginning of the SQL name of the field.

   Example, if the SQL name of the field was **dStart**:

   Change it to:

```
ComboAlarm-dStart
```

Default values for fields and links - additional information

Calculated fields:

Calculated fields can only be used to calculate the default values of standard fields if their type is **Calculated string** or **Basic script**.

Links to the Comments (amComment) table:

It is not possible to assign a default value to the links going to this table.

Access restrictions:

The calculation of default values for fields does not take access restrictions into account. You must therefore only reference those fields and links that may be viewed by all users.

Counters:

When you define a default value for a field, you can reference a counter.

When creating a new record containing this field, Asset Manager automatically inserts the number, incremented by one unit, for each new record.

Counters are managed by the administrator using the **Administration/ Counters** menu.

You must first create a counter using this menu before you can insert the counter in a formula for a field default value. Counter names cannot contain the following characters: space, "$", "(" or .")"

You can create as many counters as you want.

Asset Manager users never see the counter names.

The counter is incremented as soon as you click **New**. If you cancel the record creation without clicking **Create**, the counter is not decremented.

You are free to readjust the values of the counters.

The value displayed in the counter detail is the last number used for this counter.

Note:

If you enter a formula such as AmCounter(<Counter name>, [n]) in the default value of a field instead of AmCounter(<Counter name>), the value of the counter will be displayed using n digits.

Errors:

Here are some of the most common mistakes made when describing default values:

Execution error - Type error

In some cases the variable may be incompatible with the field type. This is the case if you try to define AmLoginName() on a date-type field, for example.

Field 'XXX' unknown in 'XXX'

When you reference a link, you must use the "Link.Link.Field" format with each link is referenced by name. This makes it possible to follow the links directly.

For example, to set a default supervisor for an asset, you may replace the cost center supervisor with: "CostCenter.Supervisor".

The default value will be used as soon as the Asset Manager user populates the asset's cost center. Then the supervisor can be located in the database.

Help on fields and links

The extended help system for Asset Manager fields uses a sub-set of the HTML language. Only a few "tags" are recognized, used mainly for formatting ToolTips. This section does not attempt to provide an exhaustive description of the HTML language. It simply gives a brief description of each of the HTML tags managed by Asset Manager.

Note:

In the following table, the HTML tags are listed as they must be entered by the user. They do not follow the notation conventions applicable to the rest of the online help.

Table 1.1. HTML tags recognized in help on fields and links

HTML Tag	Description
<FONT FACE="font name">	Defines the font used to display the text following this tag. This font remains in use until the next change of font.
<FONT COLOR=#RRGGBB>	Defines the font color used to display the text following this tag. This color remains in use until the next change of color.
<FONT SIZE=+n>	Increases the font size by "n" levels. This font size remains in use until the next change of font size.
<FONT SIZE=-n>	Decreases the font size by "n" levels. This font size remains in use until the next change of font size.
<B> </B>	These two tags surround text to be displayed in bold.
<I> </I>	These two tags surround text to be displayed in italics.
<LI>	This tag is the start of a bulleted list. It causes a carriage return and inserts a bullet at the start of the text.
<HR>	Draws a horizontal line used as a text separator.

For further information about the HTML language, refer to one of the numerous publications on the subject.

Reserved characters:

The following table lists the reserved characters in the HTML language. If you enter these characters, they will not be displayed as such on the screen. You should use the corresponding tag to display the desired character.

Table 1.2. Reserved characters

Reserved character	Use the following tag to display this character
"<"	"<"
"&"	"&"
Non breaking space	" "

Customization with Asset Manager

You can customize database fields and links using the **Configure object** command from the shortcut menu.

To display the **Configure object** shortcut menu, move to the field to configure and right-click.

Note:

If you use the shortcut menu, changes are recorded: either when you close the database and confirm the validation message, or when you select the **Administration/ Save database configuration** menu.

You can also modify the context-sensitive help for a field or a link from the **Help text** tab:

- "Description": explains the contents of the field or link.
- "Example": provides examples of how to populate the field or link.
- "Precautions": lists "tricky" aspects to bear in mind: Data-entry precautions, linked automatic mechanisms, etc.

The help system for fields is a sub-set of the HTML language.

Customizing a screen

Customizing a screen:

1. Select the table that the screen is part of.
2. Display the screens of the table (**View/ Screens** menu).
3. Select the screen to customize in the list.

You can modify:

In the **General** tab

- The **Name** and **Description** fields.

In the **List/Detail** tab

- Title of the screen
- Title of the list
- Columns in the list
- The other columns
- List/Detail proportions
- The QBE fields
- System filter

Buttons

The **Buttons** tab enables you create, modify, delete and to organize the buttons in screens.

Buttons can be associated with any of the following object types:

- Actions
- Screens
- Views
- Reports

To create a button:

1 Click .

2 A line is added to the list of buttons exposed in the tab. Click on each of the line's cells to define the following button properties:

- Name: internal name of the button. It enables you to identify the button in a unique manner.
- Text: the text appearing on the button.
- Description: label of the button as it is displayed in the graphical interface of Asset Manager.
- Multiple selection: Enables you to specify if the actions taken when you click the button can apply to several records.
- No selection: Enables you to specify if the actions taken when you click the button can be launched without any record having been selected.
- **Associated action**: Enables you to define the action executed when you click the button. Enter the SQL name of the action to execute.

  ```
  <Type of action>:<SQL name of the action, of the view, etc.>
  ```

  In this syntax, the type of action can take the following values:
  - **A** for an action.
  - **S** for a screen.
  - **V** for a view.
  - **R** for a report.
- Relevance: enables you to specify whether the button is visible, invisible or whether it's visibility is conditioned by a script.

To modify a button

1 Select the line corresponding to the button.

2 Click each cell to define the properties of the button.

If the button is a standard button, the primary function remains active (for example, the **Duplicate** button will always duplicate records), except for the following buttons: , and . These buttons can still be associated with an object but their primary function becomes inactive.

The associated object is associated:

- Before the main functions of the **New** and **Duplicate** buttons.
- After the main functions of the **Creat**, **Modify** and **Create/ Duplicate** buttons.

In certain cases, if the associate object does not execute successfully, the main function of the button is canceled.

To delete a button

1 Select the button in the list displayed in the **Buttons** tab.

2 Click .

3 Click **Modify**.

To modify the order of buttons

To modify the order in which the buttons appear in the detail, use the and buttons.

Customize a page: Insert HTML content

HTML content can be inserted into pages of the database tables.

This is made possible by **HtmlLabel** and **MultiLineHtmlLabel** class fields.

This can be done for both the Windows and Web clients.

How this works

The **HtmlLabel** and **MultiLineHtmlLabel** class fields are added to the components of one of the table's pages, and are not added to the table's list of fields and links.

In addition to where they are set in the page, the fields are defined by the following parameters:

Parameter	Parameter use
Class	■ **HtmlLabel**: HTML object on a line ■ **MultiLineHtmlLabel**: HTML object on several lines
MainField	SQL name of the field or link that, when modified, causes the HTML object to be refreshed
ExtField	SQL name of the calculated field that produces the HTML code of the object to display

Rendering of the HTML code depends on the client used to display it (Windows or Web).

- **Windows client**
  - The code is rendered by the Windows client
  - The list of recognized tags is limited
- **Web client**
  - The code is rendered by the Internet browser
  - The list of recognized tags corresponds to the HTML tags that are supported by the Internet browser and that have been validated for use with the HTML object.

Field example

Below is an example of an **HtmlLabel** class field:

Table	Computers (amComputer)
Page	Hardware (PgCpuGen)
Class	HtmlLabel
MainField	PhysicalAddress
ExtField	cf_sysCoreWebED

A **Hardware** (PgCpuGen) page exists in the **Computers** table.

This page contains an **HtmlLabel** class field whose value is calculated by the **Enterprise Discovery** (sysCoreWebED) calculated field. It is updated when the **Physical Address** (PhysicalAddress) field is modified.

This field is calculated by the following Basic scripts:

```
Dim strHtml as String
' strPhysAddr format is "AB-CD-EF-GH-IJ-KL"
Dim strPhysAddr as String
' strMAC format required by ED Web is "ABCDEFGHIJKL"
Dim strMAC as String
' Backend for ED stored in amOption (Section: 'Backends', Entry: 'ED')
' API amBackEndServerPath is dedicated to reading: amOption, 'Backends' se
ction
Dim strServerED as String

strPhysAddr = [PhysicalAddress]
strServerED = amBackEndServerPath("ED")
if strServerED="" OR Len(strPhysAddr)<17 then
strHtml = ""
else
strMAC = Mid(strPhysAddr,1,2) + Mid(strPhysAddr,4,2) + Mid(strPhysAddr,7,2
) + Mid(strPhysAddr,10,2) + Mid(strPhysAddr,13,2) + Mid(strPhysAddr,16,2)
strHtml = "<a href='"
strHtml = strHtml + amBackEndServerPath("ED")
strHtml = strHtml + "/nm/device/about.pcgi?device="
strHtml = strHtml + strMAC
strHtml = strHtml + ";device_type=MAC' target='_blank'>Display the detail
in Enterprise Discovery</a>"
end if

RetVal = strHtml
```

Example of HTML code produced by this script:

```
<a href='https://MyEnterpriseDiscoveryServerHostName/nm/device/about.pcgi?
device=000D6016CF6C;device_type=MAC'>Display the detail in Enterprise Disc
overy</a>
```

To add an **HtmlLabel** and **MultiLineHtmlLabel** class field to a page

1 Start the Asset Manager Windows or Web client

2 Display the calculated fields (**Administration/ System/ Calculated fields** link on the navigation bar).

3 Create a new calculated field.

Populate the fields and links in the following table:

Name of the field or link	SQL name of the field or link	Value
SQL name	SQLName	User defined SQL name Note: Remember this name. You will need it later.
Syntax tab		
Table	TableName	Table to which the page containing the **HtmlLabel** or **MultiLineHtmlLabel** class field belongs.
Field type	seType	Basic script
Result type	seDataType	Text
Script of the calculated field (This label is not visible. The link is located in the **BASIC syntax** frame)	Script	Script that generates the HTML code to insert in the page

4 Start Asset Manager Application Designer.

5 Select the table that contains the page to modify.

6 Display the pages of the table (**View/ Pages** menu).

7 Select the page to modify.

Note:

System pages cannot be modified (the value of the **System object** property is **Yes**).

You can duplicate one if necessary.

8 Select the **Contents** tab.

9 In the edit zone at the top left of the **Contents** tab, enter the SQL name of the field that, when modified, triggers a refresh of the **HtmlLabel** or **MultiLineHtmlLabel** class field.

10 Place the cursor outside of the edit zone.

A new object appears in the **List of fields** list.

11 Double-click the new object.

12 Populate the following properties:

Parameter	Parameter use
MainField	SQL name of the field or link that, when modified, causes the HTML object to be refreshed
Class	■ **HtmlLabel**: HTML object on a line ■ **MultiLineHtmlLabel**: HTML object on several lines
ExtField	SQL name of the calculated field that produces the HTML code of the object to display. Note: You created the calculated field in a previous step. Warning: The SQL name of the field begins with **cf_**.

Recognized HTML tags

When you generate the HTML code using the calculated field, you will use HTML tags.

The following tags are recognized by both the Windows and Web clients:

Tag	Use	Attributes
<B> </B>	Displays text in bold	
<STRONG> </STRONG>	Displays text in bold	
<I> </I>	Displays text in italics	
<EM> </EM>	Displays text in italics	
<U> </U>	Underlines text	
 	Adds a line break	
<P> </P>	Adds a paragraph	
<HR>	Inserts a horizontal line	
<UL> </UL>	Used for an unordered list	
<LI> </LI>	Used for a list entry	
<CENTER> </CENTER>	Centers the text	
<PRE>	Preformats the text	
<SMALL> </SMALL>	Decreases text size	

Tag	Use	Attributes	
<FONT> </FONT>	Defines the font used to display the text	COLOR=	Text color
		SIZE=+	Increases text size
		SIZE=-	Decreases text size
		FACE=	List of comma separated fonts that the user agent should use by order of preference.
<ALIGN> </ALIGN>	Defines text alignment	CENTER	Centers the text
<A> </A>	Anchor	HREF=	Specifies the location of a Web resource. Defines a link between the current element (source anchor) and the destination anchor defined by the **HREF** attribute.

You can use other HTML tags and attributes if they are needed to appropriately use the HTML object.

The Internet browser will be able to render them correctly.

However, the Windows client will not.

Simplified syntax

If you want to store an **http**, **https** or **mailto** link type in a field and the link's text corresponds to the field label, you can use a simplified procedure:

Configure the database

1 Start Asset Manager Application Designer.

2 Select the table containing the page that will display the hypertext link.

3 Display the pages of the table (**View/ Pages** menu).

4 Select the page to modify.

> Note:
>
> System pages cannot be modified (the value of the **System object** property is **Yes**).
>
> You can duplicate one if necessary.

5 Select the **Contents** tab.

6 In the edit zone at the top left of the **Contents** tab, enter the SQL name of the field that is used to store the URL address.

7 Place the cursor outside of the edit zone.

A new object appears in the **List of fields** list.

8 Double-click the new object.
9 Populate the following properties:

Parameter	Parameter use
MainField	SQL name of the field used to store the URL address
Class	HtmlLabel

10 Save the changes to the database structure (**File/ Update database structure...** menu).

Populate the database

1 Start the Asset Manager Windows or Web client.
2 Display the record's detail.
3 Populate the reference field.
4 Save the information.

Use the URL address

1 Start the Asset Manager Windows or Web client.
2 Display the record's detail.
3 Display the tab containing the **HtmlLabel** class field.

The **HtmlLabel** class field displays the label of the reference field as a hypertext link.

When you click the link:

- Windows client: The default Internet browser starts and displays the page corresponding to the URL address associated with the link.
- Web client: The Web client displays the page corresponding to the URL address associated with the link.

Creating new objects

Asset Manager Application Designer enables you to create new objects for the database.

Warning:

We recommend that you work on an empty database. If you modify your working database, however, you must verify and repair the database (**Action/ Diagnostics/ Repair database** menu) after having saved your changes.

Methods of creation

The following steps propose a method of creating new objects. These steps assume that you are creating the largest object: a table. Each step corresponds to a particular selection in this chapter.

- Create your table.
- Create the fields, links and index of your table.
- Create screens for your table.
- Create, if you want, action buttons present in the screen.
- Create the pages of your screens.
- Add the pages to your screens.
- Save your modifications.
- If this fails, propagate your modifications.

Creating a table

To create a new table:

- Select the **Database/Add a table** menu.
- Asset Manager Application Designer displays a creation window.
- In this window, populate the standard fields associated with a table:
  - The **SQL name** field enables you to identify the new table in a unique manner and, notably, to reference it in a Basic script.
  - The **Label** field contains the name of the table as it is shown in Asset Manager.
  - The **Description** field.
  - The **Primary key** field contains the SQL name of the field used as the table's primary key.
  - If you want to associate features to your new table, select the **Add features** option. Asset Manager Application Designer will automatically create the additional tables necessary to deal with the features.
- Click **Create**. Asset Manager creates the table as well as the field defined as the primary key for this table, and it puts you in position to edit the fields for this table.

Important:

For each table, you should create at least one screen with the exact same SQL name as the table (case sensitive).

You can have multiple screens with the same SQL name if they are associated to different screen sets.

The screens with the same SQL name as the table are used by Web services, because Web services do not work with tables but only with screens.

Example: a wizard query searches the **amAsset** table; the Web service interprets this as a screen SQL name, not a table SQL name.

▸ **Administration** guide, chapter **Standard database description files**, section **Description of tables**.

Creating a field, link or index

To create a field:

1. Select the **Database/Add a field** menu.
2. Asset Manager Application Designer displays a creation window.
3. In this window, populate the following fields:
   - **SQL name**
   - **Name**
   - **Description**
   - **Type**
4. Select the **Create an index for this field** option if you want to create an index.

   After the field is created, you can no longer modify its size or format.

Note:

Different types of fields:

- An **custom itemized list** type field must respect the following syntax:

```
Free text
```

  The text entered (**Format** field) corresponds to the **Identifier** field in the detail of the itemized list.

- A **system-itemized list** type field must respect the following syntax:

```
To be validated|0|Validate|1|Refused|2
```

- A **Duration** type field must respect the following syntax:

```
%Yl%Ml%Dld%H%N%S
```

  - **Y**, **M**, **D**, **H**, **N**, **S** define the type of duration: respectively, year, month, day, hour, minute, second.
  - **l** (long) defines whether the displayed duration unit is complete or not.
  - **d** defines whether the duration is the default duration.

▸ **Administration** guide, chapter **Standard database description files**, section **Description of fields**.

To create a link:

1 Select the **Database/Add a link** menu.

2 Asset Manager Application Designer displays a creation window.

3 In this window, populate the following fields:

- **Link type**
- For the source table:
  - **SQL name**
  - **Label**
  - **Description**
- For the destination table:
  - **Table**: Indicate the destination table.
  - **SQL name**
  - **Label**
  - **Description**

4 Select the **Create an index for this link** option if you want to create an index.

▸ **Administration** guide, chapter **Standard database description files**, section **Description of links**.

Note:

Different types of links:

- The 1-N link types are the following: Normal, Define, Own, OwnCopy, Overflow
- The following are the types of 1-1 links: Normal1, OwnCopy1, Copy1, Own1, NeutDef1
- The following are the types of N-N links: RelNN, NNCopy, CopyNN

To create an index:

1. Select the menu **Database/Add an index**.
2. Populate the different properties of each object. These properties are described in an exhaustive manner in the section **Customizing objects**, and are thus not detailed here.

Creating a hierarchical table

Creating a hierarchical table means creating a parent link in that table.

A parent link corresponds to a child link in the same table.

To create a parent link:

1. Select the **Database/Add a parent link** menu.
2. Asset Manager Application Designer displays a creation window.
3. In this window, populate the following fields:
   - **SQL name**
   - **Name**
   - **Description**
4. Populate the **Hierarchy** field according to the following syntax:

   ```
   <Id of the parent link>,<name of the field to be used>
   ```

   For example, for the Products table, the **Hierarchy** field of the **Parent** link is populated as follows:

   ```
   lParentId,InternalRef
   ```

After these steps are completed, a **FullName** field is created. This is a unique identifier inside that table.

▸ **Administration** guide, chapter **Standard database description files**, section **Description of indexes**.

Track user changes to records

By default, the name of the user modifying a record is not stored in any of the tables.

To enable this option for a given table:

1 Start Asset Manager Application Designer.
2 Connect to the database.
3 Select the table.
4 Select the **Database/ Add a 'Last Modifier' link** menu item.

  This adds the **LastModifier** (LastModifier) link to the table.
5 Save the changes (**File/ Update database structure...** menu).

To enable this option for all tables:

1 Start Asset Manager Application Designer.
2 Connect to the database.
3 Select the **Database/ Add a 'Last Modifier' link to all tables** menu item.

  This adds the **LastModifier** (LastModifier) link to all tables.
4 Save the changes (**File/ Update database structure...** menu).

Resulting Consequences: When a user modifies a record, the **LastModifier** link is populated automatically.

If you want the **LastModifier** link to be visible in the detail of a table's records: ▸ Creating a page [page 49].

Also, if you want to save the names of all users who have modified a record, activate the keep history option for the **LastModifier** link (▸ **Advanced use** guide, chapter **Historization**).

Creating a screen

A screen is a graphical view of the information stored in the records of a table. Examples: screens are displayed in Asset Manager when you select a menu or click a toolbar icon. Screens are composed of one or more pa²ges regrouped by tabs in the graphical interface of Asset Manager.

Note:

Asset Manager is provided with a set of standard screens that are used to support the functions of the application. Some screen parameters cannot be modified (example: The domain and the screen set associated with the screen).

Generally, by default, each table is associated with a full and simple screen.

To create a screen:

1 Run Asset Manager Application Designer and open the database.
2 In the left-hand (**Table**) pane, select the table on which you want to create a new screen.

3 Select the **View/ Screens** menu or click the button on the toolbar.

4 Select the **Database/ Add a screen** menu, or click **New**.

5 Populate the following fields in the **General** tab:

- **SQL name:** SQL name of the screen. This name enables you to:
  - Create a link between screens with the same nature that are associated with different screen sets.
  - Uniquely identify groups of screens and reference them in scripts or queries.

  The screen SQL Name must start with an alphabetical ASCII character (a-z and A-Z, no special characters are allowed).

  The _ character is allowed.

  For each table, you should create at least one screen with the exact same SQL name as the table (case sensitive).

  You can have multiple screens with the same SQL name if they are associated to different screen sets.

  The screens with the same SQL name as the table are used by Web services, because Web services do not work with tables but only with screens.

  Example: a wizard query searches the **amAsset** table; the Web service interprets this as a screen SQL name, not a table SQL name.
- **Label:** Label of the screen.

  Do not use strings that can be confused with HTML tags (tags starting with <).
- **Domain:** functional domain of this screen. If the functional domain that you enter already exists in the database (created using the **Administration/Functional domains** menu), you will automatically have access to your screen in the navigation bar under the corresponding functional domain.
- **Screen set**: Screen set associated with the screen. The value of this field is used by Asset Manager to identify which screen to display depending on the screen set priority order associated with the Asset Manager user.

Note:

For users with administrator rights, this is the order defined via the Windows client **Administration/ Database options** menu, **Screen sets** section, **Default order** option.

For other users, this is the order in the user profile, **General** tab **Screen sets** field defined using the Windows or Web clients. If this field is not populated, Asset Manager uses the order defined via the **Administration/ Database options** menu, **Screen sets** section, **Default order** option in the Windows client.

6 Populate the following fields in the **List/Detail** tab:

- **Title of the screen:** Defines the title of the window displayed in Asset Manager. The **String** of the description is added to this title.
- **Title of the list:** defines the title of the page as it appears in the list of screens (**Administration/ List of screens**, in Asset Manager).
- **Columns in the list:** This field enables you to define the columns that will be displayed by default in the list window. The following syntax is used for this field:

```
<SQL name of the field or link for column 1>,<Proportional size of t
he column>,...
```

- **Other columns:** This field lets you specify the list of columns that users can add to a list when they are associated with a user role whose **Authorize display of all fields and links in the lists** (bFullListCfg) check box is selected.

