Importing Exporting and Publishing data
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Chapter I. Importing resources

1. DEFINITION

The importation of resources is used to import a set of resources from the same dimension. Several types of import are possible:

■ Simple insertion of new resources,
■ Simple update of existing resources,
■ Update to existing resources with insertion of new resources.

An import of resources, using a unique source, which might be:

■ A CSV file format,
■ A worksheet (or a tab) in an Excel file,
■ A database table of one of the following formats:
  ▪ MSAccess,
  ▪ MySQL,
  ▪ Oracle,
  ▪ SQL Server,
  ▪ PostgreSQL,
  ▪ MariaDB.
■ Specific values.

2. CONFIGURATION

It is necessary to save the import contexts before running them.

Create an import context

The creation of a new import context is done from General settings > Right click on Resource Import > Create an import context > Choose a dimension.

The corresponding part is then enabled:
Then enter any differing characteristics, then click on:

- **Validate** to save the context,
- **Reset** otherwise.

These characteristics are as follows:

**Name**

Give this import context a name.

**Description**

Give a description of this context. The description is optional.
History
This represents the creation date and time and the most recent change to the context, together with the login of the user who implemented the actions.
This characteristic cannot be edited.

Definition
This is a definition of this context.
See Definition of the resource import context.

URL “call”
The activation of this option authorizes the triggering of this context using a URL from outside of VISUAL PLANNING.

Activating authentication
The activation of this option is used to protect the URL using Basic Access Authentication.

User ID
Define the identity (login) for the URL if authentication has been activated.

Password
Define the password for the URL if authentication has been activated.

Resource creation/modification
This checkbox is used to activate the triggering of the context during the creation and/or modification of resources.

- It cannot be activated for files on the disk or for an Access database.

Event creation/modification
This checkbox is used to activate the triggering of the context during the creation and/or modification of events.

- It cannot be activated for files on the disk or for an Access database.
Activated
This checkbox is used to activate the import by service trigger.

Triggers
This option is used to define the triggers for an import by service.

Reporting activated
This checkbox is used to transmit a report, by mail, for the results of each import trigger.

Prerequisites: An SMTP server must be configured as automatic mails are involved. See Automatic sending of e-mail

Sender
Define the e-mail address to be used as sender for the reporting by mail.
This parameter is only active and needed when the Reporting activated checkbox is selected.

Recipients
Define the address(es) to be informed during the reporting by mail.
This parameter is only active and needed when the Reporting activated checkbox is selected.

Definition of the import context

Source tab
The unique import destination can be of the type:
Importing, Exporting and Publishing data

- CSV file,
- Excel file,
- Database,
- Specific values.

Depending on the type chosen, the parameters required for the import are different.

**Standard format**

**For *.CSV files**

<table>
<thead>
<tr>
<th>Format</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Type:</strong></td>
<td>CSV file</td>
</tr>
<tr>
<td><strong>Separator:</strong></td>
<td>Semicolon</td>
</tr>
<tr>
<td><strong>Encoding:</strong></td>
<td>Default (System encoding)</td>
</tr>
<tr>
<td><strong>Path:</strong></td>
<td>c:/VP/text.csv</td>
</tr>
</tbody>
</table>

You must define the following parameters:

**Type**
In this case the value should be **CSV file**.

**Separator**
The separator in the source file can be:
- Semicolon,
- Full stop,
- Space,
- Comma,
- Tab,
- or Vertical Bar.

**Encoding**
The type of encoding is to be chosen to match the OS used on the server:
- Default (System encoding),
- UTF8,
- Windows-1252 (Windows).
Path

Specify the access path, the latter may contain:

- A CSV type file,
- A URL-type address,
- A standard text of the type `Export=NomDuContexteImport` used for the exports of imports.

For Excel files

You must define the following parameters:

**Type**

In this case the value should be **Excel file**.

**Path**

Define the path for access to the file in the format *.XLS or *.XLSX.

**Worksheet**

Define the worksheet of the source file to be imported.

**Databases**

If the import is from a database, you must choose the type “Database”.

You must define the following parameters:
Importing, Exporting, and Publishing data

**Type**

In this case the value should be **Database**.

**DBMS**

Define the Database Management System used:

- MSAccess,
- MySQL,
- Oracle,
- SQLServer,
- PostgreSQL,
- or MariaDB.

**Connection settings**

Connection settings differ with the type of DBMS chosen. By clicking on **Connection Settings** a new window will appear:

<table>
<thead>
<tr>
<th></th>
<th>MSAccess</th>
<th>MySQL, SQLServer, PostgreSQL, MariaDB</th>
<th>Oracle</th>
</tr>
</thead>
<tbody>
<tr>
<td>SID</td>
<td>#</td>
<td>#</td>
<td>#</td>
</tr>
<tr>
<td>Password</td>
<td>#</td>
<td>#</td>
<td>#</td>
</tr>
<tr>
<td>Path</td>
<td>#</td>
<td>#</td>
<td></td>
</tr>
<tr>
<td>Port</td>
<td>#</td>
<td>#</td>
<td></td>
</tr>
<tr>
<td>Server</td>
<td>#</td>
<td>#</td>
<td></td>
</tr>
<tr>
<td>Login</td>
<td>#</td>
<td>#</td>
<td></td>
</tr>
</tbody>
</table>

To validate these settings, click on:

- **OK**,
- or **Cancel** to return backwards.
**Database**
Define the name of the database to be used for the import.

**Table**
Choose the table or view to be imported.
This list is empty until the database has been identified.

**SQL Condition**
It is possible to define an SQL condition, notably to filter the data to be imported.
This condition is exclusively dependent on the structure of the external table used as a source.
It is not actually an SQL request, but is an SQL Condition.

For a request, defined by `SELECT * FROM TABLE WHERE CONDITION`, simply remove the `SELECT * FROM TABLE WHERE`, retaining only the `CONDITION`.

<table>
<thead>
<tr>
<th>Professional meaning</th>
<th>Example of SQL request</th>
<th>Corresponding SQL Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>All persons from Nantes</td>
<td><code>SELECT * FROM Personnel WHERE Agency LIKE 'Nantes'</code></td>
<td><code>Agency LIKE 'Nantes'</code></td>
</tr>
<tr>
<td>All worksites with a duration of 10.5 days</td>
<td><code>SELECT * FROM Client.Worksite WHERE Duration = 10.5</code></td>
<td><code>Duration = 10.5</code></td>
</tr>
<tr>
<td>All persons with a name containing the letter B</td>
<td><code>SELECT * FROM Personnel WHERE Personnel.name LIKE '%B%'</code></td>
<td><code>Personnel.name LIKE '%B\%'</code></td>
</tr>
</tbody>
</table>

**Specific values**
This makes it possible to import without a source file.
The values to be imported are defined directly for the context of the import, entering them directly into the field **Value**.

**Resource parameters**
This information is useful for an import, designed to insert new resources (without the use of a **key**).

This means information assigned to new, imported resources. These parameters are not modified for an update to existing parameters.

- **Hourly calendar**: Select the hourly calendar to assign the new resources to,
- **Daily Calendar**: Select the daily calendar to assign the new resources to,
Color: Select a color,

Icon: Choose a default icon if the parameters of the dimension allow it.

Events creation rule: Choose the creation rule to be assigned to the new resources.

Resource filter

It is possible to define the resources to be considered to be present within the schedule when carrying out an import for modification.

To do this, simply choose a resource filter.

This filter is useful for imports when updating existing resources.

Import mode

There are three potential import modes:

- **Creation only**: this option is used for a simple insertion of resources,
- **Modification only**: this option, along with the choice of keys, is used for a simple update of existing resources,
- **Modification/Creation**: this option, along with the choice of keys, is used for a simple update of existing resources and for the creation of new resources.

Stored procedure

This parameter is useful and can be accessed only for imports from a database (other than MSAccess).

The name of the stored procedure should be defined.