Note:

Users associated with a user role whose **Authorize display of all fields and links in the lists** (bFullListCfg) check box is selected are not limited in the selection of columns that they can add to a list.

The following syntax is used:

```
<SQL name of the field or link for column 1>,<SQL name of the field
or link for column 2>,...
```

- **List/detail proportions:** ratio between the detail and the list.
- **QBE fields:** Populate this field to:
  - Windows client: Have a query wizard displayed before the screen is displayed (generated on the fly using information from the **QBE fields** fields).

- Web client: Have a filter displayed before the screen is displayed (generated on the fly using information from the **QBE fields** fields).

Populate this field by providing the list of fields to display in the query wizard or filter.

Separate fields with a comma.

Fields will be displayed from bottom to top.

Example for the **Work orders** table (amWorkOrder): **WONo,seStatus,Title,dtResolLimit**.

Note:

In the Windows client, users select to use or not to use query wizards via the **Enable query wizards** option (**Edit/ Options/ Navigation** menu)

- **Query filter** and **System filter**: specify any default filters to apply to data displayed by the screen.
- Ignore user customizations: if this option is checked, the screen will behave as a **View**. Any changes that a user makes to the screen (column order, etc.), will be discarded when the screen is closed (Windows client only).

7 Click **Create**.

Note:

The screen will be visible under the selected domain in the Asset Manager Windows or Web client navigation bar when users next connect to the database.

You have created an empty shell for your new screen. Now all you need to do is populate this screen by adding pages that contain fields or links, and possibly action buttons.

Creating action buttons

Asset Manager Application Designer offers you to possibility of creating buttons in your screens. These buttons are used to trigger an action, display a screen, display a view (this option is not supported by the Web client) or print a report.

To create this button:

1 Select the screen to which you want to add a button.

2 Select the **Buttons** tab of the screen.

3 Click . A new item is created in the list of buttons for this tab.

4 You can directly edit the values for each property by clicking its value.

- **Name**: SQL name of the button. This name enables you to identify the detail in a unique manner and to reference it in Basic scripts or queries.
- **Text**: contains the button's text.
- **Description**: label of the button as it is displayed in the graphical interface of Asset Manager when the cursor is over the button.
- **Multi-selection**: enables you to specify if the actions taken when you click the button can apply to several records.
- **Edit mode**: enables you to specify whether or not the button appears while saving an item.
- **No selection**: enables you to specify if the actions taken when you click the button can be launched without any record having been selected.
- **Associated action**: Enables you to define the action executed when you click the button. Enter the SQL name of the action to execute.

  ```
  <Type of action>:<SQL name of the action, of the view, etc.>
  ```

  In this syntax, the type of action can take the following values:
  - **A** for an action.
  - **S** for a screen.
  - **V** for a view.

    Warning:

    This option is not supported by the Web client.

  - **R** for a report.
- **Relevance**: enables you to specify the button's display parameters (yes, no or script).

5 Click **Modify** to validate your changes.

Creating a page

In Asset Manager, a page is graphically represented by a tab containing fields. To create this page:

1 Select in the left-hand pane the table for which you want to create a new page.

2 Select the **View/Pages** or click the button on the toolbar.

3 Select the **Database/Add a page** menu or click **New**.

4 Populate the following fields in the **General** tab:
- **SQL name**: SQL name of the page. This name enables you to identify the page in a unique manner and to reference it in scripts or queries.

- **Name**: name of the page. This name appears as the name of the tab in the Asset Manager interface.

5 Click **Create**.

6 Click the **Contents** tab of the page's detail. You can now select the fields that will be available in the page that you are created. To do this:

- Select in the list to the left (**Fields and links**) the field or the link that you want to add to the page, and click the button to transfer it to the list on the right (**List of fields**).

  To perform the same operation, you can also:
  - Double-click the field in the list on the left (**Fields and links**).
  - Enter the SQL name of the field or link in the field above the list on the left and click the button next to this list.

  > Note:
  >
  > Entering the information this way enables you to specify the type of control associated with the object and how it behaves by using keywords. These keywords are described later in this document.

- If you want to delete a field from your page, select it in the list on the right and click the button. You can also double-click the field on the right to perform this same operation.
- The layout of this page and graphical organization of the fields on the page is, by default, automatically calculated by Asset Manager. You can, however, define the order of the fields' appearance on the page by ordering them in the left-hand pane using the buttons: , , and .

  > Note:
  >
  > You also have functions to control the geometry of the page (vertical and horizonal separators), available as keywords that you can add to the list of fields on the page. These functions are described later in this document.

7 Click **Modify**.

Controlling the behavior of objects

When you add a database object to the page directly using the field above the **Fields and links** list, you can use control keywords, which enable you to:

- Define the type of the graphical control used to populate the field,
- Define the properties and behavior of the control.

The expected syntax is the following:

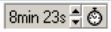
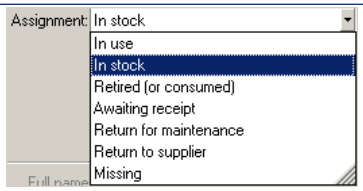
```
[<Control type>-]<SQL name of the object>[|<SQL name of a secondary object
>][|<Property of the control>="<Value>"*]
```

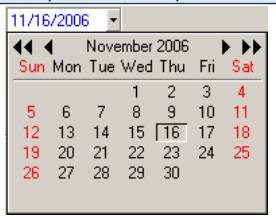
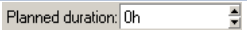
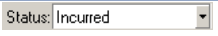
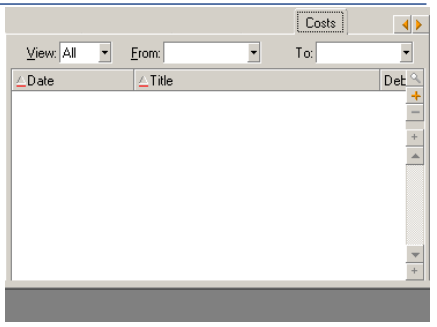
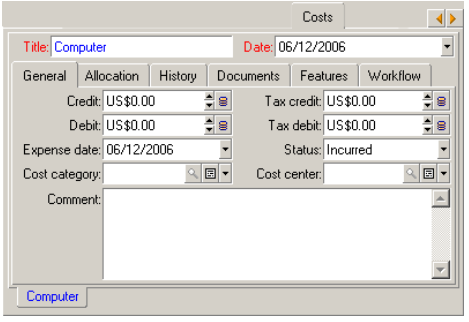
Note:

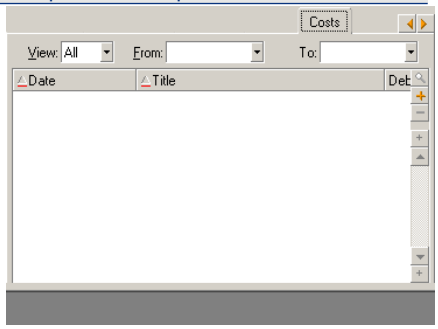
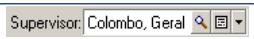
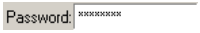
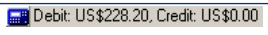
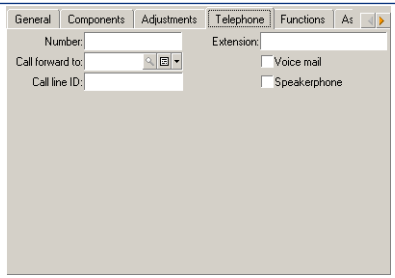
The SQL name of a secondary object is only used for certain properties.

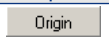
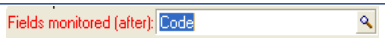
Types of graphic controls

The following table list and describes the available control types:

Control type	Description	Graphical example
TimerControl	Duration-entry control. By default, when displayed, the field is read-only and a time is started. To enter a duration in this type of control, click the icon opposite the field.	
Label	Text-data display control, read-only, without its label.	
CaptionedLabel	Text-data display control, read-only, with its label.	
MultilineLabel	Text-data display control, read-only, with its label, multi-line.	
Checkbox	Checkbox, with field label.	
ComboList	System itemized-list display control (closed, pre-defined list of values).	
Icon	Icon or image display control. The size is limited to the standard control height.	
ScrollablePicture	Image display control. Scrollbars are displayed if the image is too large.	No example
Picture	Image-display control.	
ColorCombo	Color-selection control.	

Control type	Description	Graphical example
ComboDate	Date-display control.	
TimeSpanEdit	Duration-entry control.	
MultiLineEdit	Multi-line text-edit control.	
Edit	Standard text data entry control.	
FileEdit	File-selection control.	
NumberEdit	Number-entry control.	
MonetaryEdit	Monetary field entry control.	
ItemizedList	Open itemized-list (customizable list of values) display control.	
LinkList	Linked records list display control.	
Notebook	Tabbed linked-records display control	

Control type	Description	Graphical example
OneTo-ManyLinkEdit	Linked records display control, enabling list view or tabbed view depending on user choice.	
LinkEdit	Selection control for a record in a list. **Warning:** If you insert several instances of the **LinkEdit** control in the same page, and the same link is used by more than one of these instances, then you must use the **ApiName** parameter to differentiate between them: ▸ Graphical control properties [page 54]	
ReversePass-wordEdit	Password-entry control. The encryption uses a reversible method thus enabling Asset Manager to use it to authenticate itself to external systems.	
PasswordEdit	Password-entry control. This password is not reversible. Only Asset Manager is capable of authenticating passwords of this type.	
QueryCalc	Query-result display control. The icon representing a calculator, next to the control, enables you to recalculate the result of the query.	
DistantDet	Display control for a remote detail (i.e outside of the table). This type of control enables you to display the detail of a record within another record.	

Control type	Description	Graphical example
ExternalRef	Button-display control enabling you to view a record detail pointed to by a typed link (contextual link).	
TableChoiceList	Selection control for a table in the database.	
DbPathCombo	Selection control for a field in the database.	
OneToOneLinkEdit	1-1 link selection control.	

Graphical control properties

Property	Description	Control(s) using the property
UseLabel	If the property is set to 1: Display the field label opposite the control. If the property is set to 0: Do not display it.	All
Caption	The behavior of this property depends on the type of control: ■ For OneToManyLinkEdit, LinkEdit, LinkList controls: The property defines the title of the selection window of the linked record. ■ For Label, CaptionedLabel and MultilineLabel controls: The property displays a label whose value is that of a field in the table. ■ For the QueryCalc control: The property defines the label explaining the calculated value.	Label, CaptionedLabel,MultilineLabel, QueryCalc, LinkList, OneToManyLinkEdit, LinkEdit
Query	AQL query executed when the user clicks the icon.	QueryCalc

Property	Description	Control(s) using the property

ListConfig	This property defines the columns in the list. The format used is the following:
	`ListConfig="<SQL name of the object>,<Size of the column>[,]*`
	Example:
	`ListConfig="Name,40,seType,30"`
		LinkList, OneToManyLinkEdit

WhereCond	This property contains the Where clause of an AQL query. It enables you to filter the list of records in the drop-down list. For example, in the list of departments and employees, the **Supervisor** (Manager) link is associated with a control with the following WhereCond property: `WhereCond="bDepartment=0"` Thus the departments will not appear in the list and will not be available for selection for the value of the supervisor.	LinkList, LinkEdit
DistantDet	■ SQL name of the detail displayed when viewing the detail of the linked record (icon) for the OneToManyLinkEdit and LinkEdit controls. ■ SQL name of the distant detail displayed for the DistantDet control. Note: The filter of this detail is applied as well as the WhereCond property.	OneToManyLinkEdit, DistantDet, LinkEdit

Property	Description	Control(s) using the property
AddMode	Value 0 or 1. When adding a record to the list using the + button, this property enables you to define the default user-mode of the control: ■ If the property is set to 1, the control is in creation mode and the user may create a record before selecting it to add it to the list. ■ If the property is set to 0, the control is in selection mode only and the user must use the **New** button if they wish to create a record.	OneToManyLinkEdit
OnZoom	This property contains the SQL name of an action to execute when the user clicks the button.	OneToManyLinkEdit
OnAddLink	This property contains the SQL name of an action to execute when the user clicks the + button.	OneToManyLinkEdit
OnRemoveLink	This property contains the SQL name of an action to execute when the user clicks the − button.	OneToManyLinkEdit
Mode	This property defines the default display mode for this type of control: ■ If the property is set to 1, the control is displayed in list mode by default. ■ If the property is set to 2, the control is displayed in tab mode by default.	OneToManyLinkEdit

Property	Description	Control(s) using the property
DescString	This property enables you force the description string of the window that presents the detail of the selected record (by clicking the button). The format used by this property is exactly the same as that of a description string. Note: For further information on description strings, refer to the section **Table description strings** in the **Administration** guide.	LinkEdit
ReadOnlyDetail	This property enables you to define the display mode of the detail window of the selected window: ■ If the property is set to 1, the detail is opened in read-only mode. ■ If the property is set to 0, the open detail may be modified by the user.	LinkEdit
AllowNone	This property enables you to authorize or deny selection of the **No table** value in the selection list. ■ If the property is set to 0, the value may not be selected. ■ If the property is set to 1, the value may be selected.	TableChoiceList

Property	Description	Control(s) using the property
AllowNoMainField	This properyy enables you to display relationship (intermediary) tables (such as **amRelxxx**). ■ If the property is set to 0, the relationship tables are not displayed. ■ If the property is set to 1, the relationship tables are displayed.	TableChoiceList
OnlyFeature	This property enables you to display (or not display) the tables that have a corresponding table of feature values (such as **amFVxxx**). ■ If the property is set to 0, all tables are displayed. ■ If the property is set to 1, only the tables with a corresponding table of feature values are displayed.	TableChoiceList
NoFeature	This property enables you to display the feature value tables in the selection list. ■ If the property is set to 0, all tables are displayed. ■ If the property is set to 1, the feature value tables are not displayed.	TableChoiceList
HideSystem	This property enables you to restrict the list of table to those included in the user license. ■ If the property is set to 0, all tables are displayed. ■ If the property is set to 1, only the tables authorized by the license are displayed.	TableChoiceList

Property	Description	Control(s) using the property
ApiName	This property is used when a page contains the same link more than once (generally, these links will have a different **WhereCond** property). The **ApiName** property is used by the Web services to distinguish between the different instances of this link.	LinkList

> Warning:
>
> Some controls are not supported in the Web client. The list is given in the **Asset Manager Web Implementation** guide, **Differences between the Windows client and the Web client** chapter, **Differences between the clients/ Controls** section.

Page layout

By default, the objects (fields or links) that you add to a page are displayed one after another in one single column. You can, however, define vertical and horizontal separators to modify this default behavior. These separators are defined by the following internal variables:

- **HSplitControl** for a horizontal separator.
- **VSplitControl** for a vertical separator.

To add a separator:

1. Open the **Contents** tab in the detail of a page.
2. Enter one of the two previously listed internal variables in the field above the list of fields and links.
3. Click
4. The separator is transferred to the list of fields on the right. You can define the order in which these fields will appear on the page by using the , , and buttons.

The following rules are applied when the page is displayed:

- All objects located between two **HSplitControl** variables will be part of the same horizontal block (one or more lines).
- The **VSplitControl** variable defines a separation in the column for the objects in a horizontal block.

For example, the contents of the **General** tab of an employee detail, as it is displayed by default in Asset Manager, can be defined as follows:

```
HSplitControl_0
HSplitControl_1_Adresse
HSplitControl_2
Location
HSplitControl_2
VSplitControl_2
Phone
MobilePhone
VSplitControl_2
Fax
HomePhone
HSplitControl_2
EMail
Field1
Field2
HSplitControl_1
HSplitControl_0
VSplitControl_0
IDNo
dHire
dLeave
VSplitControl_0
BarCode
Field3
HSplitControl_0
MultilineEdit-Comment
```

The underscore character enables you to define the relation of variables.

Default IDs

The **HSplitControl** and **VSplitControl** separators, as well as the fields and links listed for a page, all have default IDs. Examples:

```
HSplitControl_0|Id="Group00"
```

```
Reason|Id="Field01"
```

Asset Manager uses these IDS for hidden processes. You cannot make any use of them.

Adding a page to a screen

To add pages to a screen:

1. Select the screen to which you want to add pages.
2. Select the **Pages** tab of the screen. You can now select the page(s) that you want to add to the screen. To do this:
   - Select in the list to the left (**Available pages**) the page(s) that you want to add to the screen, and click the button to transfer them to the list

on the right (**Pages in detail**). You can also double-click the pages on the left to transfer them to the right.

You can select a linked page, which will display a page linked to another table. To display a linked page, select its link from the drop-down list located above the **Available pages** list. This list presents all the 1-1 links that are available.

- If you want to delete a page from your screen, select it in the list on the right and click the button. You can also double-click the page on the left to perform this same operation.
- To define the order of the tabs' appearance you need to order them in the right-hand pane using the buttons: , , and . The first page in the list will be the first tab displayed; the second page will be the second tab appearing, etc.

Propagating customizations to other supported languages

Objects added to the database are available in the language selected in Asset Manager Application Designer during the modification.

The following objects must be created again for each additional language to be supported:

- Screens
- Pages

Tip:

You must therefore successively select each language to be supported (list on the right side of the toolbar in Asset Manager Application Designer) and create those objects in the same way as you did for the first language.

The following objects are created for all languages, but their labels and descriptions must be translated:

- Table
- Field
- Link
- Index

To translate the labels and descriptions of the objects added in a given language:

1. Select each additional language to be supported (the list is located on the right side of the toolbar in Asset Manager Application Designer).
2. Select **Action/ Update descriptions**.
3. Translate the label and the description of each displayed object.
4. Click **Modify** to validate the changes.

5 Close the update window.

Saving modifications

To save your modifications:

1 Select **File/ Update database structure** or click .

2 Follow the instructions given by the wizard.

Verifying your modifications

To check your modifications, you need to launch Asset Manager and connect to the customized database. Using the method previously defined, we created a new table. To access this new table:

1 Select the **Administration/ List of screens** menu.

2 Search for your screen in the list that appears on screen and click **OK**. Your new screen will appear.

3 You can also create a view of this new table if you want: Select the **Tools/Views/Create view from current window** menu.

4 Enter a **Name** for your view. This name will appear on the navigation bar of a Windows client.

5 Select a functional **Domain**. The **Name** of your view will appear under this functional domain on the navigation bar.

6 You can now directly access your new view or screen.

Important note

In Asset Manager, all objects are defined by SQL names, in particular, the actions, views and screens. To open one of these objects from a menu or the navigation bar, Asset Manager uses the SQL name. If several objects, such as a view and a screen, have the same SQL name, Asset Manager tries to open the objects in the following order:

- View
- Screen

For example, if you create a new screen for the **Employees and departments** table (amEmplDept) and you associate a view whose SQL name is amEmplDept to this screen, your new screen, and not the amEmplDept table, will be displayed when you select the **Organization/Employees and departments** link on the navigation bar.

Screen sets

Overview

Why are screen sets used?

Screen sets were introduced in Asset Manager to provide simplified screens tailored to each individual user as opposed to providing only more complex, full screens to all users.

Different versions of the same screen can be created using screen sets. For example: A full version and a simple version.

Users access the correct screen set through their user profile. For example: If simple screen sets are selected for a given user, Asset Manager will display a simple screen each time one is available for a given table.

How do screen sets operate?

Different versions of the same screen must use the same SQL name and be associated with a different screen set.

In the Asset Manager database, screen sets are given a default priority order (database options).

For each user profile, a priority order can be defined for screen sets that supersedes the database options.

The priority order for screen sets depends on user rights, functional rights and user profile access restrictions.

How do I implement screen sets?

The following table explains what you need to do to implement and set up screen sets:

Action to perform	Use
If necessary, the administrator creates any missing **functional domains** (via the Windows or Web client)	Functional domains are used to group screens in the Windows and Web client navigation bar. For example: If the **Screen** screen is associated with the **Domain** functional domain, the navigation bar displays the **Domain/ Screen** tree structure.

Action to perform	Use
The administrator modifies existing **screens** or adds new ones (using Asset Manager Application Designer)	For each table in the database, the administrator can define several different screens depending on the needs of each individual user. By default, most tables are defined with a full and simple screen. For example, if: ■ Two screens with the same SQL name **Screen** are associated with screen sets **Set 1** and **Set 2**. ■ The screen set **Set 1** is associated with **User 1** via the user profile. ■ The screen set **Set 2** is associated with **User 2** via the user profile. Doing the same using the Windows or Web clients **User 1** will display the screen associated with **Set 1** and **User 2** will display the screen associated with **Set 2**.
The Asset Manager database administrator sets the default **database options** parameters (using the Windows client).	The **Default order** option in the **Screen sets** section can be set in the database options. This option defines the list of screen sets to use starting with the highest priority first (example: **Full screens, Simple screens**). This option is used when the following user types request a table be displayed: ■ Users associated with a profile whose **Screen sets** (ScreenSets) field is empty ■ Users associated with a profile whose **Administration rights** (bAdminRight) option is selected When these users request a table be displayed, Asset Manager takes the identifiers of the screen sets in the order specified by the option and searches the table to see if it contains a screen associated with this screen set. When a screen is found, Asset Manager uses it to display the table. This default behavior can be superseded by the functional rights associated with the profile: Access to a given screen can be denied by the functional rights.

Action to perform	Use
The Asset Manager database administrator defines **functional rights** (using the Windows or Web client)	Functional rights are used to authorize users access to screens and pages via the menu bar, the navigation bar and wizards. To determine which screens are displayed when a user connects to Asset Manager, Asset Manager checks the following: 1 The user is described by a record in the **Employees and departments** (amEmplDept) table. 2 This record is linked to a user profile (**Profile** (Profile) link). 3 The profile is linked to functional rights (**Functional rights** link (FuncRights)). 4 The list of available function domains can be found in the detail of functional rights. Available screen sets can be found in each functional domain. Screens linked to the concerned functional domain and screen sets can are found within these screen sets. The detail of a functional right is used to grant access rights to various screens.