Stored procedures should only have the following two parameters:

- operational **retcode** OUT and type **INTEGER**: must be set to the value **0** if successful,
- operational **message** OUT and type **VARCHAR**: must contain explicative text, made available to the user.

Importing events - procedure to be used

This parameter is useful and can be accessed only for imports from a database (other than MSAccess).

This is used to launch another import context once the stored procedure has been run.
The user should choose an import context from those listed. The list of proposed imports are of the type:

- Database,
- URL.

**Correspondence tab**

This tab is used to produce a correspondence between the source, which may be a file, a worksheet or a table - and the destination, which is one of the dimensions of the schedule.

This correspondence is defined on a field by field basis.

Simply fill in the table, which contains several columns:

**Dimension**

This column take the name of the dimension chosen. This column contains the names of headings and the attributes chosen for the import.

By clicking on  

- Each heading of the dimension, individually,
- Several headings at once if the user clicks on (Select attributes). This is useful when a large number of headings are involved in the import,
- The internal identifier (UID) for the resources.

One cannot import values in headings of the following types:
- Control total,
- Operation,
- Geolocation (if automatic localization is checked),
- and event values.

If these headings are chosen they will automatically be defined as keys.

**Source**

Select, for each heading or attribute to be exported, the corresponding source field.

The name of each element to import should be chosen from the list of source fields. The name of the equivalent field does not need to be identical. This equivalence is valid for each time the source is saved.

The headings without equivalence are treated as follows:

- for the insertion of new resources, the values of these headings are empty,
- for modifications to existing resource, the values are not modified.

**Value**

In the event that information is not included in the source, the values of certain fields can be entered manually, using this column. This field value is the same for all imported resources.

**Global variables**

*In a text heading, the following values can be added as a fixed value for an import:*

- $USERNAME yields the ID of the user who ran the import;
- $NOW yields the date and time when the import was run;
- $DATENOW yields the day when the import was run;
- $TIMENOW yields the timestamp at which when the import was run.

**Now**

In a Data-type heading, it is possible to give the date for the start of the import ("Now") as the value for the date to be imported.

To do this, check the box opposite the selection of date.

**Multiple values**

The insertion of multiple values is possible, in headings of a given type:
Multiple choice list type heading,
Attachment type heading.

To achieve this, in the source the values to be imported must be specified, separated by the character “/”.

Key

For each entry in the source of the import, it is possible to check whether the information already exists as a resource in the schedule, thanks to the notion of a key.

A key is a Unique ID formed from one or more headings. A key therefore allows a distinction to be made between insertions or updates.

There are two possible options:

- If no heading is checked as being the key, this is the insertion of new resources.
- If one or more headings are selected as being a key, this is an update of existing resources and potentially the insertion of new resources.

See Import mode

Modification to an import context

To modify an import context, go to General settings then Click on the context to be modified.

The corresponding part is then enabled. Modify the characteristics (see Creation of an import context), then click on Validate to save any modifications.

Delete an import context

To delete an import context, go to General settings then Click on the context > Delete.

The following message appears:

Click on:

- Yes, to definitively delete the context,
No to cancel the deletion.

Amalgamation of values (snowballing)

It is possible, when importing into a text or multi-line text type heading, to amalgamate (snowball) the value imported with the existing value instead of replacing it.

This mechanism is added if the imported value starts with the character $+.

For a multi-line heading, the imported value is added to a new line.

There are three possible options:

- Use of the Value column, with the prefix $+,
- Import of specific values with the prefix $+,
- Addition of the prefix $+ to the source.

3. USE

After having configured the context it should be run.

There are a number of types of trigger:

- Manual import,
- Import by service,
- Automatic import,
- Import by URL,
- Import/Export chain,
- Import of an export or export of an import.

See Import/Export triggers
Chapter II. Importing events

1. DEFINITION

The importing of events is used to create new events in a schedule, using an external source.

These new events may have multiple dimensions, and must possess, as a minimum:

- a resource,
- a start date.

Three types of import are possible:

- Simple insertion of new events,
- Simple update of existing events,
- Update of existing events and insertion of new events.

An import of events, using a unique source, which might be:

- A CSV file format,
- A worksheet (or a tab) in an Excel file,
- A database table of one of the following formats:
  - MSAccess,
  - MySQL,
  - Oracle,
  - SQL Server,
  - PostgreSQL,
  - MariaDB,
- Specific values.

For an event to be imported, the resources included must already exist in the schedule.

2. CONFIGURATION

It is necessary to save the import contexts before running them.

Create an import context

The creation of a new import context is done from General settings > Right click on Events Import > Create an import context.
The corresponding part is then enabled:

![Import context](image)

Then enter any differing characteristics, then click on:

- **Validate** to save the context,
- **Reset** otherwise.

These characteristics are as follows:

**Name**  
Give this import context a name.

**Description**  
Give a description of this context.
History
This represents the creation date and time and the most recent change to the context, together with the login of the user who implemented the actions.
This characteristic cannot be edited.

Definition
This is a definition of this context.
See Definition of the events import context.

URL "call"
The activation of this option authorizes the triggering of this context using a URL from outside of VISUAL PLANNING.

Activating authentication
The activation of this option is used to protect the URL using Basic Access Authentication.

User ID
Define the identity (login) for the URL if authentication has been activated.

Password
Define the password for the URL if authentication has been activated.

Event creation/modification
This checkbox is used to activate the triggering of the context during the creation and/or modification of events.
It cannot be activated for files on the disk or for an Access database.

Activated
This checkbox is used to activate the import by service trigger.

Triggers
This option is used to define the triggers for an import by service.

Reporting activated
This checkbox is used to transmit a report, by mail, for the results of each import trigger.
Prerequisites: An SMTP server must be configured as automatic mails are involved. See Automatic sending of e-mail

**Sender**

Define the e-mail address to be used as sender for the reporting by mail.

This parameter is only active and needed when the **Reporting activated** checkbox is selected.

**Recipients**

Define the address(es) to be informed during the reporting by mail.

This parameter is only active and needed when the **Reporting activated** checkbox is selected.

**Definition of the import context**

**Source tab**

The unique import destination can be of the type:

- **CSV file**,  
- **Excel file**,  
- **Database**,  
- **Specific values**.

Depending on the type chosen, the parameters required for the import are different.

**Standard format**

**For *.CSV files**

![CSV file format settings](image)

You must define the following parameters:

**Type**

In this case the value should be **CSV file**.
**Separator**

The separator in the source file can be:

- Semicolon,
- Full stop,
- Space,
- Comma,
- Tab,
- or Vertical Bar.

**Encoding**

The type of encoding is to be chosen to match the OS used on the server:

- Default (System encoding),
- UTF8,
- Windows-1252 (Windows).

**Path**

Specify the access path, the latter may contain:

- A CSV type file,
- A URL-type address,
- A standard text of the type `Export=NomDuContexteImport` used for the exports of imports.

**For Excel files**

![Excel file format settings](image)

You must define the following parameters:

**Type**

In this case the value should be **Excel file**.

**Path**

Define the path for access to the file in the format *.XLS or *.XLSX.
Worksheet

Define the worksheet of the source file to be imported.

Databases

If the import is from a database, you must choose the type “Database”.

You must define the following parameters:

Type

In this case the value should be Database.

DBMS

Define the Database Management System used:

- MSAccess,
- MySQL,
- Oracle,
- SQLServer,
- PostgreSQL,
- or MariaDB.

Connection settings

Connection settings differ with the type of DBMS chosen. By clicking on Connection Settings a new window will appear:

<table>
<thead>
<tr>
<th></th>
<th>MSAccess</th>
<th>MySQL, SQLServer, PostgreSQL, MariaDB</th>
<th>Oracle</th>
</tr>
</thead>
<tbody>
<tr>
<td>SID</td>
<td></td>
<td></td>
<td>#</td>
</tr>
</tbody>
</table>
To validate these settings, click on:

- OK,
- or Cancel to return backwards.

**Database**

Define the name of the database to be used for the import.