Action to perform	Use
The Asset Manager database administrator defines **user profiles** (using the Windows or Web client)	User profiles are used to define user access rules for the Asset Manager database. Results for the screens depends on the following elements: ■ **General** tab, **Screen sets** field(ScreenSets): This field is used when a user associated with the profile requests a table be displayed. Asset Manager takes the identifiers of the screen sets in the order specified by the **Screen sets** field and searches the table to see if it contains a screen associated with this screen set. When a screen is found, Asset Manager uses it to display the table. This default behavior can be superseded by the functional rights associated with the profile: Access to a given screen can be denied by the functional rights. ■ **User rights** tab, **User rights** link (UserRights): Access rights to tables (create, delete, read, enter during creation, enter during update). ■ **User rights** tab, **User rights** link (UserRights): Access rights to screens and pages.

Operations that access screen sets

Screen sets are used by the following operations:

- Menus that display a table (example: **Portfolio/ Portfolio items...**)
- Windows and Web client navigation bar links that display a table (For example: **Contracts/ Contracts**)
- Wizards that display screens via the **AmOpenScreen** and **AmOpenScreenEx** APIs.

Default configuration of the Asset Manager database

In the default structure of the Asset Manager database, most tables are defined with:

- A full screen associated with the **Full** screen set
- A simple screen associated with the **Simple** screen set

The default value of the **Screen sets/ Default order** database option is **Custom,MigratedSys,Full,Simple**.

You can also create **Custom** screen sets tailored to your needs.

Practical case 1: Using screen sets

Presentation

This practical case is intended to help you understand how to configure different screen sets for different users in Asset Manager.

Prerequisites

Before beginning this practical case, you must install the following applications and components:

- MSDE
- Asset Manager
- Demonstration database
- Asset Manager Application Designer

Scenario

Let's look at the following scenario:

- Asset Manager database administrators require access to all fields and links for all tables when they display records.
- The Human Resources Advisor is responsible for updating the **Employees and departments (amEmplDept)** table. To do this, he or she requires access to all fields and links for that table.
- The Human Resources Manager only wants to have access to an executive summary of the employee information.

Steps to follow

Create the functional domain **CP1 - Human Resources**

The screens that you are going to create in the **Employees and departments** table will be linked to the newly created functional domain.

a Start the Asset Manager Windows client.

b Connect to the demonstration database selecting **Admin** as the user:

Field	Value
Login	Admin
Password	The password is empty

c Display the functional domains (**Administration/ Functional domains** menu).

d Create the following record using the fields and links as shown in the following table:

Field or link	Value
Name (Name)	CP1-Human Resources
SQL name (SQLName)	CP1_Human_Resources

e Exit Asset Manager.

Create the screens

The screens will allow users to display a customized view of the **Employees and departments** table.

a Start Asset Manager Application Designer.

b Connect to the demonstration database selecting **Admin** as the user.

c Display the detail of the **Employees and departments** (amEmplDept) table.

d Display the list of screens (**View/ Screens** menu).

e Create the following screens by populating the fields and links as shown in the following tables (**New** button):

Field	Value
General tab	
SQL name	CP1_amEmplDept
Domain	CP1_Human_Resources
Screen set	CP1-Simplified
List/Detail tab	
Columns in the list	Name,20,FirstName,20,Title,30
Pages tab	
Pages in detail list	Add the page **sysamEmplDept**

Field	Value
General tab	
SQL name	CP1_amEmplDept
Domain	CP1_Human_Resources
Screen set	CP1-Complete
List/Detail tab	
Columns in the list	Name,20,FirstName,20,Title,30
Pages tab	
Pages in detail list	Add all pages of the **Available pages** list.

f Start and enter the required information in the database structure update wizard (**File/ Update database structure** menu).

g Exit Asset Manager Application Designer.

Enter the parameters for the database options

The option that you are going to configure is used to define the order in which screen sets are made available to the administrator.

a Start the Asset Manager Windows client.

b Connect to the demonstration database selecting **Admin** as the user.

c Display the database options via the **Administration/Database options** menu.

d Populate the following option (**Current value** column):

Section	Option	Value
Screen sets	Default order	CP1-Complete,CP1-Simplified,Custom,MigratedSys,Full,Simple

e Close all screens.

f Reconnect to the database as **Admin** so that all database options are taken into account (**File/ Connect to database** menu).

Create the functional right **CP1-Human Resources**

The functional right that you are creating will be associated with the Human Resources Advisor and Human Resources Manager user profiles.

a Display the functional rights (**Administration/ Functional rights** menu).

b Create the following record using the fields and links as shown in the following table:

Field or link	Value
Description (Description)	CP1-Human Resources
SQL name (SQLName)	CP1_Human_Resources
Granted by default (bDefault)	Check this option
List of items	Make sure the **Value of parent** option is checked for all items.

c Close all screens.

Create the user right **CP1-Human Resources**

The user right that you are creating will be associated with the Human Resources Advisor and Human Resources Manager user profiles.

a Display the user rights (**Administration/ Users rights** menu).

b Create the following record using the fields and links as shown in the following table:

Field or link	Value
Description (Description)	CP1-Human Resources
Rights tab	
Object list	
Select all objects	
Read	Select this option
Enter during creation	Select this option
Enter during update	Select this option
Create	Select this option
Delete	Select this option

c Close all screens.

Create the **CP1 - Human Resources Advisor** and **CP1 - Human Resources Manager** user profiles

Access profiles will be assigned to the Human Resources Advisor and the Human Resources Manager.

a Display the user profiles (**Administration/ User profiles** menu).

b Create the following records by populating the fields and links as shown in the following tables:

Field or link	Value
Description (Description)	CP1 - Human Resources Advisor
General tab	
Screen sets (ScreenSets)	CP1-Complete, CP1-Simplified
User rights tab	
User rights (UserRights)	Add the user right **CP1-Human Resources**
Functional Rights tab	
Functional rights (FuncRights)	Add the functional right **CP1-Human Resources**

Field or link	Value
Description (Description)	CP1 - Human Resources Manager
General tab	
Screen sets (ScreenSets)	CP1-Simplified, CP1-Complete
User rights tab	
User rights (UserRights)	Add the user right **CP1-Human Resources**
Functional Rights tab	
Functional rights (FuncRights)	Add the functional right **CP1-Human Resources**

c Close all screens.

Create employees **CP1-Smith** and **CP1-Williams**

These employees will access the Asset Manager database.

a Display the employees (**Organization/ Employees and departments** menu).

b Create the following records by populating the fields and links as shown in the following tables:

Field or link	Value
Name	CP1-Smith
Title	Human Resources Advisor
Profile tab	
Access type	Floating
Profile	CP1-Human Resources Advisor
User name	smith
Password	Leave this field empty.

Field or link	Value
Name	CP1-Williams
Title	Human Resources Manager
Profile tab	
Access type	Floating
Profile	CP1-Human Resources Manager
User name	williams
Password	Leave this field empty.

c Close all screens.

Look at the result for the user **Admin**

1 Display the navigation bar (**Window/ Display navigation bar** menu).

2 Display the employees associated with the functional domain **CP1-Human Resources** (**CP1-Human Resources/ CP1_amEmplDept**) link on the navigation bar).

3 Note that the full screen is displayed.

4 This is because the user **Admin** is associated with the screen sets specified by the **Screen sets/ Default order** database option.

In our example, the screen set order to use is **CP1-Complete,CP1-Simplified,Custom,Full,Simple**.

Look at the result for the user **Cp1 - Smith**

1 Connect to the demonstration database as **Cp1 - Smith** (**File/ Connect to database** menu).

Field	Value
Login	smith
Password	The password is empty

2 Display the employees associated with the functional domain **CP1-Human Resources** (**CP1-Human Resources/ CP1_amEmplDept**) link on the navigation bar).

3 Note that the full screen is displayed.

4 This is because the user **Cp1 - Smith** is associated with the profile **CP1 - Human Resources Advisor** and for this profile the value of the **Screen sets** (ScreenSets) field is **CP1-Complete, CP1-Simplified**.

Look at the result for the user **Cp1 - Williams**

Field	Value
Login	williams
Password	The password is empty

Connect to the demonstration database as **Cp1 - Williams** (**File/ Connect to database** menu).

2 Display the employees associated with the functional domain **CP1-Human Resources** (**CP1-Human Resources/ CP1_amEmplDept**) link on the navigation bar).

3 Note that the simplified screen is displayed.

4 This is because the user **Cp1 - Williams** is associated with the profile **CP1 - Human Resources Manager** and for this profile the value of the **Screen sets** (ScreenSets) field is **CP1-Simplified, CP1-Complete**.

Customization prepared in a test database

When customizing an Asset Manager database, we recommend working on a copy of that database to preserve the integrity of the original.

This section explains how to migrate structural changes from the test database to the working database (of the same version of Asset Manager).

Here are the steps you must follow:

1 Make a copy of your working database. This will be your test database.

2 Develop and test the test database.

This test database contains the new data that will be categorized and transferred to the working database.

3 Propagate customizations from the test database to the production database

Instead of propagating the customizations from the test database to the production database, you can:

1 Export the additional data and the structure of the test database.
2 Import the additional data and the structure of the test database into the working database.
3 Migrate the data (the records) from the test database to the working database with HP Connect-It.

Copying your working database

Warning:

The way you copy your working database depends on your database engine. We recommend that you refer to the documentation provided with your database engine.

To copy a database to an empty database:

1 Create an empty shell with your DBMS.

▸ **Administration** guide, chapter **Creating, modifying and deleting an Asset Manager database**, section **Creating an empty shell with the DBMS**.

2 Create a DBMS login.

▸ **Administration** guide, chapter **Creating, modifying and deleting an Asset Manager database**, section **Creating an empty shell with the DBMS/ Creating a DBMS login**.

3 Create a connection to the empty shell.

▸ **Administration** guide, chapter **Creating, modifying and deleting an Asset Manager database**, section **Creating a connection with Asset Manager**.

4 Start Asset Manager Application Designer.
5 Connect to your working database (**File/Open/ Open existing database** menu).
6 Copy your working database (**Action/Copy database to empty database** menu).

Select the connection to the empty shell that you have just created.

Note:

This operation copies the whole database (structure and data).

▸ **Administration** guide, chapter **Creating, modifying and deleting an Asset Manager database**, section **Changing your DBMS**.

Propagating customizations from a test database to a production database

There are two ways to customize the production database:

- By modifying the `gbbase*.*` files describing the structure of the database and importing those modifications into the production database.
- By modifying an empty test database and transfering those modifications to the production database.

Those customizations pertain to tables, fields, links, screens and indexes.

Propagating customizations to a production database is performed using Asset Manager Application Designer

Propagating customizations

To propagate customizations to a production database:

1. Connect to the production database.
2. Select **Action/ Integrate a customization**.
3. Follow the instructions given by the wizard.
4. Once the integration is over, check that the customizations done on the test database (or on the `gbbase*.*` files) have been properly propagated to the production database.

Logic of propagating customizations

The customizations made to your test database will overwrite the modifications made to your production database.

If you wish to keep the modifications made to your production database and integrate the customizations made to the test database, we recommend that you export the structures of both databases, compare them and integrate them using an integration program or a HP Connect-It scenario.

Exporting the database structure

Asset Manager Application Designer enables you to export the structure of your test database.

To export the structure of your test database:

1. Create a folder to hold the database structure.
2. Start Asset Manager Application Designer.
3. Connect to your working database (**File/Open/ Open existing database** menu).
4. Export the structure of this database (**File/ Export the database structure** menu).

Exporting the structure of the database means exporting the following types of files:

- `.bin`
- `.cfg`
- `.xml`
- `.dsd`
- `.str`
- `.stt`
- `.usr`
- `.wiz`

Importing the new database structure

> **Warning:**
>
> We advise you to make a copy of your test database and your working database and save them. Importing the new structure is irreversible, and these copies will come in handy in case of any problem.

Importing the structure of your test database into your working database enables you to:

- Update your working database with the structure of the test database.
- Update the working database with the additional data from the test database.

To import the structure of your test database:

1. Start Asset Manager Application Designer.
2. Connect to your working database (**File/Open/ Open existing database** menu).
3. Choose to update the structure (**Action/ Integrate a customization**).
4. Follow the instructions given by the wizard.

Migrate the data using HP Connect-It

Launch the HP Connect-It scenario corresponding to the data type to be migrated. Then include a WHERE clause to distinguish the modified data from the original data.

Look out for software counters

When you create an entitlement counter with the **Create a counter** wizard, Asset Manager creates the queries that identify certain records by their primary keys.

Example of query associated with the **User rights scope** (LicQuery) of a counter:

```
(bDepartment = 0) AND (lEmplDeptId = 164)
```

If you create a counter in a test database, then transfer it to your production database, (export, then import), the identifiers that appear in the query most likely reference the wrong records.

For example, the idenfier **164** could be **Mr. Doe** in the test database but **Mrs Dour** in the production database.

After importing the software counters and their queries in the production database, you must verify the queries associated with the counters.

Tip:

Another solution consists of using more stable fields as the primary keys to identify the records in the queries: A name or a code, for example.

Customization made by several operators at the same time

Warning:

Implementing the process described in this section requires attention to detail and knowledge in the following areas:

- Structure of the Asset Manager database
- Exporting data
- Importing data
- Database administration
- Administering Asset Manager

Implementation may also be long and difficult if you wish to guarantee the integrity of the data in your production database.

Explanation of the problem

This section explains how to customize the Asset Manager database as a team.

This situation is restricting because the customizations that are saved in files cannot be shared.

As a consequence, each developer must:

- Work on a copy of the production database (called the **development database**).

- Save their own customizations separately in their own files.

You can then:

1. Merge the different customization files
2. Propagate the merged customizations to the production database

Possible types of customizations

The Asset Manager database can be customized at different levels:

- Structural parameters of the database
- Data in the database

Customizable structural parameters of the database

- Tables (label, description, etc.)
- Fields (label, description, size, etc.)
- Links (label, description, default value, etc.)
- Indexes (label, description, list of fields, etc.)
- Pages (label, description, content, etc.)
- Screens (label, description, buttons, etc.)
- Context-sensitive help for fields and links

Note:

These parameters sometimes use scripts (mandatory status of a field, for example).

Customizable data in the database

- Features and feature classes
- Calculated fields
- Itemized lists
- Units
- Functional domains
- Actions
- Workflow schemes
- Scripts
- Queries
- Reports
- Views
- User rights and profiles, access restrictions
- Functional rights
- Database options and tips of the day

- Configurations and preferences
- Workflows and deployment servers

Note:

The choice of data to be customized depends on your needs.

Once you have made your choice, make sure the tables corresponding to this data cannot be be modified by the Asset Manager users, exceptions permitted.

Make user of user profiles for this.

For example, you can stop tables linked to the workflow from being modified but still all itemized-list values to be modified.

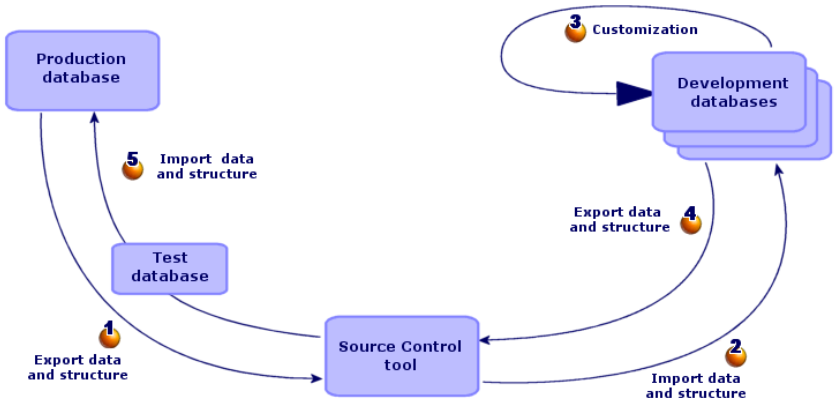
You can be even more specific in defining the scope of configurations that can be made by using access restrictions.

If necessary, using prefixes in identification fields (such as **amWfScheme.Ref**) in the tables concerned, will enable you to easily identify the records that are concerned by the configuration.

In the case of itemized lists, using closed lists can provide a simple solution.

If you require a more flexible solution, you can define access restrictions for the itemized lists based on criteria of your own choice.

Figure 1.2. Customization by several operators - simplified process



To customize Asset Manager as a team:

1 Exporting data and structure of the production database [page 80]
   1 Exporting the structure of the production database [page 80]
   2 Exporting the data to be customized from the production database [page 81]
   3 Storing the result of the export in a source control tool [page 84]
   4 Creating test data [page 85]

Note:

This series of steps is only performed once at the initial implementation stage of the project.

2 Importing the data and structure of development databases [page 85]
   1 Synchronizing files from the source control on the development computers [page 85]
   2 Check out the files from the source control [page 85]

3 Creating development databases and importing data to customize and test data [page 86]

Note:

This series of steps if performed once at the start and then whenever required afterwards.

3 Customizing the development databases [page 90]
1 Customizing the structure of the development databases [page 90]
2 Customizing the data in the development databases [page 90]

4 Exporting the data and structure of development databases [page 91]
1 Exporting the data of the customized development databases [page 91]
2 Exporting the customized data from the development databases [page 91]
3 Updating the files in the source control tool [page 92]

5 Importing data and structure into the production database [page 92]
1 Creating a test database and importing the merged customized data [page 92]
2 Testing the test database [page 92]
3 Applying the customized structure to the production database [page 93]
4 Importing the customized data in the production database [page 93]

1 Exporting data and structure of the production database

Because you are not going to directly modify the production database, you must export the data and structure of the database in the form of text files.

The text format enables you to manage the resulting files in a revision control (or source control) tool.

The files obtained during the export enable you to:

- Keep a trace of the structure of the production database prior to customization
- Create development databases to make and test customizations
- Compare the files generated after customizing the development databases with the original files

Exporting the structure of the production database

To export the structure of the production database:

1 Create a folder in which the results of the export will be stored
2 Start Asset Manager Application Designer

3 Connect to the production database (menu **File/ Open/ Open existing database**)

4 Export the structure of this database (**File/ Export the database structure** menu).

Exporting the structure of the database creates the following files:

- `<Connection name>.bin`: Definition of guest users (not modifiable)
- `lstpage_xx.cfg`: Description of the pages
- `lstdet_xx.cfg`: Description of the screens
- `<Connection name>.xml`: Structure of the database
- `<Connection name>_xx.xml`: Database dictionary
- `dawkfl.dsd`: Definition of the automation workflow (not modifiable)
- `tips.str`: Tips of the day
- `<Connection name>_xx.str`: Contexual help on fields and links
- `<Connection name>.wiz`: Functions library for wizards

Note:

`xx` corresponds to the language version of `Asset Manager` (depending on availability):

- **en**: English
- **fr**: French
- **de**: German
- **it**: Italian
- **sp**: Spanish
- **ja**: Japanese

Exporting the data to be customized from the production database

Note:

If your production database does not yet contain data, this section is still pertinent as for the creation of import scripts, which will be used throughout the process.

To export the data to be customized:

1 Create a folder to hold the data from the database.

2 Start Asset Manager Export Tool

▸ **Advanced use** guide, chapter **Exporting data and creating SQL views**

3 Connect to the production database

4 Select the **Edit/ Options** menu.

5 Expand the branch **Edit**

6 Set the **Displaying of database objects** to **SQL name (Description)**

7 Confirm this setting (**OK** button)

8 Display a new export script (**File/ New script** menu)

> Tip:
>
> You can also create your export script using the `custom.scx` template provided with the sample data.
>
> This script is located in or around the `C:\Program Files\HP\Asset Manager 5.20 xx\datakit\custom` folder.
>
> ▸ The `custom.scx` script respects the indications in section Database customization - Tables to take into consideration [page 94].

9 Save this script under the name of your choice (**File/ Save script** menu).

> Important:
>
> Save regularly any modifications you make to the script.

10 Add a query for each data set to be exported - In general, one data set per table (**New** button)

List of tables to take into consideration: ▸ Database customization - Tables to take into consideration [page 94]

11 For each query:

1 Name the query (**Name** field)

> Tip:
>
> We recommend using the SQL name of the exported table as the name of the query.
>
> Example: **amAction**

2 Define the full path of the file that will be used to stored the exported data (**File** field)

> Tip:
>
> We recommend using the SQL name of the exported table as the file name.
>
> Example: **amAction.txt**

3 Click the magnifier next to the **Query** field.

4 Add the following elements from the list on the left to the list on the right:

- All fields, except:
  - **Modified on** (dtLastModif)
  - **Hierarchic level** (sLvl)

  They are identified by the icon.
- All Memo fields.

  They can be accessed from the list of links.

  They are identified by the icon.
- The useful 1 links (no n link).

  They are identified by the or icon.

  For these links, select the field or fields that constitute a relevant reconciliation key.

  ▸ Database customization - Tables to take into consideration [page 94]

  Do not use a primary key.

5 Enable sorting on the fields making up the reconciliation key (red arrow with a digit).

Warning:

This is required so that the exported files can be managed more easily with a source control tool.

If the files are not adequately sorted, the source control application will not be able to analyse the differences between the files to be reconciled.

Important:

Exception: If there is a **Full name** field (FullName) in the table, enable the sort on the **Full name** only, and clear the **Visibility** check box.

By enabling the sort on the **Full name** field, you can be sure of importing the parent records before the child records. In this way, you are sure of being able to populate the parent link.

By clearing the **Visibility** checkbox, the **Full name** field is not exported. You risk not being able to import it later on.

During the import, this field is automatically generated from the parent/child links.

6 Confirm your choices by clicking **OK**

7 In the **Query** field, after each of the fields making up the reconciliation key of the table, add **keyvalue**.

Example:

```
SELECT sX, sY, seType, Comment.memComment, WfTransition.Ref keyvalue
, WfScheme.Ref keyvalue FROM amWfSysActiv ORDER BY lSysActivId
```

In this example, we have added **keyvalue** after the **WfTransition.Ref** and **WfScheme.Ref** fields because they make up the reconciliation key for records in the **amWfSysActiv** table.

Note:

Asset Manager Export Tool uses the values of the **keyvalue** fields for certain files created during the export.

8 In the **Query** field, if there are links to images (**Images** table (amImage)), replace the image identifier with **<link>.Name**.

Example:

```
SELECT Name, SQLName, Comment.memComment, WfActivity.Ref keyvalue, W
fEvent.Ref, lIconId FROM amWfUserChoice ORDER BY lUserChoiceId
```

Becomes:

```
SELECT Name, SQLName, Comment.memComment, WfActivity.Ref keyvalue, W
fEvent.Ref, Icon.Name FROM amWfUserChoice ORDER BY lUserChoiceId
```

In this example, **lIconId** has been replaced by **Icon.Name**.

12 Display the **Formatting** tab

13 Populate the **Column title** with the value **SQL name**

14 Save the script (**File/ Save script** menu)

15 Execute the script (**Actions/ Execute the script**)

16 View the result of the export: You obtain 1 file per query + 1 file per memo field and per record exported.

Make sure that the result of the export is consistent.

Storing the result of the export in a source control tool

This enables you to:

- Keep a trace of the database structure and customized data each time a change is made.

  You can thus roll back changes if necessary, or compare changes between different versions.
- Merge files modified by different persons.

Note:

Merging different file versions is part of the base functionality of a source control tool.

Add the files obtained during the export processes to your source control tool.

Important:

From now on, you must use these files as a starting point when making any modifications to the database structure or when customizing the database.

To store the result of the export in a source control tool:

Refer to the documentation of your source control tool.

Creating test data

When customizing the database, you may need to use test data with the development database. However it is probably not useful to store the test data under source control.

For example, when creating an action, an author needs to be assigned. The author is selected from the **Employees** table (amEmplDept). It is therefore necessary to have employee records in the development database. However, these employee records do not need to be customized. For this reason, the employees will not be stored in the source control.

We recommend that you create a test data set starting out from:

- Data from the production database:
  - Records in the target tables (**Employees**, for example) and the links (**Author**, for example) in the tables to be customized (**Actions**, for example).
  - All or a selection of record in the tables required for tests.
- Other data, if necessary.

2 Importing the data and structure of development databases

Synchronizing files from the source control on the development computers

Before customizing a database on their computers, the developers must create a database whose data is synchronized with the data on the source control.

To synchronize files from the source control on the development computers:

1. Install and configure the source control tool
2. Synchronize the database structure files on the development computer

Check out the files from the source control

Each developer must identify what they are going to modify and check out the corresponding files from the source control tool.

To check out the files from the source control tool:

Refer to the documentation of your source control tool.

Creating development databases and importing data to customize and test data

In order that each developer be able to customize the database independently, create a development database for each developer.

To create a development database:

1 Create an empty shell with your DBMS

▸ **Administration** guide, chapter **Creating, modifying and deleting an Asset Manager database**, section **Creating an empty shell with the DBMS**.

2 Create a DBMS login

▸ **Administration** guide, chapter **Creating, modifying and deleting an Asset Manager database**, section **Creating an empty shell with the DBMS/ Creating a DBMS login**.

3 Create a connection to the empty shell

▸ **Administration** guide, chapter **Creating, modifying and deleting an Asset Manager database**, section **Creating a connection with Asset Manager**.

4 Install required License Keys on the machine's instance of HP AutoPass License Management Tool.

▸ The **Administration** guide, chapter **Installing License Keys**.

> Tip:
>
> HP AutoPass License Management Tool is automaticaly installed with any Asset Manager 5.20 component that you install.
>
> Installing License Keys is a manual process, though.

5 Start Asset Manager Application Designer

6 Open the `<Connection name>.xml` file synchronized from the source controll on the development computer (**File/ Open** menu, **Open database description file - create new database** option).

This file is obtained in the step Exporting the structure of the production database [page 80].

7 Start the database creation wizard (**Action/ Create database** menu).

8 Populate the pages of the wizard as follows (navigate through the wizard pages using the **Next** and **Previous** buttons):

Generate SQL script / Create database page:

Fields	Value
Database	Select the connection to the empty shell created with Asset Manager.
Creation	Create the database
Use avanced creation options	Select this option if you need to define the tablespaces for tables, indexes and LOBs.

Creation options page:

Note:

The tablespaces must be created beforehand using the DBMS.

Creation parameters page:

Fields	Value
Password	Password to associate with the administrator login. Note: The Asset Manager database adminstrator is the record in the **Employees and departments** (amEmplDept) table for which the **Name** (Name) field is set to **Admin**. The database connection login in stored in the **User name** (UserLogin) field. The administration name is **Admin**.
Confirm password	Confirm the value entered in the **Password** field.

Create system data page:

Fields	Value
Use time zones	Select this option in order to be able to manage the time-zone differences between the database server, the date field and the Asset Manager clients. ▶ **Advanced use** guide, chapter **Time zones**.
Server	Select the time zone of the Asset Manager database server. This is the time zone defined, for example, at the level of the Windows Control Panel of the server.
Data	Select the time zone in which the dates stored in the database will be expressed.

Fields	Value
Use help on fields	Select this option to insert the information describing the database fields and links.

Data to import page:

Fields	Value
Available data	Do not select any data.
Stop import if error	Do not select this option
Log file	Do not populate this field.

9 Execute the options defined using the wizard (**Finish** button).

To import the data to be customized in a development database:

1 Start Asset Manager
2 Connect to the development database
3 Start the import function (**File/ Import**, **Import database** button, **Text** tab, **Open** button)
4 Select the **Edit/ Options** menu.
5 Clear the option **Do not import empty fields from the source database**
6 Confirm this setting (**OK** button)
7 Save the blank import script using the name of your choice (**File/ Save** menu).

Important:

Save regularly any modifications you make to the script.

Tip:

You can also create your export script using the `custom.scx` template provided with the sample data (**File/ Open script**)

This script is located in or around the `C:\Program Files\HP\Asset Manager 5.20 xx\datakit\custom` folder.

▸ The `custom.scr` script respects the indications in section Database customization - Tables to take into consideration [page 94].

8 Configure the script so that it imports the exported data files
▸ **Administration** guide, chapter **Import**.
9 For each file to be imported (1 for each file exported; ▸ Database customization - Tables to take into consideration [page 94]):

1. Add the file (**File/ Add**)
2. Populate the pages displayed by the wizard, in particular:
   - Page 1: Select the options **First imported line contains column names** and **Separators**
   - Page 2: Select the option **Tab**
   - Page 3: Select the columns containing **Date** or **Date + Time** data and populate the **Type** field accordingly
3. Select the target table: Main table matching the imported file
4. Map the file to the table (**Edit/ Map**)
5. Select the mapping **(file, target table)**
6. Map the columns in the file to the fields in the target table (**Edit/ Properties** menu).

> Tip:
>
> The best is to use the button to automatically map the fields based on theire SQL names.

For certain fields, a **File**-type calculation formula must be created and mapped to the target field instead of the field.

This is case of the following fields in particular:

- Memo fields
- **Data** fields (blbData)
- **Script** fields (memScript)
- **Definition** field in the **Functional rights** table
- **Period** field in the **Workflow events** table (amWfEvent)

When you use the button, the formulas are automatically created and associated with the correct field.

If you look at details of one of these formulas, you will see:

- **Type of field** field: **File**
- **Main field** field: Column name of the exported file indicating the file name storing the memo

For duration fields (their SQL names start with **ts** for timespan), you must also create a formula with the following features:

- **Field type**: **Script**
- **Script**: **RetVal = [<SQL name of the field>] & "s"**

  Example: **RetVal = [tsDelay] & "s"**

Associate the calculate field you have just created with the target field (instead of the source field associated with it by default).

7 Define the keys recommended in the table Database customization - Tables to take into consideration [page 94] as the reconciliation keys for the main table and linked tables

> Warning:
>
> The button does not automatically select the appropriate keys.
> You must systematically verify them.

10 Save the script (**File/ Save** menu)

11 Verify the import settings (**Edit/ Option** menu)

12 Execute the script (**Importer** button)

13 Make sure that the result of the import is consistent.

> Important:
>
> These instructions should suffice for all tables except for the workflow schemes, for which you will have to test the scripts in-depth to get them to work correctly.

To import the test data in a development database:

Create a new import script in the same way as for importing the data to customize.

Customizing the development databases

Customizing the structure of the development databases

The structure of the database may be modified by more than one developer at the same time.

For each individual developer, to customize the structure of the development database:

1 Start Asset Manager Application Designer

2 Connect to your intance of the development database (**File/Open/Open existing database** menu).

3 Modify the structure of the database

4 Save the modifications (**File/ Save** menu)

Customizing the data in the development databases

The database data may be modified by more than one developer at the same time.

To customize the data in a development database:

1 Start Asset Manager
2 Connect to the development database (menu **File/ Open/ Open existing database**)
3 Modify the data in the development database

> Tip:
>
> Populate the key recommended in the table Database customization - Tables to take into consideration [page 94] so that it enables you to identify the developer who created or modified the record.
>
> You can, for example, start each identifier with a prefix for each developer.

> Tip:
>
> When performing your tests, you may have to create temporary records.
>
> Don't forget to delete these temporary records.
>
> If the number of these records ever becomes too greate, you may wish to consider creating separate test and development databases.

Exporting the data and structure of development databases

Exporting the data of the customized development databases

This operation must be performed for each development database that has been customized.

To export the structure of a development database:

1 Start Asset Manager Application Designer
2 Connect to the development database (menu **File/ Open/ Open existing database**)
3 Export the database structure (**File/ Export the database structure**) to the place where you sychronized the structure files

Exporting the customized data from the development databases

To export the data of a development database:

1 Start Asset Manager Export Tool
2 Connect to your instance of the development database
3 For each script corresponding to data to be exported:
   1 Open the script (**File/ Open script**)

2 Execute the script (**Actions/ Execute the script**)

▸ Exporting the data to be customized from the production database [page 81]

Updating the files in the source control tool

When a developer finishes making their modifications, they check the exported files back into the source control.

If during the time they have been working on a file, the centrally stored version of the file in the source control has been updated by another user, they will have to merge the modifications before checking the file back in, so as not to overwrite the changes made by the other users.

The source control tool can be used in conjunction with a **diff and merge** tool, which highlights the modifications made between successive versions.

5 Importing data and structure into the production database

Creating a test database and importing the merged customized data

When every developer has customized their development database, and the results have been placed back in the source control, you must verify the application of the new structure and importing the customized data in a test database.

To create a test database with an up-to-date structure:

Proceed in the same way as in the step Creating development databases and importing data to customize and test data [page 86].

To import the customized data into the test database:

Proceed in the same way as in the step Creating development databases and importing data to customize and test data [page 86].

To import the test data into the test database:

Proceed in the same way as in the step Creating development databases and importing data to customize and test data [page 86].

Testing the test database

Make sure the structure of the database matches the customizations made in the development databases.

Also test one or more customized objects in the development databases.

In the case of actions, for example, execute one or two actions to check whether they function correctly.

Applying the customized structure to the production database

If the tests on the test database are successful, you can update the production database.

To apply the customized structure to the production database:

1. Start the source control tool
2. Synchronize the folder containiing the structure files and data
3. Start Asset Manager Application Designer
4. Open the production database
5. Select **Action/ Integrate a customization**
6. Select the **Integrate from a database description file** option
7. **Working folder**: Temporary folder of your choice.
8. **Source file**: Full path of the structure file, `<Database name>.xml`, that you have synchronized (do not select the file, `<Database name>_xx.xml`)
9. Click **Integrate**
10. Once the integration is performed, make sure the customizations have been correctly made in your production database

Importing the customized data in the production database

To import the customized data into the test database:

Proceed in the same way as in the step Creating development databases and importing data to customize and test data [page 86].

References: Customizable tables

The following is a list of customizable objects.

For each of these objects, the related tables are indicated.

For each of these tables, a recommended reconciliation key is given as are the useful 1 links (Memo links and Images links are not given).

Tip:

During an import, the order of the tables is important because certain imported records reference records in other tables that must already exist. The order of the tables listed below must respect the dependencies between tables.

Table 1.3. Database customization - Tables to take into consideration

Table	Recommended key	Useful 1 links
Images		
Images (amImage)	Name (Name)	
Calculated fields		
Calculated fields (amCalcField)	SQL name (SQLName) + Table (TableName)	
Scripts		
Scripts (amScriptLibrary)	SQL name (SQLName)	
Units		
Units (amUnit)	Symbol (Symbol)	
Functional domains		
Functional domains (amFuncDomain)	SQL name (SQLName)	Parent domain (Parent.Code)
Queries		
Queries (amQuery)	SQL name (SQLName)	Author.IDNo (Author.IDNo) Domain.SQL name (Domain.SQLName)
Views		
View (amViewDef)	SQL name (SQLName)	Author.IDNo (Author.IDNo) Domain.SQL name (Domain.SQLName)
Options of the application		
Applications options (amOption)	■ Section (OptSection) ■ Entry (OptEntry)	Employee.ID # (EmplDept.IDNo)
Configurations and preferences		
Configurations and preferences (amSysConfig)	■ Entry (CfgEntry) ■ Section (CfgSection) ■ Employee (EmplDept.IDNo)	Employee.ID # (EmplDept.IDNo)
Reports		
Reports (amReport)	SQL name (SQLName)	Author.IDNo (Author.IDNo) Domain.SQL name (Domain.SQLName)
Itemized lists		
Itemized lists (amItemizedList)	Identifier (Identifier)	
Itemized list value (amItemListVal)	■ Value (Value) ■ Itemized list.Identifier (ItemizedList.Identifier)	Itemized list.Identifier (ItemizedList.Identifier)
Features		
Feature classes (amFeatureClass)	Code (Code)	Parent class (Parent.Code)

Table	Recommended key	Useful 1 links
Features (amFeature)	SQL name (SQLName)	Class.Code (Feature-Class.Code)
		Itemized list.Identifier (ItemizedList.Identifier)
		Unit.Symbol (Unit.Symbol)
Features (amFeature)	Export the records a second time with the **SQL name** (SQLName) and **Source features.SQL name** (SrcFeatures.SQLName) only Note: This second import enables you to create the links between consolidating features and consolidated features during the import phase. This can only be achieved if all these features already exist. This condition is ensured by importing the first file. Asset Manager Export Tool generates one line per link.	
Feature parameters (amFeatParam)	■ Table (TableName) ■ Feature.SQL name (Feature.SQLName)	Help on this parameter.Description (ShortHelp.Comment)
		Help on this parameter.Example (ShortHelp.Example)
		Help on this parameter.Precautions (ShortHelp.Warning)
		Feature.SQL name (Feature.SQLName)
Actions		
Actions (amAction)	SQL name (SQLName)	Author.IDNo (Author.IDNo)
		Deployment workflow.Reference (DaWfScheme.Ref)
		Domain.SQL name (Domain.SQLName)
		Action to execute.SQL name (ExecAction.SQLName)
		Report.SQL name (Report.SQLName)
User profiles		
User profiles (amProfile)	SQL name (SQLName)	Defaut action.SQL name (DefLoginAction.SQLName)
User rights (amUserRight)	SQL name (SQLName)	
Access restrictions (amAccessRestr)	SQL name (SQLName)	
Functional rights (amFuncRight)	SQL name (SQLName)	

Table	Recommended key	Useful 1 links
User rights (amUserRight)	Export the records a second time with the **SQL name** (SQLName) and **Profiles.SQL name** (Profiles.SQLName) only Note: This second import enables you to create the links between user profiles and user rights during the import phase. Asset Manager Export Tool generates one line per link.	
Access restrictions (amAccessRestr)	Export the records a second time with the **SQL name** (SQLName) and **Profiles.SQL name** (Profiles.SQLName) only Note: This second import enables you to create the links between user profiles and access restrictions during the import phase. Asset Manager Export Tool generates one line per link.	
Functional rights (amFuncRight)	Export the records a second time with the **SQL name** (SQLName) and **Profiles.SQL name** (Profiles.SQLName) only Note: This second import enables you to create the links between user profiles and functional rights during the import phase. Asset Manager Export Tool generates one line per link.	
Workflow schemes		
Employee groups (amEmplGroup)	Barcode (BarCode)	Supervisor.IDNo (Supervisor.IDNo)
		Sub-group of.Barcode (Parent.BarCode)
Employee groups (amEmplGroup)	Export the records a second time with the **Barcode** (BarCode) and **Members.IDNo** (Members.IDNo) only Note: This second import enables you to create the links between workflow groups and members during the import phase. Asset Manager Export Tool exports one line per line between a group and a member.	
Workflow roles (amWfOrgRole)	Reference (Ref)	Assignee.ID No (Assignee.IDNo)
		Group.Barcode (EmplGroup.BarCode)
Workflow schemes (amWfScheme)	Reference (Ref)	Supervisor.ID # (Supervisor)

Table	Recommended key	Useful 1 links
System activities (amWfSysActiv)	■ Workflow.Reference (WfScheme.Ref) ■ Type (seType) **Note:** In this first file, add a WHERE clause to filter the START activities (seType = 0).	Workflow.Reference (WfScheme.Ref)
Workflow activities (amWfActivity)	■ Workflow.Reference (WfScheme.Ref) ■ Reference (Ref)	Assignee.Reference (Assignee.Ref) Calendar.SQL name (Calendar.SQLName) Action.SQL name (NotifAssignAct.SQLName) Template.Reference (Template.Ref) Template.Workflow.Reference (Template.WfScheme.Ref) Workflow.Reference (WfScheme.Ref) Wizard.SQL name (Wizard.SQLName)
User choices (amWfUserChoice)	■ SQL name (SQLName) ■ Activity.Reference (WfActivity.Ref) ■ Activity.Workflow.Reference (WfActivity.WfScheme.Ref)	Activity.Reference (WfActivity.Ref) Activity.Workflow.Reference (WfActivity.WfScheme.Ref)
Workflow events (amWfEvent)	■ Workflow.Reference (WfScheme.Ref) ■ Source activity.Reference (SrcActivity.Ref) ■ Reference (Ref)	Source activity.Reference (SrcActivity.Ref) Workflow.Reference (WfScheme.Ref)
Workflow transitions (amWfTransition)	■ Reference (Ref) ■ Source event.Reference (SrcEvent.Ref) ■ Source event.Source activity.Reference (SrcEvent.SrcActivity.Ref) ■ Workflow.Reference (WfScheme.Ref)	Source event.Reference (SrcEvent.Ref) Source event.Source activity.Reference (SrcEvent.SrcActivity.Ref) Target activity.Reference (TargetActiv.Ref) Workflow.Reference (WfScheme.Ref)

Table	Recommended key	Useful 1 links
System activities (amWfSysActiv)	■ Workflow.Reference (WfScheme.Ref) ■ Transition.Reference (WfTransition.Ref) ■ Transition.Source event.Reference (WfTransition.SrcEvent.Ref) ■ Transition.Source event.Source activity.Reference (WfTransition.SrcEvent.SrcActivity.Ref)	Transition.Reference (WfTransition.Ref) Transition.Source event.Reference (WfTransition.SrcEvent.Ref) Transition.Source event.Source activity.Reference (WfTransition.SrcEvent.SrcActivity.Ref) Workflow.Reference (WfScheme.Ref)
	Note: In this second file, add a WHERE clause to filter the END activities (seType = 1).	
Workflow activities (amWfActivity)	Export the records a second time with the **Workflow.Reference** (WfScheme.Ref), **Reference** (Ref) and **Actions.SQL name** (Actions.SQL name) only Note: This second import enables you to create the links between workflow groups and actions during the import phase. Asset Manager Export Tool generates one line per link.	
Workflow alarms (amWfActivAlarm)	■ Reference (Ref) ■ Activity.Reference (WfActivity.Ref) Activity.Workflow.Reference (WfActivity.WfScheme.Ref)	Action.SQL name (Action.SQLName) Activity.Reference (WfActivity.Ref) Activity.Workflow.Reference (WfActivity.WfScheme.Ref)
Calendars		
Time zones (amTimeZone)	Code (Code)	
Calendar of business days (amWorkCalendar)	SQL name (SQLName)	Time zone.Code (TimeZone.Code)
Currencies		
Currencies (amCurrency)	Name (Name)	
Exchange rates (amCurRate)	■ Source currency.Name (SrcCurrency.Name) ■ Target currency.Name (TargetCurrency.Name) Date of rate (dtStart)	Source currency.Name (SrcCurrency.Name) Target currency.Name (TargetCurrency.Name)

Remarks: Choice of reconciliation keys

The choice of reconciliation keys is tricky:

- You may not use a primary key as a reconciliation key. In effect, each developer will be generating primary keys that are specific to their own development databases. However, these identifiers will be different once they are imported into the production database (you cannot import a primary identifier; Asset Manager generates them automatically during the import process).
- You require a reconciliation key that will enable you to update the records in the production database whenever it is customized again in the future.

  Example:

  1. During an initial round of customizations, a developer creates a new action, **A1**, in a development database.

     The primary key of the action is **PK1** and its SQL name **SQL1**.
  2. When it is imported into the production database, the primary key of the action **A1** automatically changes (**PK2**). However, its SQL name remains the same (**SQL1**).
  3. During a subsequent round of customizations, a developer modifies the action **A1** in a development database.

     The primary key of the action is **PK1** and its SQL name **SQL1**.
  4. When it is imported into the production database, the action **A1** is identifed in the production database by its SQL name (**SQL1**), which is used as a reconciliation key. The record describing the action **A1** is updated.

2 Database options

Certain options specifically concern a database.
They are common to all client computers connecting to the database.
This chapter explains the options in question and how to configure them.

To configure the database options

1 Launch Asset Manager.

2
Warning:

Only the **Admin** user and users for which the **Administration rights** option has been selected are able to configure the database options.

Connect to the database (**File/Connect to database** menu).

3 Display the list of database options (**Administration/Database options** menu).

4 Select the option to modify.

5 Proceed using one of the following methods:
- Double click the value of the option in the **Current value** column.
- Press **Shift** + **Space bar**.

6 The value can be modified in different ways:
- If the value is part of a list: Select the value from the list.

- If the value is entered freely and is on one single line: Enter the value in the **Current value** column.
- If the value is entered freely and is over several lines: enter the value in the edit zone at the bottom of the option window.

> Tip:
>
> If this window is not shown, place the mouse pointer over the lower edge of the options window until the split pointer appears, then drag it upwards.

7 Validate the options (**OK** button).

8 Have the users reconnect to the database in order for the new options to be taken into account at the level of their Asset Manager client.

Database option configuration window

> Note:
>
> Values displayed in black cannot be modified.
>
> Values displayed in black can be modified.
>
> The **Default value** column indicates the standard values for reference.

Table 2.1. Database options - Description of the available options

Section	Name of the option	Description	Example of values
Procurement	Create expense lines for consumables as soon as received	■ **Yes**: As soon as a consumable is received, an expense line is generated. It corresponds to the purchase of the consumable. An additional expense line is not created when the consumable is used (i.e. when the consumable is linked to the parent asset that consumes it). You must create a chargeback rule if you want to generate expense lines taking into account the **consumption** aspect. ■ **No**: No expense line is created when a consumable is created upon its receipt. An expense line is created when the consumable is used (i.e. when the consumable is linked to the parent asset that consumes it).	Yes

Section	Name of the option	Description	Example of values
Procurement	Let Asset Manager Automated Process Manager create the items received in the portfolio	■ **Yes**: Receiving an item from a purchase order will create a record in the **Receiving slips** table (amReceipt). However, the received items are not created in their respective tables (assets, computers, portfolio items, etc.). Temporary records are created in the **Items received** table (amItemsReceived) and processed by the **Create assets, consumables, etc. corresponding to items received** module in Asset Manager Automated Process Manager, which takes care of creating records in the final tables. Purpose of this method: Giving this task to Asset Manager Automated Process Manager rather Asset Manager enables increased performance for those client computers used to receive purchase orders. ■ **No**: Receiving an item from a purchase order will create a record in the **Receiving slips** table (amReceipt). The corresponding records are immediately created in their respective tables (assets, computers, portfolio items, etc.).	Yes
Import	Disable history during import	■ **Yes**: No record is created in the **History** table (amHistory) for modifications brought about by importing the data. ■ **No**: 1 record is created in the **History** table (amHistory) for the modifications brought about by importing the data, when these modifications concern a field or a link for which history is kept.	Yes
Wizards	BASIC functions	This option stores Basic functions that can be called in **Wizard** type actions.	

Section	Name of the option	Description	Example of values
Tips of the day	Text of tips	List of tips of the day displayed when Asset Manager is launched.	TIP2, "Shift+F9 starts the wizard debugger."
LDAP authentication	Use an LDAP server for authentication	■ **Yes**: The password entered when connecting to the database is looked up in an external LDAP directory. ■ **No**: The password entered when connecting to the database is looked up in the **Password** field (Login-Password) of the **Employees and Departments** table (amEmplDept).	Yes
LDAP authentication	Authorize anonymous LDAP connections (empty login without password)	■ **Yes**: Anonymous LDAP connections are authorized. ■ **No**: Anonymous LDAP connection is disabled and the LDAP server checks login and password validity. This option is only taken into account if the **Use an LDAP server for authentication** option is set to **Yes**.	Empty
LDAP authentication	Use a secure connection (SSL) to the LDAP server	■ **Yes**: Authentication is performed via the LDAP certificate directory (`LDAPCertDir` or `LDAPCertfile`). ■ **No**: The password entered when connecting to the database is looked up in an external LDAP directory. This option is only taken into account if the **Use an LDAP server for authentication** option is set to **Yes**.	Yes
LDAP authentication	LDAP server name	Name of the server exposing the directory in which the Asset Manager user logins and passwords are stored. This option is only taken into account if the **Use an LDAP server for authentication** option is set to **Yes**.	MyLDAPServer
LDAP authentication	LDAP server port	LDAP server port used to listen for requests concerning the directory. This option is only taken into account if the **Use an LDAP server for authentication** option is set to **Yes**.	389

Section	Name of the option	Description	Example of values
LDAP authentication	SQL name of the 'amEmplDept' table in which the LDAP directory login is stored.	By default, this option supposes that you are using the same login in the Asset Manager database and in the LDAP directory: This login is then stored in the **Login** field (UserLogin) of the **Employees** table (amEmplDept). You may choose to differentiate between the LDAP directory login and that of Asset Manager. You must select a field to store the LDAP directory login and indicate its SQL name using this option. This option is only taken into account if the **Use an LDAP server for authentication** option is set to **Yes**.	Field1
Authorization	Asset Manager Automated Process Manager signature	Used by Asset Manager to verify that Asset Manager Automated Process Manager regularly connects to the database. This option cannot be modified in this window.	Updated by Asset Manager Automated Process Manager.
Features	Disable recalculation of consolidated features	■ **Yes**: The values of consolidated features are not be recalculated when the values of the features making them up change. ■ **Yes**: The values of consolidated features are recalculated when the value of at least one of the features making them up changes.	Yes
Access control	Discard current changes after automatic disconnection	Ensures that changes are only saved intentionally.	Yes
Access control	Enable automatic disconnection of named users	Ensures that user sessions do not remain open indefinitely.	Yes
	Connection slot update delay (minutes)	Interval at which the client updates the login slot.	10
Access control	Enable automatic disconnection	Concerns the automatic disconnection (timeout) of a client from the database if inactive.	Yes
Access control	Slot timeout (seconds)	Timeout period for the database connection. This option is only taken into account if the **Enable automatic disconnection** option is set to **Yes**.	1800

Section	Name of the option	Description	Example of values
Documents	Maximum size of documents that can be inserted into the database (bytes)	This is maximum size of files that can be inserted in the **Documents** table (amDocument).	5 242 880
System data	Build	Build number of the the **System data** imported into the database. The **system data** is automatically imported into the database when it is created. This option cannot be modified in this window.	
Time zone	Data: Time difference in relation to the reference GMT time zone (minutes)	Time zone of data in the database. The expected value is a numeric value specifying the difference with reference to GMT. An empty value means that no time zone is used. Zero (**0**) defines the time zone as GMT.	-120 (time zone GMT-120)
Time zone	Server: Time difference in relation to the reference GMT time zone (minutes)	Time zone of the server. The expected value is a numeric value specifying the difference with reference to GMT. An empty value means that no time zone is used. Zero (**0**) defines the time zone as GMT.	240 (time zone GMT+240)
Event management	Expiration time for output events (hours)	Output events are queues that can receive data and export it to external applications. The expiration time sets the value that determines when to purge these events.	336
Event management	Expiration time for input events (hours)	Input events are queues that can receive data and import it from external applications. The expiration time sets the value that determines when to purge these events.	336

Section	Name of the option	Description	Example of values
Screen sets	Default order		Full,Simple

Section	Name of the option	Description	Example of values
		This option defines the list of screen sets to use starting with the highest priority first (example: **Full, Simple**). This option is used when the following user types request a table be displayed: ■ Users associated with a profile whose **Screen sets** (ScreenSets) field is empty ■ Users associated with a profile whose **Administration rights** (bAdminRight) option is selected When these users request a table be displayed, Asset Manager takes the identifiers of the screen sets in the order specified by the option and searches the table to see if it contains a screen associated with this screen set. When a screen is found, Asset Manager uses it to display the table. This default behavior can be superseded by the functional rights associated with the profile: Access to a given screen can be denied by the functional rights. For example: Employees in the **Employees and departments** (amEmplDept) table can be displayed using two screens: ■ A full screen: SQL name: **amEmplDept** Screen set: **Full** ■ A simple screen: SQL name: **amEmplDept** Screen set: **Simple** Suppose that user **Hartke** is associated with a user profile that allows him to view the **Employees and departments** table and that the **Screen sets** (ScreenSets) field is empty. If the **Default order** database option is **Full,Simple**, then the **Organization/ Employees and departments** link on the navigation bar will display the **amEmplDept** screen associated	

Section	Name of the option	Description	Example of values
		with the **Full** screen set.	
Leasing	Authorize automatic asset LRF calculation	■ **Yes**: The **LRF** field (pLRF) of assets is automatically calculated by Asset Manager depending on the values available. ■ **No**: The **LRF** field (pLRF) of assets is not recalculated automatically. Its value is used as a constant to calculate the other values that depend on it.	Yes
Password	Length of validity of the password in days		Yes
Password	Use password historization to stop passwords from being recycled	User passwords are archived in order to stop the same password from being used several times in a row by the same user.	Yes
Password	Number of days before expiration of the password	Delay in days before a system alert is raised.	Yes
Password	Name of library that validates the password formats.	Library defining the formats of user passwords.	Yes
Full-text search	Enable full-text search	By default, simple filters enable you to use the **LIKE** operator. This operator searches a string within the values of a field. This search is performed directly by Asset Manager. Certain DBMSs offer equivalent functionality with greater efficiency. When this is the case, this function must be specifically enabled at the DBMS level in order for it to be available. This search function then uses the **CONTAINS** operator instead of the **LIKE** operator. The **Enable full-text search** option enables the **CONTAINS** operator in the simple filter editor.	Yes

II Customizing screens

3 Customizing screens

This chapter explains how to use screens.

Definition of a screen

Screens let you store a specific state of the database that you can easily view on a regular basis.

They can be accessed via the navigation bar: ▸ To display a screen [page 117].

▸ For more information about screens, please read paragraph Creating a screen [page 45].

Views are similar, but are only available in the Windows client, whereas screens are available in both the Windows and Web clients.

Screens can be viewed by all users.

Views can either be viewed only by the view's owner (or users with administration rights) or by all users. This is defined by the **Not shared** (amViewDef:bPrivate) field.

▸ For more information about **Views**, please read chapter Using Views [page 131].

Tip:

Screens can only be created, modified or deleted from Asset Manager Application Designer.

Once created, they can be displayed in both the Windows and Web clients.

Differences between screens and views

Screens have several advantages over views: they can be displayed in the Web client, and they are available to all users.

Table 3.1. Differences between a view and a screen

	View	Screen
Available in the Windows client	Yes	Yes
Available in the Web client	No	Yes
Visible by all users	Defined by the **Not shared** (amViewDef:bPrivate) field	Yes
Can be viewed by users with administration rights	Yes	Yes
Storage	**Views** (amViewDef) table	Database structure
Creating	Windows client	Windows client or Asset Manager Application Designer
Modifying and deleting	Windows client	Asset Manager Application Designer

If you create a screen based on a view, (▸ To create a screen from a view in the Windows client [page 114]), it will have the same properties as the view.

To create a screen from scratch in Asset Manager Application Designer

▸ Creating a screen [page 45]

To create a screen from a view in the Windows client

1. Start the Windows client and connect to the database.
2. Display the list of views (**Tools/ Views/ Edit views...** menu).
3. Select the view that you want to share with other users or make available via the Web client.
4. Click **+Screen**.

   This starts the **Create screen using view as a template...** (sysCoreViewToScreen) wizard.

5 Complete the wizard, and make sure you specify a value for the **Functional domain** field in order for the screen to be accessible via a node under that domain on the navigation bar.

6 Exit the wizard.

Note:

- You should keep the view once the screen has been created in case you would like to make changes to the screen later on; it will be easier to start from the view rather than from the screen in Asset Manager Application Designer; furthermore, you cannot change the set of pages of a screen with Asset Manager Application Designer when the screen originates from a view.
- If you have set filters for the view, the filters may be modified when you create the screen.

  For more information on how filters are managed when creating a screen, please read section Transforming filters when creating the screen [page 116].

When a screen is created out of a view, the following limitations apply:

- The customization of tab lists are not saved for the following tabs: **History**, **Documents**, **Workflow**, **Features**, **Adjustments**.
- Simple and cascading filters are converted to a single query filter when you create a screen.
- Only simple **sorts** are kept for main lists when a screen is created.
- If you set a default filter on a tab list (collection) through Asset Manager Application Designer this is not applied by default in the Web client. It needs to be re-selected manually in the list of filters available for that collection.
- The following properties available in the Windows client views using the **Utilities/ Configure list** contextual menu are not supported in the Web client via screens:
  - **Columns and sort** tab:
    - Sorting on multiple columns (the first one is retained)
    - **Force indexes**
    - **View NULLs**
    - **Color**
  - **Filter (WHERE clause)** tab:
    - The whole **Where** clause is ignored for tab lists (but kept for main lists)
- Filters that refer to monetary fields will not work in the Web client.

Managing filters in screens

When you create a screen from a view, you define and associate filters.

This section explains how filters are managed when creating a screen.

Transforming filters when creating the screen

When you create a screen from a view, filters are transformed as indicated in the following table:

Filters used for the view or window	Result in the screen
Simple filter	This filter type is replaced with a query filter in which the operator is hard coded. This filter will be visible in the screen.
Several filters (any type)	A single query which concatenates each of the conditions from all of the filters is generated.
List filter (WHERE clause) with the icon	This filter, which is initially hidden (not visible by a standard user), is converted to a visible query filter and will be concatenated with any other display filters.
List filter (WHERE clause) set via the icon for **tab lists**	This filter is dropped when the screen is created.

To modify the filter applied to the screen's main list

1. Start Asset Manager Application Designer.
2. Connect to the database.
3. Display the table of which the view is a part.
4. Display the screens (**View/ Screens** menu item).
5. Select the screen for which you wish to define filters.
6. Display the **List/Detail** tab.
7. Note the value of the **Query filter** field.

   This is the SQL name of the query that filters the screen's main list.
8. Exit Asset Manager Application Designer.
9. Start the Windows or Web client.
10. Connect to the database.
11. Display the queries (**Administration/ Queries** link).
12. Select the query using the SQL name that you noted from Asset Manager Application Designer.
13. Modify the query.

14 Save the modifications.

To display a screen

To display a screen: Navigate to the screen in the navigation bar (under the **Functional domain** that you specified when you created the screen).

Note:

If the screen has just been created, you will need to re-connect to the database to be able to see it.

To modify a screen

1 Start Asset Manager Application Designer and connect to the database.
2 Display the table underlying the view.
3 Display the screens for that table (**View/ Screens** menu item).
4 Select the screen that you want to modify.

Note:

You cannot make changes to the set of pages.

5 Modify its properties.
6 Save the modifications made to the screen (**Modify** button).
7 Save the changes to the database (**File/ Update database structure...** menu).

To delete a screen

1 Start Asset Manager Application Designer.
2 Connect to the database.
3 Display the table of which the view is a part.
4 Display the screens (**View/ Screens** menu item).
5 Select the screen that you want to delete.

Note:

You cannot delete System screens (screens for which the **Domain** is System).

6 Click **Delete**.

7 Save the changes to the database (**File/ Update database structure** menu).

Warning:

When deleting a screen using this method, if a query filter was associated with the view it will not be deleted from the queries table.

III Customizing Windows clients

4 Customizing a Windows client

This chapter's objective is to teach you how to customize your workspace.

You will learn how to:

- Only select the functionality that you are likely to need.
- Customize the organization of information in your screens.
- Define the options that best adapt the interface to your needs.

All users can customize Asset Manager at the workstation level. These modifications only concern the workstation of the user who made them. Other workstations are not affected.

If you want to return to the default configuration for the screens (the windows describing tables), cancel your customization options for the duration of your session by selecting the **Tools/ Reinitialize screens** menu item.

Activating the modules

Asset Manager enables you to restrict the active modules on a computer. Each module covers an area of functionality and brings menus, screens and wizards to the graphical interface.

By deactivating certain modules that you do not use, you simply the user interface.

Use the **File/ Activate modules** menu item to select the modules to activate individually at the level of each client machine.

To enable or disable a module, use one of the following procedures:

1 Click the icon of the module.

> Note:
>
> You can also cycle through the list of modules using the arrow keys and toggle them off or on using the spacebar.

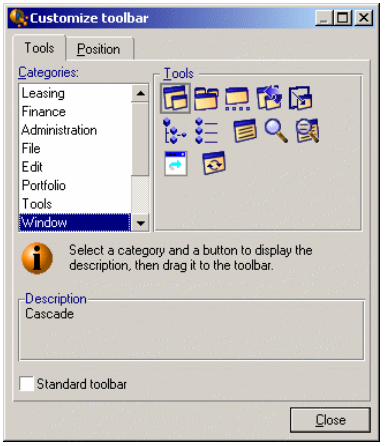
2 Click **OK** to validate your modifications.

Customizing the toolbar

This section explains how to customize the Asset Manager toolbar.

Adding a button to the toolbar

1 Use the **Tools/ Customize toolbar** menu item to configure the toolbar.



2 Select the tool category containing the button you want to add.

Asset Manager displays in the **Tools** frame the buttons corresponding to the selected category. The **Description** frame provides the description of the selected button.

3 In the **Tools** zone, select the button of your choice and drag it to the desired position on the toolbar.

Asset Manager integrates the button into the toolbar and resizes it as necessary.

Removing a button from the toolbar

Select the button and drag it outside the toolbar. Asset Manager modifies and resizes the toolbar as necessary.

Repositioning a button in the toolbar

Select the button and drag it to another position in the toolbar. Asset Manager modifies and resizes the button as necessary.

Adding a separator in the toolbar

Select the button to the right of (or below) the area where you want to add a separator. Then, drag it to its own right half (lower half if the toolbar is in the vertical position). Asset Manager adds a separator in front of the button and resizes the toolbar if necessary.

Note:

It is not possible to have two separators together; you can only have one between two buttons.

Removing a separator from the toolbar

Select the button immediately preceding the separator and drag it over the separator. Asset Manager deletes the separator and resizes the toolbar if necessary.

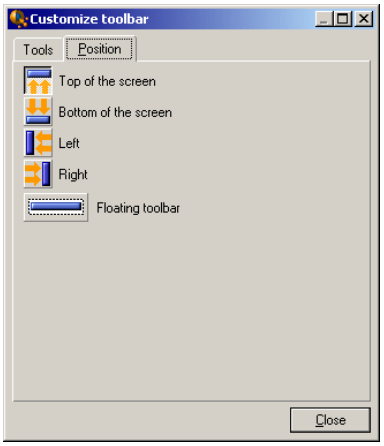
Displaying the default toolbar

Asset Manager is delivered with a standard toolbar that you can restore by selecting the **Standard toolbar** checkbox.

If you restore the standard toolbar, any customizations are lost.

Modifying the position of the toolbar

The position of the toolbar in the workspace can be modified using the **Position** tab in the toolbar customization window.



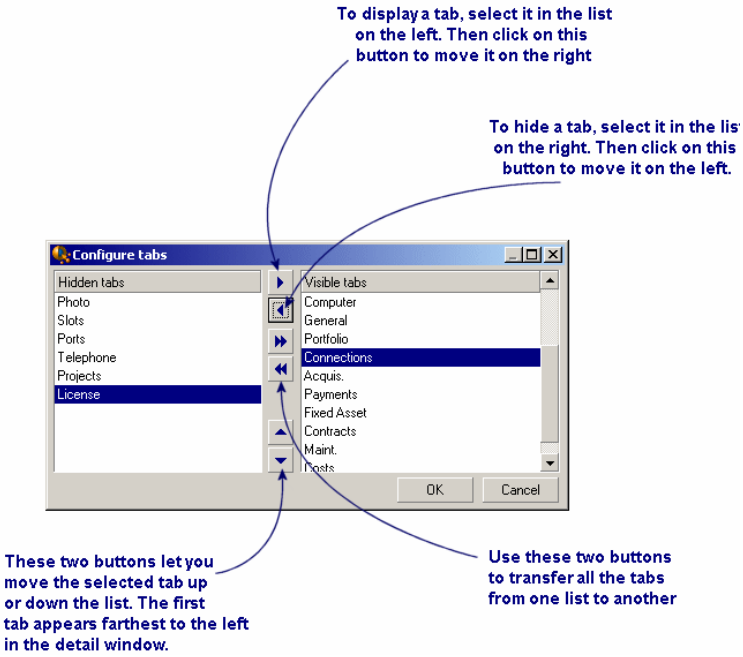
Click the button corresponding to the position in which you want to find your toolbar. Or, you can move the toolbar anywhere you like on the workspace by choosing **Floating** toolbar.

Customizing tabs

Each user can select the list of tabs to be displayed in a detail window and the order in which they are displayed. Other workstations are not affected by these modifications.

Use the **Tools/ Configure tabs** shortcut menu or **Tools/ Configure tabs** from the general menu when your cursor is in the tab zone to make these modifications.

Figure 4.1. Configuring tabs in a detail



- To show a hidden tab, you can double-click on its name in the list on the left.
- To hide a visible tab, double-click on its name in the list on the right.
- You can change the order of items in the right-hand list. Click on the desired item and use the up and down arrows to the right of the list to move it to a new position. The tab at the top of the list appears on the left-most side of the detail window.

General options

Asset Manager's options can be configured via the **Edit/ Options** menu.

Note:

Thes options are either associated with the computer on which they are defined or with the user (and therefore their login) who defined them during a work session. The options that apply to the workstation are available without the user having to be connected.

To find out what an option corresponds to and how to configure it:

1 Display the options window (**Edit/ Options** menu).

2 Select the option in question.

3 Consult the **Description** field, which is also in the options window.

To modify an option:

1 Display the options window (**Edit/ Options** menu).

2 Select the option to modify.

3 Click in the **Value** column.

4 Select a value from the list (if a list is available) or enter a value manually.

Note:

The modifications made to the options in this window are saved after you click **OK**.

Functions of the buttons

- **Reset**: Sets all options to their default values and saves.

  Warning:

  You cannot cancel the action once you reset.

  You cannot reset a sub-set of options.

- **Apply**: Saves the values of all the options but does not close the window.

  Warning:

  You cannot cancel this action once you apply.

- **OK**: Saves the values of all the options and closes the window.

Administrator information

There are several types of options:

- The options independent of the databases.

  Their values are stored on the hard drive of the machine where these options are defined.

- The database-dependent options.

  Their values are stored in the database and associated with the login of the person making the modifications.

  Anyone who connects with the same login, even if it's from a different computer, will find the same optional settings.

Tip:

To find out whether an option is database-dependent or not:

1. Launch Asset Manager without connecting to a database (or if you are already connected, disconnect from the database).
2. Display the options window (**Edit/ Options** menu).
3. The only options available in this window now are those that are independent of the database (and stored on the hard drive of the computer). All database-dependent options in this window are grayed out.

User defined customizations

Enforce default configuration

By default, Asset Manager stores the user preferences (also called user configurations) in the **amSysConfig** table. When a user modifies their preferences (options, window sizes, enabled modules, list and sub-list configurations, filters and views, etc.), the corresponding record is updated in the database.

To stop users from updating their configurations and define a default configuration:

- Create a user configuration that suits you by customizing Asset Manager. You will use this configuration as the standard configuration.
- Select the **Administration/ List of screens** menu.
- Select the **amSysConfig** table.
- Select and duplicate all records whose **Section** starts with **User**.

Note:

The purpose of performing this duplication is to keep the original user configuration.

- Create an action that sets the value of the **EmployeeId** in the **amSysConfig** table to 0. This step enables you to specify that that configuration is applied to **all** users. To do this:
  - Select the **Tools/ Actions/ Edit** menu.
  - Click **New**, define a **Name** for the action (for example, **Config**), select **amSysConfig** as the **Context** and **Script** as the **Type**.
  - In the **Script** tab, enter the following script:

```
Set [lEmplDeptId]=0
```

  - Finish the creation by clicking **Create**.
- Execute this action on the records duplicated previously.
- Define for all users, a read-only user right for the **amSysConfig** table.

Note:

For further information defining user rights, refer to the **Administration** guide, chapter **Controlling access to the database**.

Important:

This procedure is only valid for users that have not yet connected to the database, because they do not yet have a record in the **amSysConfig** table. If a user has already connected to the database, their preferences are stored in the table. The only way to cancel them and to force the default configuration is to delete the records corresponding to this user.

User defined colors in scripted queries for charted statistics

Users can specify a set of custom colors to be used by a scripted query which returns charted statistics results for a set of subgroups or series. (It only makes sense to define colors in queries which involve multiple subgroups.)

To define a color for a series, use the **color=** parameter with the subgroup definition statement. For example

```
<subgroup Name="Germany" filtertable="amEmplDept" filter="Location.FullNam
e like '/Germany/%' and MrMrs='Mr'" value="9" color="#cc0066"/>
```

Note:

To ensure compatibility with Asset Manager Windows and Web clients, colors need to be specified with the hex equivalent of their RGB values, for example **#6f006f** for purple.

Standard graphic colors are represented with the following values (however you can specify any other color with the hex equivalent of its RGB value) :

Color specifications for standard graphics

Blue R:28 G:107 B:227 (Hex:1C6BE3)	Aqua R:51 G:166 B:182 (Hex:33A6B6)	Gray R:156 G:156 B:156 (Hex:9C9C9C)
R:186 G:210 B:246 (Hex:BAD2F6)	R:168 G:215 B:223 (Hex:A8D7DF)	R:215 G:215 B:215 (Hex:D7D7D7)
Dark Blue R:15 G:71 B:128 (Hex:0F4780)	Magenta R:204 G:0 B:102 (Hex:CC0066)	Dark Green R:51 G:102 B:51 (Hex:336633)
R:183 G:197 B:212 (Hex:B7C5D4)	R:255 G:173 B:198 (Hex:FFADC6)	R:193 G:209 B:193 (Hex:C1D1C1)
Purple R:138 G:40 B:145 (Hex:8A2891)	Brown R:146 G:93 B:73 (Hex:925D49)	
R:202 G:163 B:205 (Hex:CAA3CD)	R:212 G:183 B:174 (Hex:D4B7AE)	

Error handling

The following rules are used to resolve anomalies in color definitions:

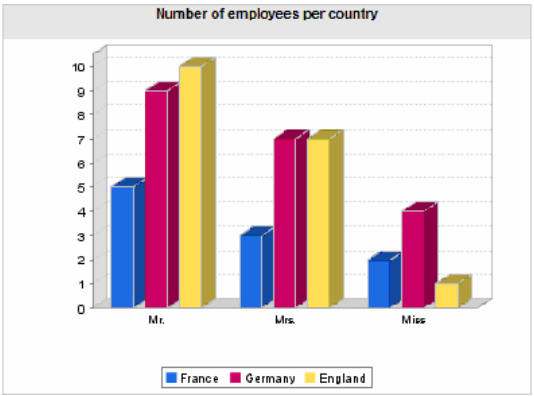
- If the **color=** parameter is undefined for one ore more subgroups in a query, default colors will be applied to those subgroups.
- If the **color=** parameter uses an unrecognized value, a default color will be applied.
- Colors can only be defined once per subgroup. (Any attempt to redefine them will be ignored.)

Practical Case

The following query defined below defines the customs colors blue, purple and yellow for three subgroups of the **Mr** group.

```
<group Name="Mr.">
<subgroup Name="France" filtertable="amEmplDept" filter="Location.FullName
like '/France/%' and MrMrs='Mr'" value="5" color="#1c6be3" />
<subgroup Name="Germany" filtertable="amEmplDept" filter="Location.FullNam
e like '/Germany/%' and MrMrs='Mr'" value="9" color="#cc0066"/>
<subgroup Name="England" filtertable="amEmplDept" filter="Location.FullNam
e like '/England/%' and MrMrs='Mr'" value="10" color="#ffde53"/>
</group>
```

The query results in the following chart:



To learn more about defining scripts to display statistics: ▸ **Advanced use** guide, chapter **Statistics** , section **Examples of statistics/ Scripted statistics**.

5 Using Views

This chapter explains how to create, edit, display and delete views.

Tip:

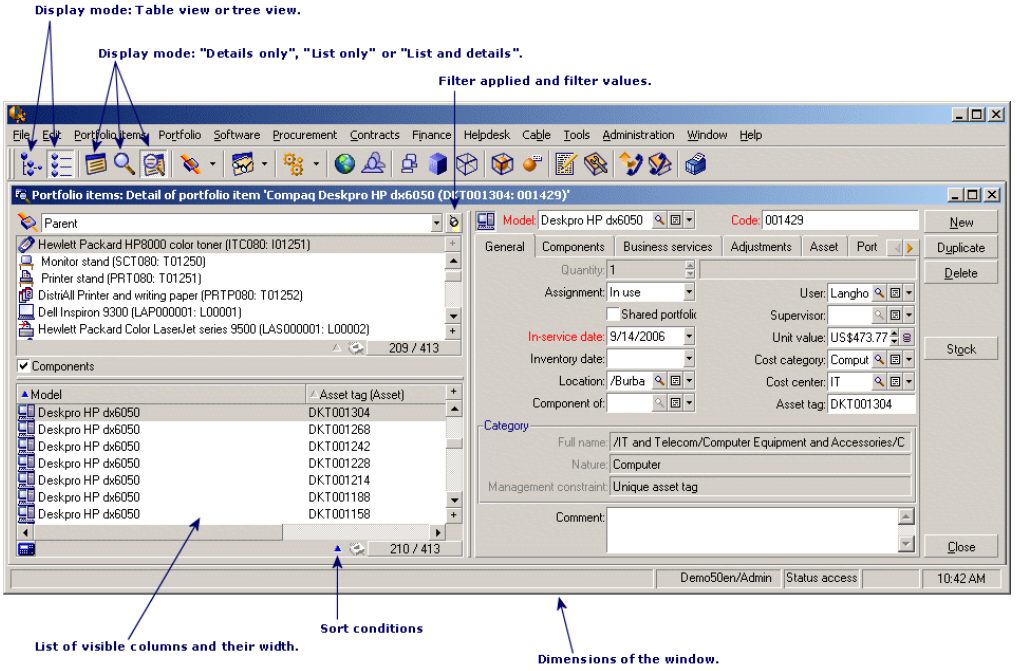
Views are only available via the Windows client (not the Web client).

To have an equivalent in the Web client:

- Create a screen using Asset Manager Application Designer: ▸ Creating a screen [page 45]
- Create a screen from a view in the Windows client: ▸ To create a screen from a view in the Windows client [page 114]

Use the **Tools/ Views** menu to create, edit, display and delete views.

Figure 5.1. Items stored in a view



Definition of a view

A view lets you save and retrieve customized display parameters for a main list:

- The list display mode: Table view or Tree view.
- The screen display mode: Details only, List only, or List + Details.
- The position of the list with respect to the detail: horizontal or vertical.
- List sort conditions.
- Filter applied to the list, and the filter values.
- The list and the width of the columns visible in the list.
- The position of the displayed window.
- Dimensions of the displayed window.
- The list of tabs visible in the detail.
- Display or do not display records in the list when the value of a field used to sort a list is null.

- Use or do not use forced indexes when the list is sorted.
- Grouping by fields or links in the list.
- Display mode of tab lists: in list form or tab form.
- Color of lines in lists.

Creating a view makes it easier to produce the same report every time. Once you have displayed the view you can easily print it with the same presentation each time.

Examples

- List of unassigned assets worth over $5,000.
- List of all offices with a fax machine, displaying the office number, the fax model and the name of their users.

Note:

Views can either be viewed only by the view's owner (or users with administration rights) or by all users. This is defined by the **Not shared** (amViewDef:bPrivate) field.

To create a screen that can be displayed both in the Windows and in the Web client:

- Using Asset Manager Application Designer: ▸ Creating a screen [page 45]
- From a view in the Windows client: ▸ To create a screen from a view in the Windows client [page 114]

Note:

Views are stored in the **Views** table (amViewDef).

To create a view

1. Start the Asset Manager Windows client.

   Note:

   Views cannot be created via the Web client, nor can they be viewed in the Web client (except if they are saved as screens).

2. To create a view, display the list exactly as you want it - these parameters will be saved for future retrieval.
3. Save this view via the **Tools/ Views/ Create view from the current window...** menu.

Any Asset Manager user with access to the **Views** (amViewDef) table can create a view.

Views can either be viewed only by the view's owner (or users with administration rights) or by all users. This is defined by the **Not shared** (amViewDef:bPrivate) field.

To make a view available in the Web client, you must create a screen equivalent to the view:

- Using Asset Manager Application Designer: ▸ Creating a screen [page 45]
- From a view in the Windows client: ▸ To create a screen from a view in the Windows client [page 114]

An Asset Manager administrator may display, modify and delete views made by all users, including the ones users decide not to make public.

To display a view (Windows client)

A view can be displayed in different ways.

Views can either be viewed only by the view's owner (or users with administration rights) or by all users. This is defined by the **Not shared** (amViewDef:bPrivate) field. This is true as long as the **Visible in the menus** option (bVisible) has been checked.

The view is displayed using all the saved parameters.

Asset Manager displays a new window, even if a list with the same information is already displayed. The window title displays the name of the view.

There are three ways to display a view in the Windows client:

- Select the view to display via the **Tools/ Views** menu.
- Select the desired view from the list that is displayed by clicking the button on the toolbar. This button displays the icon of the view that was last called.
- Select the desired view in the navigation bar's tree structure that corresponds to the **Domain** (Domain) field that you specified when you created the view.

To delete a view

- 1st method:
  1. Start the Asset Manager Windows client.
  2. Display the view.
  3. Delete it using the **Tools/ View/ Drop current view** menu item.

- 2nd method:
  1. Start the Asset Manager Windows client.
  2. Select the **Tools/ Views/ Edit views...** menu item to display the table of views.
  3. Select the view you want to drop.
  4. Click **Delete**.

Note:

Views can neither be displayed nor deleted via the Web client.

To modify a view

1. Start the Asset Manager Windows client.

   Note:

   Views can neither be displayed nor modified via the Web client.
2. Display the view.
3. Modify your display parameters.
4. Save your changes using the **Tools/ Views/ Modify current view** menu item.

To edit a view

1. Start the Asset Manager Windows client.

   Note:

   Views can neither be displayed nor edited via the Web client.
2. Display the views (**Tools/ Views/ Edit views...** menu).
3. Select the view to edit.
4. Modify the view's parameters.
5. Save the modifications (**Modify** button).

Associating a view with a button in a screen

There are several ways to associate a view with a screen button.

For further information, refer to:

- This guide, section Buttons [page 33].
- This guide, section Creating action buttons [page 48].

IV Customizing Web clients

6 Modifying the Web client's default behavior

To disable authentication when accessing the WSDL

During the initial connection to the WSDL, Internet Explorer displays an authentication window requesting an Asset Manager user name and password.

This reinforces security when accessing Asset Manager databases.

Authentication can be disabled.

This allows applications that do not support WSDL authentication to access the Asset Manager database.

Note:

Applications can only access the Asset Manager WSDL if the License Keys installed for Asset Manager include authorization for the Web services.

Also, if authentication is enabled, users can only access the WSDL if their user profile provides them the functional right to access the Web services.

To disable authentication:

1 Decompress the `.war` file used to install Asset Manager Web Service in the `AssetManagerWebService.war_build` folder.

It is assumed that you are using the `C:\Program Files\HP\Asset Manager 5.20 xx\websvc\AssetManagerWebService.war` file.

2 Edit the AssetManagerWebService.war_build\WEB-INF\classes\application-context.xml file.

3 Remove the comment marks **<!--** and **-->** from the following section:

```
<property name="convertUrlToLowerCaseBeforeComparison">
<value>true</value>
</property>
```

4 Locate the following section:

```
<property name="publicResources">
<list>
<value>/index.jsp</value>
<value>/images/**</value>
</list>
</property>
```

5 Add the following lines:

```
<value>/**/*?wsdl*</value>
<value>/**/*.xsd</value>
```

6 Save the application-context.xml file.

7 Open the AssetManagerWebService.war_build folder.

8 Select all files and folders.

9 Compress these files and folders in the webapps\AssetManagerWebService.war_build\AssetManagerWebService.war file.

10 Copy the file.

11 Paste it in the webapps folder (overwrite the previous file).

12 Delete the webapps\AssetManagerWebService.war_build folder.

13 Reinstall Asset Manager Web Service: ▸ **Installation and upgrade** guide, chapter **Installing Asset Manager Web**, section **Installing Asset Manager Web Service**.

To change the images of the banner

These images correspond to the two logos that are displayed above the workspace (HP logo and nautilus). To change these images:

1 Decompress the .war file used to install Asset Manager Web Service in the AssetManagerWebService.war_build folder.

It is assumed that you are using the C:\Program Files\HP\Asset Manager 5.20 xx\webtier\AssetManager.war file.

2 Open the AssetManager.war_build\ext folder.

3 Create a folder named `images`.
4 Change to this folder.
5 Copy the image(s) to this folder.

> Note:
>
> You may need to make sure that your images fit correctly within your Web client's workspace. The dimensions of the images may need to be modified.

6 Rename the file that will appear in the left part of the banner (image that will replace the HP logo) to `header_left.gif`.
7 Rename the file that will appear in the right part of the banner (image that will replace the nautilus) to `header_right.gif`.
8 Open the `AssetManager.war_build` folder.
9 Select all files and folders.
10 Compress these files and folders in the `AssetManager.war_build\AssetManager.war` file.
11 Copy the `AssetManager.war` file to the `C:\Program Files\HP\Asset Manager 5.20 xx\webtier` folder (overwrite the previous file).
12 Delete the `webapps\ AssetManager.war_build` folder.
13 Reinstall Asset Manager Web Tier: ▸ **Installation and upgrade** guide, chapter **Installing Asset Manager Web**, section **Installing Asset Manager Web Tier**.

To reduce the time it takes to display screens for the first time

Asset Manager Web uses the functions of the Web services to retrieve or modify information in the Asset Manager database.

These functions are described in a WSDL document.

The WSDL document exposes the current database functions as well as the functions that were available at specific moments if the database was tagged at those specific moments.

The functions of the Web services handle objects (fields, screens, actions, etc.) which are called by Asset Manager Web Service via application programming interfaces (API).

These objects are stored in caches (one cache per service).

The first query for a service takes a significant amount of time to execute (around 10 seconds per service) because the cache needs to be loaded during this initial query.

To make pages display faster for Asset Manager Web users, you can set up Asset Manager Web Service to have it preload all or part of the Web services.

However, it will take longer to start your web applications server.

To "preload" one or more services:

1 Edit Asset Manager Web Service's `package.properties` file: ▸ **Installation and upgrade** guide, chapter **Installing Asset Manager Web**, section **Installing Asset Manager Web Service**.

2 Locate the **WebService.LoadOnStartup** parameter.

3 Modify the parameter's value:

Entry value	`<Version of the Web services to preload>/<Services to preload>, <Version of the Web services to preload>/<Services to preload>, ...` **<Services to preload>**: To include all services, use the asterisk *. Separate the services using a comma if you want to preload more than one. **<Version of the Web services to preload>** must be the same for all services in the list.
Example	`WebService.LoadOnStartup` In the default value (**Head/***), a request to "preload" all services of the **Head** version is made. For example, if you only want to load the **Administration** version, you must set the parameter value to **Head/Administration**. Separate the services using a comma if you want to preload more than one. For example, to "preload" **Head/Administration** and **Head/Finance**: Note: For the list of available services, please read the WSDL document ▸ **Tailoring** guide, chapter **Customizing the database**, section **Development best practices/ Tag the Web services/ Displaying the WSDL document**. Warning: The Web services version that is specified (**Head** in our example) must be the same as the value of the **WebService.Version** parameter in the Asset Manager Web Tier `package.properties` file (▸ **Installation and upgrade** guide, chapter **Installing Asset Manager Web**, section **Install Asset Manager Web Tier**). **Head/Administration, Head/Finance**

4 Reinstall Asset Manager Web Service: ▸ **Installation and upgrade** guide, chapter **Installing Asset Manager Web**, section **Installing Asset Manager Web Service**.

To define the number of lines to export to Excel

1 Edit Asset Manager Web Tier's `package.properties` file: ▸ **Installation and upgrade** guide, chapter **Installing Asset Manager Web**, section **Installing Asset Manager Web Tier**.
2 Locate the **Exports.Excel.RowCount.Maximum** parameter.
3 Modify the parameter's value:

Entry value	Maximum number of lines to export to Excel
Example	Exports.Excel.RowCount.Maximum=10000

4 Reinstall Asset Manager Web Tier: ▸ **Installation and upgrade** guide, chapter **Installing Asset Manager Web**, section **Installing Asset Manager Web Tier**.

To define the number of lines to display in the lists

You can define the number of lines to display in lists for the following types of lists:

- Main list (list of records from a table that is displayed when you click a link on the navigation bar).
- Tab list (list that appears on a tab of a record's details)
- Wizard list (list that appears on a wizard's page)

To define the number of lines to display in the lists:

1 Edit Asset Manager Web Tier's `package.properties` file: ▸ **Installation and upgrade** guide, chapter **Installing Asset Manager Web**, section **Installing Asset Manager Web Tier**.
2 Locate the **Lists.Paging.Count.Maximum.Default** parameter.
3 Modify the parameter's value:

Entry value	Maximum number of lines to display in the lists
Example	Lists.Paging.Count.Maximum.Default=20

4 Reinstall Asset Manager Web Tier: ▸ **Installation and upgrade** guide, chapter **Installing Asset Manager Web**, section **Installing Asset Manager Web Tier**.

To modify text read by screen reader software

To modify text that is read by a screen reader in order to identify required fields and links:

1. Edit Asset Manager Web Tier's `package.properties` file: ▸ **Installation and upgrade** guide, chapter **Installing Asset Manager Web**, section **Installing Asset Manager Web Tier**.
2. Locate the **Fields.All.Mandatory.Prompt.Aural** parameter.
3. Modify the parameter's value:

Entry value	Text read by screen reader software to designate a required field or link
Example	Fields.All.Mandatory.Prompt.Aural=Mandatory field or link

4. Reinstall Asset Manager Web Tier: ▸ **Installation and upgrade** guide, chapter **Installing Asset Manager Web**, section **Installing Asset Manager Web Tier**.

To define the number of records to display in the drop-down lists

1. Edit Asset Manager Web Tier's `package.properties` file: ▸ **Installation and upgrade** guide, chapter **Installing Asset Manager Web**, section **Installing Asset Manager Web Tier**.
2. Locate the **Fields.LinkEdit.Suggestions.Count** parameter.
3. Modify the parameter's value:

Entry value	Maximum number of lines to display in the lists
Example	Fields.LinkEdit.Suggestions.Count=10

4. Reinstall Asset Manager Web Tier: ▸ **Installation and upgrade** guide, chapter **Installing Asset Manager Web**, section **Installing Asset Manager Web Tier**.

To choose the location of the workspace toolbar

The toolbar that is displayed inside the workspace contains buttons used to perform actions on records(**New**, **Modify**, **Delete**, etc.) and the **Actions**

drop-down list. The toolbar can be displayed at the top and/or bottom of the workspace.

To choose its location:

1 Edit Asset Manager Web Tier's `package.properties` file: ▸ **Installation and upgrade** guide, chapter **Installing Asset Manager Web**, section **Installing Asset Manager Web Tier**.

2 Locate the **Lists.Toolbars.Display** parameter.

3 Modify the parameter's value:

Entry value	Location of the toolbar: ■ **header**: The toolbar is located at the top. ■ **footer**: The toolbar is located at the bottom. ■ **both**: The toolbar is located at both the top and bottom.
Example	`Lists.Toolbars.Display=both`

4 Reinstall Asset Manager Web Tier: ▸ **Installation and upgrade** guide, chapter **Installing Asset Manager Web**, section **Installing Asset Manager Web Tier**.

To modify how often the cache managing the workflow schemes and instances is refreshed

Information used for a workflow scheme (list and position of boxes and links, etc) are managed by a **cache** stored in memory on the Asset Manager Web Tier server and refreshed periodically (every **24 hours** by default).

▸ **Advanced use** guide, chapter **Workflow**, section **Workflow tracking**, paragraph **Refreshing workflow schemas and instances**.

You can modify how often the cache is refreshed. To do this:

1 Edit Asset Manager Web Tier's `package.properties` file: ▸ **Installation and upgrade** guide, chapter **Installing Asset Manager Web**, section **Installing Asset Manager Web Tier**.

2 Locate the **Cache.Workflows.Refresh.Interval** parameter.

3 Modify the parameter's value:

Entry value	Number of seconds between cache refreshes.

Example

Note:

86400 seconds = 24 hours

Cache.Workflows.Refresh.Interval=86400

4 Reinstall Asset Manager Web Tier: ▸ **Installation and upgrade** guide, chapter **Installing Asset Manager Web**, section **Installing Asset Manager Web Tier**.

Refreshing a detail screen when the cursor leaves a field's or link's edit zone.

General

A detail screen is only refreshed if the field or link that has been modified is referenced by a **Mandatory**, **Read only**, **Irrelevant** or **Default** script of another field or link in the same table.

However, a refresh is not triggered in the following cases:

- Fields whose data type is among the following list:
  - Monetary
  - Text
  - Custom itemized list, if the itemized list is open.
- Scripts that reference a calculated field or a table description string

To force the refresh for exceptions

If you notice that the refresh is not triggered when leaving a field or link for which a refresh should be triggered (unique exception), you can force a refresh:

1 Edit Asset Manager Web Tier's `package.properties` file: ▸ **Installation and upgrade** guide, chapter **Installing Asset Manager Web**, section **Installing Asset Manager Web Tier**.

2 Locate the **Refresh.fields** parameter.

3 Modify the parameter's value:

Entry value	List of fields and links for which a detail screen must be automatically refreshed when the cursor leaves the edit zone. Syntax: `<Truncated SQL name of screen 1>:<Truncated SQL name of field or link 1>|...|<Truncated SQL name of screen n>:<Truncated SQL name of field or link n>` **Truncated SQL name** means the SQL name from which the first two letters, **am**, have been deleted.
Example	Refresh.fields=Employee:Field1|Employee:Field2

4 Reinstall Asset Manager Web Tier: ▸ **Installation and upgrade** guide, chapter **Installing Asset Manager Web**, section **Installing Asset Manager Web Tier**.

Delay before a link's list of values is refreshed

To modify the delay before a link's list of values for auto-completion is refreshed:

1 Edit Asset Manager Web Tier's `package.properties` file: ▸ **Installation and upgrade** guide, chapter **Installing Asset Manager Web**, section **Installing Asset Manager Web Tier**.

2 Locate the **Fields.LinkEdit.AutoCompletion.DelayMS** parameter.

3 Modify the parameter's value:

Entry value	Time in milliseconds before the list of values is refreshed
Example	Fields.LinkEdit.AutoCompletion.DelayMS=700

4 Reinstall Asset Manager Web Tier: ▸ **Installation and upgrade** guide, chapter **Installing Asset Manager Web**, section **Installing Asset Manager Web Tier**.

Using other parameters to generate the Asset Manager Web Tier log file

1 Edit Asset Manager Web Tier's `package.properties` file: ▸ **Installation and upgrade** guide, chapter **Installing Asset Manager Web**, section **Installing Asset Manager Web Tier**.

2 Locate the **log.properties** parameter.

3 Modify the parameter's value:

Entry value	Full path to the new parameter file Note: You must create a new `.properties` file describing how the log file is to be generated, and then reference the new `.properties` file. This file must be referenced using its absolute path.
Example	log.properties=/WEB-INF/classes/log4j.properties

4 Reinstall Asset Manager Web Tier: ▸ **Installation and upgrade** guide, chapter **Installing Asset Manager Web**, section **Installing Asset Manager Web Tier**.

Using another screen from the **Business home pages** table to display business home pages

To use another screen from the **Business home pages** (amFDView) table to display business home pages:

1 Edit Asset Manager Web Tier's `package.properties` file: ▸ **Installation and upgrade** guide, chapter **Installing Asset Manager Web**, section **Installing Asset Manager Web Tier**.

2 Locate the **WebService.Object.FunctionalDomainHomePage** parameter.

3 Modify the parameter's value:

Entry value	SQL name of the screen to use
Example	WebService.Object.FunctionalDomainHomePage=FuncDomDisplay

4 Reinstall Asset Manager Web Tier: ▸ **Installation and upgrade** guide, chapter **Installing Asset Manager Web**, section **Installing Asset Manager Web Tier**.

Modifying the style sheet to use to display and print HTML pages from Asset Manager Web Tier

1 Edit Asset Manager Web Tier's `package.properties` file: ▸ **Installation and upgrade** guide, chapter **Installing Asset Manager Web**, section **Installing Asset Manager Web Tier**.

2 Locate the **alternateTheme** parameter.

3 Modify the parameter's value:

Entry value	Name without the `.css` extension of the new style sheet. Note: The style sheet to display the pages must be located in the `ext\css` folder of the `AssetManager.war` file. The style sheet to print the pages must be located in the `ext\css\print` folder of the `AssetManager.war` file.
Example	alternateTheme=am

4 Reinstall Asset Manager Web Tier: ▸ **Installation and upgrade** guide, chapter **Installing Asset Manager Web**, section **Installing Asset Manager Web Tier**.

Modify how often the currency cache is refreshed

Asset Manager Web Tier stores the symbol and the position of currencies from the **Currencies** (amCurrency) table in a cache.

This information is used when amounts are displayed.

To modify how often the cache is refreshed:

1 Edit Asset Manager Web Tier's `package.properties` file: ▸ **Installation and upgrade** guide, chapter **Installing Asset Manager Web**, section **Installing Asset Manager Web Tier**.

2 Locate the **Cache.Currencies.Refresh.Interval** parameter.

3 Modify the parameter's value:

Entry value	Duration is seconds
Example	Cache.Currencies.Refresh.Interval=21600

4 Reinstall Asset Manager Web Tier: ▸ **Installation and upgrade** guide, chapter **Installing Asset Manager Web**, section **Installing Asset Manager Web Tier**.

Modify how often the itemized lists cache is refreshed

Asset Manager Web Tier stores itemized list values from the **Itemized lists** (amItemizedList) table in a cache.

This information is used when completing a field that is populated via a non-system itemized list.

To modify how often the cache is refreshed:

1. Edit Asset Manager Web Tier's `package.properties` file: ▸ **Installation and upgrade** guide, chapter **Installing Asset Manager Web**, section **Installing Asset Manager Web Tier**.
2. Locate the **Cache.OpenedItemizedLists.Refresh.Interval** parameter.
3. Modify the parameter's value:

Entry value	Duration is seconds
Example	Cache.OpenedItemizedLists.Refresh.Interval=1200

4. Reinstall Asset Manager Web Tier: ▸ **Installation and upgrade** guide, chapter **Installing Asset Manager Web**, section **Installing Asset Manager Web Tier**.

Enable the confirmation page before a **script** type action is executed

Asset Manager Web Tier stores itemized list values from the **Itemized lists** (amItemizedList) table in a cache.

This information is used when completing a field that is populated via a non-system itemized list.

To modify how often the cache is refreshed:

1. Edit Asset Manager Web Tier's `package.properties` file: ▸ **Installation and upgrade** guide, chapter **Installing Asset Manager Web**, section **Installing Asset Manager Web Tier**.
2. Locate the **Actions.Scripts.Launch.Confirmation** parameter.
3. Modify the parameter's value:

Entry value	▪ **true**: Enables confirmation message ▪ **false**: Disables confirmation message
Example	Actions.Scripts.Launch.Confirmation=true

4. Reinstall Asset Manager Web Tier: ▸ **Installation and upgrade** guide, chapter **Installing Asset Manager Web**, section **Installing Asset Manager Web Tier**.

Modifying the maximum number of segments to display in report or statistics graphs

1. Edit Asset Manager Web Tier's `package.properties` file: ▸ **Installation and upgrade** guide, chapter **Installing Asset Manager Web**, section **Installing Asset Manager Web Tier**.
2. Locate the **Charts.Categories.Count.Maximum** parameter.
3. Modify the parameter's value:

Entry value	Maximum number of segments to display
Example	Charts.Categories.Count.Maximum=10

4. Reinstall Asset Manager Web Tier: ▸ **Installation and upgrade** guide, chapter **Installing Asset Manager Web**, section **Installing Asset Manager Web Tier**.

Modifying the maximum number of reports to display in dashboards

1. Edit Asset Manager Web Tier's `package.properties` file: ▸ **Installation and upgrade** guide, chapter **Installing Asset Manager Web**, section **Installing Asset Manager Web Tier**.
2. Locate the **Dashboards.Items.Count.Maximum** parameter.
3. Modify the parameter's value:

Entry value	Maximum number of reports
Example	Dashboards.Items.Count.Maximum=6

4. Reinstall Asset Manager Web Tier: ▸ **Installation and upgrade** guide, chapter **Installing Asset Manager Web**, section **Installing Asset Manager Web Tier**.

Modifying the maximum number of segments to display in graphs for business home pages

To modify the maximum number of segments to display in report or statistic graphs when they are displayed in a business home page:

1 Edit Asset Manager Web Tier's `package.properties` file: ▸ **Installation and upgrade** guide, chapter **Installing Asset Manager Web**, section **Installing Asset Manager Web Tier**.
2 Locate the **BusinessHomePages.Statistics.Count.Maximum** parameter.
3 Modify the parameter's value:

Entry value	Maximum number of reports
Example	BusinessHomePages.Statistics.Count.Maximum=10

4 Reinstall Asset Manager Web Tier: ▸ **Installation and upgrade** guide, chapter **Installing Asset Manager Web**, section **Installing Asset Manager Web Tier**.

Modifying the maximum number of statistics to display in business home pages

1 Edit Asset Manager Web Tier's `package.properties` file: ▸ **Installation and upgrade** guide, chapter **Installing Asset Manager Web**, section **Installing Asset Manager Web Tier**.
2 Locate the **BusinessHomePages.Items.Count.Maximum** parameter.
3 Modify the parameter's value:

Entry value	Maximum number of reports
Example	BusinessHomePages.Items.Count.Maximum=6

4 Reinstall Asset Manager Web Tier: ▸ **Installation and upgrade** guide, chapter **Installing Asset Manager Web**, section **Installing Asset Manager Web Tier**.

Modifying the root used for URLs in Asset Manager Web Service

To modify the **<Root>** used for Asset Manager Web Service URLs (**<http://<Server name>:<Port>/<Root>**):

1 Edit Asset Manager Web Tier's `package.properties` file: ▸ **Installation and upgrade** guide, chapter **Installing Asset Manager Web**, section **Installing Asset Manager Web Tier**.
2 Locate the **context.root** parameter.
3 Modify the parameter's value:

Entry value	New name to use
Example	context.root=HPAssetManager

4 Reinstall Asset Manager Web Tier: ▸ **Installation and upgrade** guide, chapter **Installing Asset Manager Web**, section **Installing Asset Manager Web Tier**.

Modifying the root used for URLs in Asset Manager Web Service

Warning:

This is only possible if WebSphere Application Server or BEA WebLogic is used as your application server (not Tomcat).

To modify the **<Root>** used for Asset Manager Web Service URLs (**<http://<Server name>:<Port>/<Root>**):

1 Edit Asset Manager Web Service's `package.properties` file: ▸ **Installation and upgrade** guide, chapter **Installing Asset Manager Web**, section **Installing Asset Manager Web Service**.

2 Locate the **context.root** parameter.

3 Modify the parameter's value:

Entry value	New name to use
Example	context.root=HPAssetManager

4 Reinstall Asset Manager Web Tier: ▸ **Installation and upgrade** guide, chapter **Installing Asset Manager Web**, section **Installing Asset Manager Web Service**.

Modifying the root used for URLs in Asset Manager Web Tier

Warning:

This is only possible if WebSphere Application Server or BEA WebLogic is used as your application server (not Tomcat).

To modify the **<Root>** used for Asset Manager Web Tier URLs (**<http://<Server name>:<Port>/<Root>**):

1 Edit Asset Manager Web Tier's `package.properties` file: ▸ **Installation and upgrade** guide, chapter **Installing Asset Manager Web**, section **Installing Asset Manager Web Tier**.
2 Locate the **context.root** parameter.
3 Modify the parameter's value:

Entry value	New name to use
Example	`context.root=HPAssetManager`

4 Reinstall Asset Manager Web Tier: ▸ **Installation and upgrade** guide, chapter **Installing Asset Manager Web**, section **Installing Asset Manager Web Tier**.

Modifying the name of Asset Manager Web Service that is displayed in administration screens of your application server

Warning:

This is only possible if WebSphere Application Server or BEA WebLogic is used as your application server (not Tomcat).

1 Edit Asset Manager Web Service's `package.properties` file: ▸ **Installation and upgrade** guide, chapter **Installing Asset Manager Web**, section **Installing Asset Manager Web Service**.
2 Locate the **display.name** parameter.
3 Modify the parameter's value:

Entry value	New name to use
Example	`display.name=HPAssetManager`

4 Reinstall Asset Manager Web Tier: ▸ **Installation and upgrade** guide, chapter **Installing Asset Manager Web**, section **Installing Asset Manager Web Service**.

Modifying the name of Asset Manager Web Tier that is displayed in administration screens of your application server

> Warning:
>
> This is only possible if WebSphere Application Server or BEA WebLogic is used as your application server (not Tomcat).

1 Edit Asset Manager Web Tier's `package.properties` file: ▸ **Installation and upgrade** guide, chapter **Installing Asset Manager Web**, section **Installing Asset Manager Web Tier**.

2 Locate the **display.name** parameter.

3 Modify the parameter's value:

Entry value	New name to use
Example	`display.name=HPAssetManager`

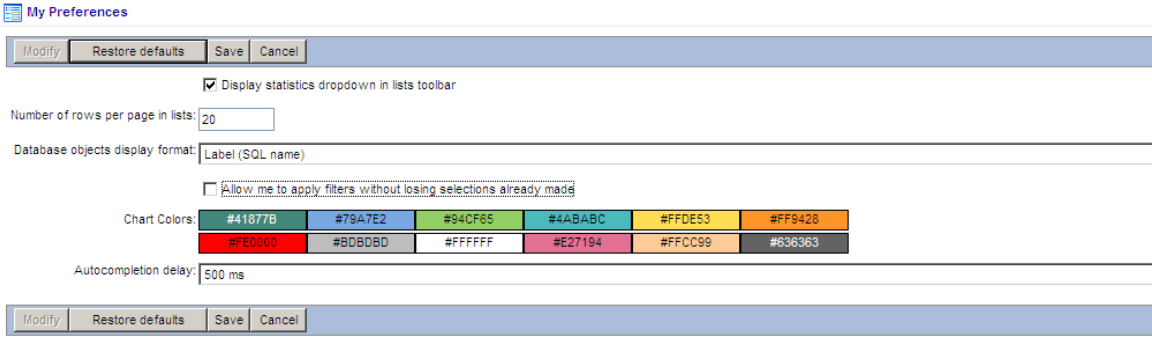
4 Reinstall Asset Manager Web Tier: ▸ **Installation and upgrade** guide, chapter **Installing Asset Manager Web**, section **Installing Asset Manager Web Tier**.

User defined customizations

Preferences pane

You can customize a number of display features for the current user, using the **Preferences** pane. To display this, click on the wrench icon from the tool palette at the upper-right corner of the Asset Manager window:

The **Preferences** pane is shown below:



Click **Modify** to customize any of the following features:

Feature	Details
Display statistics dropdown in lists toolbar	Displayed by default. Uncheck to hide this dropdown.
Number of rows per page in list	Defaults to 20. (This global default can itself be changed by the Administrator.)
Database objects display format	The default is **Label (SQL name)**. The options are: ■ Label (SQL name) ■ SQL name ■ SQL name (Description) ■ SQL name (Label) ■ Label ■ Description ■ Description (SQL name)
Allow me to apply filters without losing selections already made	Selecting the box enables the user to choose whether to keep or clear the selections already made before applying a filter.
Chart Colors	Explained in detail in the following section.
Autocompletion delay	Defaults to 500 ms. Available options: 500 ms, 1500 ms and 3000 ms.

To return all these features to their system default values, click **Restore defaults**.

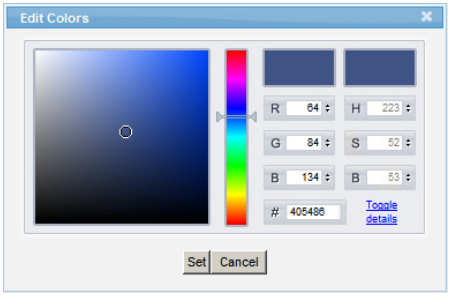
To save your customizations or restored defaults, click **Save**.

Note:

The default values of these user preferences are defined in the `default_user_pref.properties` file located in `<Tomcat installation folder>\webapps\AssetManager\WEB-INF\classes\com\hp\ov\ac\web\bean`.

Customizing Chart Colors

The **Preferences** pane provides access to a palette of twelve default **Chart Colors**, for which the hex values are shown against the background color. To change any one of these colors, enter edit mode by clicking the **Modify** button, then double-click in the corresponding color box to display the **Edit Colors** tool, as shown below.



There are three ways to select a new color:

- Use the central slider bar to choose an approximate color in the square selector box on the left of the pane. Then click or drag the dropper to select a color. The two smaller boxes on the upper right of the pane show a sample (left) of the selection and the original color (right) that is displayed before the **Edit Colors** tool opens.
- Enter RGB values between 1 and 255.
- Enter a hex value in the # field.

Click **Set** to apply your selected color to the chart palette on the **Preferences** pane.

Click **Save** to save your customized chart color(s) and any other preferences that you have changed.

Note:

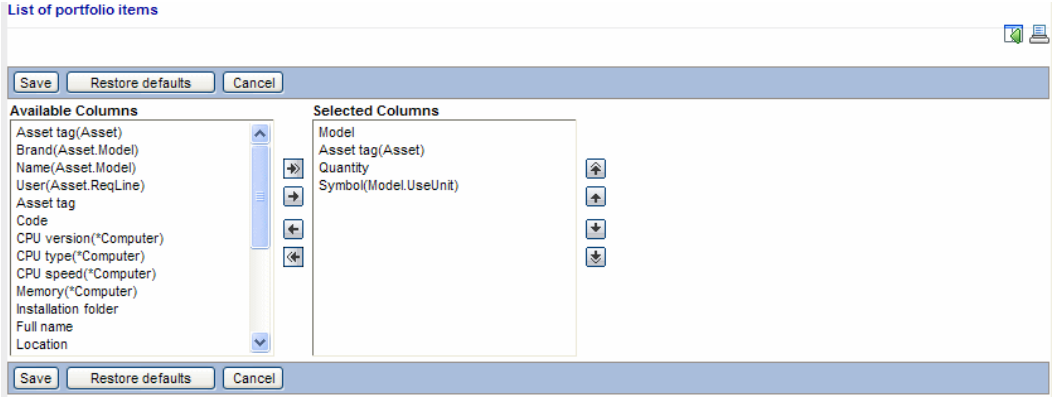
You can also customize chart colors using a script. This method applies to both Web and Windows clients. For more details, see section **Customizing Windows clients**, chapter **Customizing a Windows client**, section **User defined colors in scripted queries for charted statistics**.

Configuring list columns

To customize which columns display for the current list, and in which order:

1. Either click on the list icon that appears to the right of the list header and footer:

   Or right-click in the list body and select **Utilities/ Configure list...** from the contextual menu
2. The columns customization pane displays. The following example is the the list of columns for the **Portfolio Items** (amPortfolio) list



   Use the arrow buttons in the middle to transfer columns to and from the the lists of **Available Columns** and **Selected Columns** (displayed).

   Use the arrow buttons to the right of **Selected Columns** to change the order of the columns as they appear in the list.
3. To return all these features to their system default values, click **Restore defaults**.
4. To save your customizations or restored defaults, click **Save**.

Editing the `package.properties` file

Parameters used for configuring several aspects of the Asset Manager web client are found in the Asset Manager Web `web.xml` file which is stored in the zipped application `war` file.

For deployment purposes the values of these parameters are actually specified and can be edited in the `package.properties` file for your web server. These are explained below.

Note:

In version 5.20 of Asset Manager Web the format of the `web.xml` file has changed, and the parameters it holds have undergone a major overhaul.

- Old parameters, used to configure earlier versions of of Asset Manager Web will no longer be recognized.
- Where an old parameter has a new equivalent, values have often switched polarity or meaning. For these reasons, a search and replace on parameter names is not an adequate way of migrating your configuration data. Instead, you should re-examine all the settings stored in the `package.parameters` file.

Warning:

You should never edit the `web.xml` file directly. Rather, edit the parameters in the `package.properties` file and use the deployment script (`deploy.bat` or `deploy.sh`) to deploy them. For more details see the **Installation and Upgrade** guide, chapter **Installing, configuring, removing updating Asset Manager Web**, section **Installing Asset Manager Web**.

Commonly customized parameters

These parameters are those which you are more likely to customize:

Parameter name	Explanation
WebService.EndPoint.SOAP	URL of the SOAP Web service.
WebService.EndPoint.REST	URL of the REST Web service.
WebService.Version	Web service version name.
Exports.Excel.RowCount.Maximum	Max number of rows to export to Excel.

Parameter name	Explanation
Fields.All.Mandatory.Prompt.Aural	Aural prompt for mandatory fields that are visually indicated by an asterisk. The English default, used when this property is left blank, is "Mandatory field". A default with a similar meaning is provided in other languages. Because a default is used in the event that this property is left blank, the prompt cannot be removed. This is intentional. In any event this prompt will not be seen or heard by users who are not using a screen reader.
Fields.LinkEdit.AutoCompletion.DelayMS	Delay in milliseconds after keypress before autocompletion in LinkEdit controls.
Fields.LinkEdit.Suggestions.Count	LinkEdit control popup size.
Fields.TableChoiceList.AutoCompletion.DelayMS	Delay in milliseconds after keypress before autocompletion in TableChoiceList controls.
Fields.TableChoiceList.Suggestions.Count.Maximum	TableChoiceList control popup maximum size. A negative or zero value provides for an unlimited scrolling list.
Lists.Paging.Count.Maximum.Default	Default value of user preference for the maximum number of documents to show per page in a list.
Lists.Toolbars.Display	Sets how the list toolbar is to be displayed relative to lists. Recognized values are "header" (above list), "footer" (below list) and "both" (above and below list).

Less commonly customized parameters

The following parameters can also be customized:

Parameter name	Explanation
Actions.Scripts.Launch.Confirmation	Whether or not to show a confirmation screen before launching a script action.
BusinessHomePages.Items.Count.Maximum	Maximum number of items to display on a Business Home Page.
BusinessHomePages.Statistics.Count.Maximum	Maximum number of statistical breakdowns to display on a Business Home Page.
Cache.Currencies.Refresh.Interval	Currencies refresh interval in seconds (21600 seconds = 6 hours).
Cache.DbTables.Refresh.Interval	DbTables refresh interval in seconds (86400 seconds = 24 hours).
Cache.OpenedItemizedLists.Refresh.Interval	Opened ItemizedList values refresh interval in seconds (1200 seconds = 20 minutes).
Cache.Workflows.Refresh.Interval	Workflow refresh interval in seconds (86400 seconds = 24 hours).
Charts.Categories.Count.Maximum	Max number of categories (e.g. bars) to display on a chart.
Charts.General.Height	General statistics chart height (pixels).

Parameter name	Explanation
Charts.General.Width	General statistics chart width (pixels).
Charts.Dashboards.Height	Statistics chart height in Dashboards (pixels).
Charts.Dashboards.Width	Statistics chart width in Dashboards (pixels).
Charts.StatisticsScreens.Height	Statistics chart height in Statistics screens (pixels).
Charts.StatisticsScreens.Width	Statistics chart width in Statistics screens (pixels).
Charts.Wizards.Height	Statistics chart height in Wizards (pixels).
Charts.Wizards.Width	Statistics chart width in Wizards (pixels).
Dashboards.Items.Count.Maximum	Max number of items per dashboard.
Documents.Downloads.OpenInBrowser.AllowAll	Whether or not to globally permit documents to be opened within the browser window.
Documents.Downloads.OpenInBrowser.AllowedFileTypes	Which file types to allow being opened within the browser window. This value is only used if Documents.OpenInBrowser.AllowAll=false
Fields.ColorChooser.Font.White.ColorDarknessLevel	For color choosers, the color value is displayed in white for darker colors. This parameter determines the minimum darkness (0-1) at which the color value is displayed in white rather than black (0 is darkest, 1 is lightest).
Workflows.Diagrams.Captions.Font	For canvas caption font.
WebService.Service.Authentication	Web service used for authentication.
WebService.Service.Currency	Currency service provider - Uses the amCurrency screen in the amCurrency table.
WebService.Service.Dashboard	Dashboard service provider - Uses the amDashboardItem screen in the amDashboardItem table.
WebService.Object.Dashboard	Functional Domain Homepage object - Uses the amDashboardItem screen in the amDashboardItem table.
WebService.Service.DateAlarm	DateAlarm service provider - Uses the amDateAlarm screen in the amDateAlarm table.
WebService.Service.DocBlob	File upload/download service provider - Uses the amDocBlob screen in the amDocBlob table.
WebService.Service.FunctionalDomainHomePage	Functional domain service provider - Uses the FuncDomainHomePage screen in the amFuncDomain table.
WebService.Object.FunctionalDomainHomePage	Functional Domain Homepage object - Uses the FuncDomainHomePage screen in the amFuncDomain table.
WebService.Service.FunctionalDomain	Functional domain service provider - Uses the amFuncDomain screen in the amFuncDomain table.
WebService.Service.ItemizedList	temizedList service provider - Uses the amItemListVal screen in the amItemListVal table.
WebService.Service.Mail	Mail service provider - Uses the amMail screen in the amMail table.

Parameter name	Explanation
WebService.Service.Profile	Profile service provider - Uses the amMaster-Profile screen in the amMasterProfile table.
WebService.Service.ReadMailWizard	Read mail wizard service provider - Uses the sysCoreReadMsg wizard.
WebService.Service.Reports	Reports service provider - Uses the amReports screen in the amReports table.
WebService.Service.WorkflowSchema	Workflow schema service provider.
AssetManager.WS.EmplDeptService (no longer used)	Employee service provider.

7 Business home pages

This chapter introduces business home pages.

Note:

Business home pages can only be viewed in the Asset Manager Web client. They can be created using the Windows or Web client.

What is a business home page?

A business home page provides a summary screen for a given functional domain and connection role (▸ Specifying default home pages and home pages based on user roles [page 167]).

When you click a domain node on the navigation bar a business home page is displayed (for example, **Finance**).

It has different sections:

- Statistics
- A set of useful links in HTML format: open a screen, start a wizard, open a Web site, etc.
- Actions
- Reports

How business home pages work

- Business home page contents may be viewed by multiple users, but they are only displayed if the user's role authorizes it.

  If a user has several connection roles, he or she will need to select the appropriate role (**Administration/ Select your Asset Manager user role** link on the navigation bar).
- If one of the sections of the business home page does not contain any data, then the section is not displayed.
- Asset Manager considers that a report is available via Crystal Reports Server if:
  - The Crystal Reports Server was declared via the **Edit the URL address of the application servers...** (BstBackEndOpt) wizard (**Administration/ Edit the URL address of the application servers...** link on the navigation bar).
  - And the report's **File** (FileName) field contains a **numerical value** corresponding to its identifier in the Crystal Reports Server server.

  For more information about Crystal Reports, refer to the **Advanced use** guide, chapter **Crystal Reports**.

How to create or modify a business home page

To create or modify a business home page:

1. Display the business home pages (amFDView): **Administration/ Business home pages** link on the navigation bar.
2. Create a new record by populating the relevant fields and adding the desired items on the different tabs, or select the record to modify and make the desired changes.
3. Save your changes.

The business home page that you have created is now available. In the Web client click the node specified in the **Domain** (Domain) field.

Recommendations when creating business home pages

We recommend that you not use more than two statistics per page (however, the maximum number is six).

You can set the maximum number in Asset Manager Web Tier's `package.properties` file by modifying the **BusinessHomePages.Items.Count.Maximum** parameter.

▸ Modifying the maximum number of statistics to display in business home pages [page 152].

HTML syntax for useful links

Useful links are entered in HTML. The following syntax rules must be used:

Unfiltered Asset Manager lists

```
<a href="/AssetManager/<SQL name of the top-level domain in the tree struc
ture to which the list is attached>/<SQL name of the screen without the 'a
m' prefix>/list.jsf"><Label of the link to display on the business home pa
ge></a>
```

For example:

```
<a href="/AssetManager/IT/CPUComputer/list.jsf">Computers</a>
```

Note:

Example of **am** prefix removal: Instead of typing **amPOrder** for the purchase orders screen, type only **POrder** instead.

Asset Manager lists filtered by query

```
<a href="/AssetManager/<SQL name of the top-level domain in the tree struc
ture to which the list is attached>/<SQL name of the screen without the 'a
m' prefix>/list.jsf?filterName=<SQL name of the query>"><Label of the link
to display on the business home page></a>
```

For example:

```
<a href="/AssetManager/Core/EmplDept/list.jsf?filterName=BstEmplWithProfil
e">Employees with a user profile</a>
```

Asset Manager lists filtered on an indexed field

```
<a href="/AssetManager/<SQL name of the top-level domain in the tree struc
ture to which the list is attached>/<SQL name of the screen without the 'a
m' prefix>/list.jsf?filterName=<SQL name of the field>&<SQL name of the fi
```

```
eld>=<Value to apply"><Label of the link to display on the business home p
age></a>
```

For example:

```
<a href="/AssetManager/Core/Location/list.jsf&filterName=BarCode&BarCode=M
%25">Locations where the bar code is equal to M%25</a>
```

Asset Manager Wizards

```
<a href="/AssetManager/<SQL name of the top-level domain in the tree struc
ture to which the wizard is attached>/<SQL name of the wizard>/wizard.jsf?
?filterName=<SQL name of the filter>"><Label of the link to display on the
business home page></a>
```

For example:

```
<a href="/AssetManager/Procurement/sysProcRequestAddModelnc/wizard.jsf?">C
reate a new request...</a>
```

Note:

Note: To reference Asset Manager objects, you do not need to enter the complete URL address. You are not required to enter the domain name (for example: **http://MyServerAssetManager.com:8090/**).

External Web pages

To reference external Web pages, enter the complete URL address to the pages.

Hint for a URL of a page or wizard

1. Display the page or wizard in the Web client.
2. Create a favorite for Internet Explorer.
3. Open the list of favorites in Internet Explorer.
4. Right click the favorite that you just created.
5. Select **Properties**.
6. You will see the URL address of the page that you can use to create a link to the page or wizard.

Specifying default home pages and home pages based on user roles

The business home page of a given domain is used for all of its sub-domains except if the sub-domain has its own home page.

You can also tailor home pages to specific user roles. In this case, you will need to create a home page per role. To do this, specify the desired user role in the **User role** (MasterProfile) field.

By default, if you do not specify a user role, the home page will be displayed for all users.

For example, let's suppose we have:

- **User U** whose user role is **CIO**.
- **Standard user S**.

And they are accessing the following sections of the navigation bar:

- Portfolio management
  - IT
    - IT equipment

The following table details the different business home pages that will be displayed depending on the connected user:

Function domain (or sub-domain)	Business home pages that are created	**Standard user S** clicks the domain name (or sub-domain). The following business home page is displayed:	**User U** clicks the domain name (or sub-domain). The following business home page is displayed:
Portfolio management	A single page is created without specifying the user role: **page A**	page A	page A
IT	Two pages are created: ■ **Page B1** without specifying a user role. ■ **Page B2** when specifying the **CIO** user role.	page B1	page B2

Function domain (or sub-domain)	Business home pages that are created	**Standard user S** clicks the domain name (or sub-domain). The following business home page is displayed:	**User U** clicks the domain name (or sub-domain). The following business home page is displayed:
IT equipment	Case 1: No page is created	page B1	page B2
	Case 2: A single page is created without specifying the user role: **page C**	page C	page C
	Case 3: A single page is created when specifying the **CIO** user role: **page D**	page B1	page D
	Case 4: Two pages are created: ■ **Page E1** without specifying a user role. ■ **Page E2** when specifying the **CIO** user role.	page E2	page E2

Deleting a business home page

To delete a business home page:

1. Display the business home pages (amFDView): **Administration/ Business home pages** link on the navigation bar.
2. Select the record to delete.
3. Click the **Delete** button.

8 Asset Manager Web and HP Service Manager Web menu aggregation

As is the case for numerous software applications distributed by HP Software, both Asset Manager and HP Service Manager use the same technology for their Web clients.

This enables you to have a coherent and simplified interface across all HP Software software applications by including the menu items from each of the applications in one, single navigation bar. This also enables simplified authentication for several applications using integrated Windows authentication.

This chapter explains how to aggregate the navigation bars of the Asset Manager and HP Service Manager Web clients.

After this is performed, we recommend that you use integrated authentication for both applications. ▸ Using Integrated Windows authentication [page 172]

Aggregate the navigation bars of the Asset Manager and HP Service Manager Web clients

In this section you will learn how to:

- Add the Asset Manager Web menu to the HP Service Manager Web menu
- Add the HP Service Manager Web menu to the Asset Manager Web menu

This section describes the configuration to implement when using **Tomcat** as the application server. The examples will assume that Tomcat is installed in

C:\ Tomcat\ (if this is not the case, replace the path in the examples with the path that you use).

It will be assumed that:

- The installation folder of Asset Manager Web is **AssetManager**.
- The installation folder of HP Service Manager Web is **webtier-7.00**.

If your installation folders for these applications are different, change them as required.

Warning:

Asset Manager and HP Service Manager must be installed on the same server in order for menu aggregation to work correctly.

Add the Asset Manager Web navigation bar to the HP Service Manager Web navigation bar

1. On the machine where you installed HP Service Manager Web Tier, open the `C:\Tomcat\webapps\webtier-7.00\WEB-INF\web.xml` file with a text editor and add the text provided below to the section where the **<context-param>** are defined:

```
<context-param>
<param-name>aggregatedContexts</param-name>
<param-value>webtier-7.00,AssetManager</param-value>
</context-param>
```

2. Next, add the text provided below to the section where the **<filter>** are defined:

```
<filter>
<filter-name>Navigator forwarder</filter-name>
<filter-class>com.hp.ov.cwc.web.navMenu.CwcNavFilter</filter-class>
<init-param>
<param-name>webtier-7.00:label</param-name>
<param-value>Self-service catalog</param-value>
</init-param>
<init-param>
<param-name>AssetManager:label</param-name>
<param-value>AssetManager</param-value>
</init-param>
<init-param>
<param-name>AssetManager:url</param-name>
<param-value>/AssetManager</param-value>
</init-param>
<init-param>
<param-name>webtier-7.00:url</param-name>
<param-value>/webtier-7.00</param-value>
</init-param>
</filter>
```

3 Next, add the text provided below to the section where the **<filter-mapping>** are defined:

```
<filter-mapping>
<filter-name>Navigator forwarder</filter-name>
<url-pattern>/cwc/nav.menu</url-pattern>
</filter-mapping>
```

4 Restart your Tomcat application server.

5 Open Internet Explorer to HP Service Manager Web and click the Asset Manager links on the navigation bar.

Next, navigate through the navigation bar's HP Service Manager links.

You should see the HP Service Manager and Asset Manager links.

Add the HP Service Manager Web menu to the Asset Manager Web menu

1 On the machine where you installed Asset Manager Web Tier, open the `C:\Tomcat50\webapps\AssetManager\WEB-INF\web.xml` file with a text editor and add the text found below to the section where the **<context-param>** are defined:

```
<context-param>
<param-name>aggregatedContexts</param-name>
<param-value>AssetManager,webtier-7.00</param-value>
</context-param>
```

2 In the same file, add the text provided below to the section where the **<filter>** are defined:

```
<filter>
<filter-name>Navigator forwarder</filter-name>
<filter-class>com.hp.ov.cwc.web.navMenu.CwcNavFilter</filter-class>
<init-param>
<param-name>AssetManager:label</param-name>
<param-value>AssetManager</param-value>
</init-param>
<init-param>
<param-name>webtier-7.00:label</param-name>
<param-value>Catalogue</param-value>
</init-param>
<init-param>
<param-name>webtier-7.00:url</param-name>
<param-value>/webtier-7.00</param-value>
</init-param>
<init-param>
<param-name>AssetManager:url</param-name>
<param-value>/AssetManager</param-value>
</init-param>
</filter>
```

3 Next, add the text provided below to the section where the **<filter-mapping>** are defined:

```
<filter-mapping>
<filter-name>Navigator forwarder</filter-name>
<url-pattern>/cwc/nav.menu</url-pattern>
</filter-mapping>
```

before the following paragraph:

```
<filter>
<filter-name>PostSiteMesh</filter-name>
<filter-class>com.hp.ov.ac.web.filter.PostSiteMeshFilter</filter-class>
</filter>
```

Warning:

Make sure you maintain the given order and declare the **Navigator forwarder** before the **PostSiteMesh** filter.

4 Restart your Tomcat application server.

5 Open Internet Explorer with Asset Manager Web Web and click the HP Service Manager links of the navigation bar.

Next, navigate through the navigation bar's Asset Manager links.

You should see the HP Service Manager and Asset Manager links.

Using Integrated Windows authentication

Warning:

For Asset Manager Web and HP Service Manager Web menu aggregation to work properly, you must use the same single sign-on system for both applications. Our examples detail the use of integrated Windows authentication using Active Directory.

With Asset Manager Web

▸ **Administration** guide, chapter **Controlling access to the database**, section **Managing user authentication for the Asset Manager database**, section **Asset Manager Web clients: Implementing Single Sign-On using Active Directory**.

With HP Service Manager Web

- HP Service Manager documentation: **http://<HP Service Manager documentation server >/help/index.jsp?topic=/security/concepts/example_enabling_trusted_sign-on.htm**

V Customizing applications

9 .ini and .cfg files

Programs belonging to the Asset Manager suite are associated with configuration files (`.ini` and `.cfg` extensions).

Available `.ini` and `.cfg` files

The following is a list of the main available `.ini` and `.cfg` files:

Table 9.1. `.ini` and `.cfg` files - List of main files

Program (add `.exe` or `.dll` in Windows, or possibly `.so` in Unix)	`.ini` or `.cfg` file	Description
Asset Manager `am`	`aam-dsk52.ini`	User display options. You may delete this file if you wish to revert the display options of all windows to the default options.
	`am.ini`	Asset Manager user options.

Asset Manager Application Designer
`amdba`
`amdbal`
	`amdba.ini`
	`amdbal.ini`
		Asset Manager Application Designer user options.
		User display options.

Program (add .exe or .dll in Windows, or possibly .so in Unix)	.ini or .cfg file	Description
Asset Manager Export Tool amexp amexpl	amexp.ini amexpl.ini	Asset Manager Export Tool user options. User display options.
Asset Manager Import Tool amimpl	amimpl.ini	Asset Manager Import Tool user options. User display options.
Asset Manager Script Analyzer amsg	amsg.ini	Asset Manager Script Analyzer user options. User display options.
Asset Manager Automated Process Manager amsrv amsrvl	amsrv.ini amsrv.cfg amsrvl.ini	Asset Manager Automated Process Manager user options. User display options.
	amsrvcf.ini	Parameters for Asset Manager Automated Process Manager running as a web server
Asset Manager API aamapi43	aamapi52.ini	Program user options.
All of the following programs	amdb.ini	List of database connections.
	mail.ini	Asset Manager messaging system configuration.

Table 9.2. .ini and .cfg files - Location of main files

.ini or .cfg file	Location
aamdsk52.ini am.ini amdba.ini am.ini amdba.ini amdbal.ini amexp.ini amexpl.ini amimpl.ini amsg.ini amsrv.ini amsrvl.ini aamapi52.ini	**In Windows 9x or ME**: Windows root installation folder **In Windows (NT family)**: In the \<Documents and Settings>\<Windows User> folder **In Unix**: ~/HP Software/ folder
amsrvcf.ini	Same folder as the amsrv executable

.ini or .cfg file	Location
amsrv.cfg	Same folder as the amsrv executable Note: If you have upgraded from an older version of Asset Manager, amsrv.cfg might still be located in the parent folder of the amsrv executable. This also functions.
amdb.ini	**In Windows 9x or ME**: Windows root installation folder
	In Windows (NT family): ■ **System** connections: Windows root installation folder ■ **User** connections: In the \<Documents and Settings>\<Windows User> folder
	In Unix: ■ **System** connections: /etc/HP Software/ folder ■ **User** connections: ~/HP Software/ folder
mail.ini	**In Unix**: ~ folder

Modifying the .ini files

Entries in the **.ini** files can be modified:

- By the software: They are saved when modifications are confirmed, or when exiting the software. In the latter case, modifications are only saved when exiting using the **File/ Exit** menu entry.
- And/or manually.

Whenever possible, we recommend modifying the **.ini** file entries using Asset Manager and its associated programs.

However, certain **.ini** file entries can only be created and modified manually.

Note:

Warning: Only persons with the required technical knowledge should modify the **.ini** files manually.

The following tables describe the **.ini** file entries you may wish to modify. Those entries can only be modified manually.

Note:

Warning: The following tables only describe some of the entries in the **.ini** files. They do not provide a complete list. Do not modify any of the other sections or entries that have not been described below.

Boolean entries are described either by "1" or "0". "1" can be replaced with "True" and "0" with "False".

Am.ini file entries

[OPTION] section

Table 9.3. [OPTION] section

Entry	Description
bSaveOptionOnExit	Set this entry to "0" if you do not want to save modified entries in the [Option] section when you exit Asset Manager. By default, modifications are saved.
g_bAllowFlyCreate	Enables or disables the creation of linked records on the fly: ■ 0: Do not allow creation on-the-fly. ■ 1: Allow creation on-the-fly. Default value: 1.
CmdComboLines	Limits the number of lines displayed in the views and actions lists you can access via the toolbar.
CNtbkTabCfg.bShowFlyby	Displays ToolTips for tabs in detail screens: ■ 0: No. ■ 1: Yes.
KeyIniFileName	Specifies the path of the `aamdsk52.ini` file. For example: `KeyIniFileName=aamdsk52.ini` Asset Manager uses a file, `aamdsk52.ini`, that may be located on a network drive. In this case, it is possible to configure this file as read-only and users will not be able to modify their configuration.
NewMailLastCheck	Time when the Asset Manager messages were last read. Unit: Seconds elapsed since January 1, 1970 at 00:00.

Entry	Description
opt_bAskForConcurrentModifications	This entry determines whether or not Asset Manager displays a confirmation dialog box when a user clicks the **Modify** button if another user is modifying the same record at the same time: ■ 1: Display a confirmation dialog box ■ 0: Do not display the confirmation dialog box and save the modifications automatically.
opt_bCommitDeletesOneByOne	This option is useful when deleting a set of records. If it is activated, Asset Manager erases one record after another (one transaction per record.) Otherwise Asset Manager erases the records in a single transaction. Default value: 0.
opt_ImportCacheSize	When data is imported using reconciliation keys, this sets the value for the cache memory used to increase import performance. Unit: Number of records found. Default value: 100.
StartSunday	Sets the beginning of a week on Monday (StartSunday=0) or Sunday (StartSunday=1). This option is used for calendars.

[SQL] section

Table 9.4. [SQL] section

Entry	Description
OracleDLL	Sets the name of the Oracle DLL to load in order to dialog with Oracle.

Amsrv.ini file entries

[OPTION] section

Table 9.5. [OPTION] section

Entry	Description
MaxRentPerTrans	This entry is used for generating rent payments. It sets the maximum number of rent calculations per transaction. Default value: 200.

Entry	Description
MaxMsgInList	Sets the number of displayed lines in the main window list of Asset Manager Automated Process Manager. Default value: 5000.
<Module>LastCheck Where <module> may be set to any of the following values: Alarms, CostCenter, HDAlarms, History, LostVal, Rent, Stats, Stock, TimeZone, UpdateToken, WkGroup, WkGroup <xxx>, WorkflowFinder	The lines suffixed with "LastCheck" correspond to the date of the last module execution. They allow the calculation of the next module execution when Asset Manager Server restarts. It may be useful to erase a line "WkGroup <xxx> LastCheck" (or the "WkGroupLastCheck" line) if an execution group <xxx> does no longer exist (or if a workflow scheme does not exist without an execution group) as the program will not do it automatically.

Amsrvcf.ini file entries

amsrvcf.ini file entries are self-described in the file created with the installation.

Amexp.ini file entries

[OPTION] section

Table 9.6. [OPTION] section

Entry	Description
MaxOldDoc	Maximum number of previous documents displayed in the **File** menu.

Amdb.ini file entries

You may have to modify the following entries for each section describing an Asset Manager connection:

Table 9.7. `Amdb.ini` **file entries**

Entry	Description
AmApiDll	Sets the path to the `aamapi52` API DLL for Asset Manager. This entry is used for HP Connect-It and OAA.

Entry	Description
FetchingArraySize	Number of lines to fetch when executing SQL statements. Default value: 30.
OdbcLockingTime	In the case of a Microsoft SQL Server database (MSDE included), sets the time after which a record is to be considered as locked by another user. Unit: Seconds. Default value: 60. Warning: If the value is too low, the import process may be interrupted when run on an overloaded server.
OldStyleCatalog	With an Oracle database, this entry enables you to force the use of the "Tab" view instead of the default "All_Catalog" view. This entry can be set to one of two values: ■ 1: Use "Tab". ■ 0: Use "All-Catalog".

Controlling the modification of the `.ini` files

The `.ini` files are automatically modified by their respective applications when an option is changed.

When multiple executables or instances of an executable are associated with the same `.ini` file, the last executable to save the modifications wins out.

If you wish to keep control over these modifications, we recommend making the `.ini` read-only.

This is particularly true for the `aamapi52.ini` file.

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