**Table**

Choose the table or view to be imported.

This list is empty until the database has been identified.

**SQL Condition**

It is possible to define an SQL condition, notably to filter the data to be imported.

This condition is exclusively dependent on the structure of the external table used as a source.

It is not actually an SQL request, but is an SQL Condition.

For a request, defined by `SELECT * FROM TABLE WHERE CONDITION`, simply remove the `SELECT * FROM TABLE WHERE`, retaining only the `CONDITION`.

Examples:

<table>
<thead>
<tr>
<th>Professional meaning</th>
<th>Example of SQL request</th>
<th>Corresponding SQL Condition</th>
</tr>
</thead>
</table>
All persons from Nantes

<table>
<thead>
<tr>
<th>Agency LIKE 'Nantes'</th>
</tr>
</thead>
<tbody>
<tr>
<td>SELECT * FROM Personnel WHERE Agency LIKE 'Nantes'</td>
</tr>
</tbody>
</table>

All worksites with a duration of 10.5 days

<table>
<thead>
<tr>
<th>Duration = 10.5</th>
</tr>
</thead>
<tbody>
<tr>
<td>SELECT * FROM Client.Worksite WHERE Duration = 10.5</td>
</tr>
</tbody>
</table>

All persons with a name containing the letter B

<table>
<thead>
<tr>
<th>Personnel.name LIKE '%B%'</th>
</tr>
</thead>
<tbody>
<tr>
<td>SELECT * FROM Personnel WHERE Personnel.name LIKE '%B%'</td>
</tr>
</tbody>
</table>

**Specific values**

This makes it possible to import without a source file.

The values to be imported are defined directly for the context of the import, entering them directly into the field **Value**.

This type of import is particularly suitable for the **automatic assignment** function.

**Date format**

Choose one of the date formats.

- **dd/MM/yyyy**,
- **yyyy-MM-dd**,
- **MM/dd/yyyy**,
- or **dd.MM.yyyy**.

**Import mode**

There are three potential import modes:

- **Creation only**: this option is used for a simple insertion of events,
- **Modification only**: this option, along with the choice of keys, is used for a simple update of existing events,
- **Modification/Creation**: this option, along with the choice of keys, is used for a simple update of existing events and for the creation of new events.

**Events filter**

It is possible to define the events to be considered as being present within the schedule when carrying out an import for modification.

To do this, simply select an events filter.

This filter is useful for imports when updating existing events.
Importing Exporting and Publishing data

**Stored procedure**

This parameter is useful and can be accessed only for imports from a database (other than MSAccess).

The name of the stored procedure should be defined.

Stored procedures should only have the following two parameters:

- **operational retcode** OUT and type INTEGER: must be set to the value 0 if successful,
- **operational message** OUT and type VARCHAR: must contain explicative text, made available to the user.

**Correspondence tab**

This tab is used to produce an equivalence between the source, which may be a file, a worksheet or a table - and the destination, which is a set of events for the schedule.

This equivalence is defined on a field by field basis.

![Import events](image)

Simply fill in the table, which contains several columns:

**Property**

This column contains all the properties and headings to be imported.

By clicking on ![plus](image), it is possible to import:

- The general and temporal properties of the events,
- Each heading of each dimension,
The name of each resource, in the form of identification headings,

Several headings at once if the user clicks on (Select all attributes). This is useful when a large number of headings are involved in the import,

Each heading of each form,

The fixed value, the value per unit and the coefficient for each valuation item,

The internal identifier (UID) for the events.

- For the importing of daily events, using the end date parameters, the value to be imported should be at D+1 for the event to end on Day D.
- If an equivalence is made with the Operations-type heading, it will be automatically selected as a key.

Source

Select, for each heading or heading to be imported, the corresponding source field.

The name of each element to import should be chosen from the list of source fields. The name of the equivalent field does not need to be identical. This equivalence is valid for each time the source is saved.

The properties and headings without equivalence are treated as follows:

- for the insertion of new resources, the values of these entities are empty,
- for modifications to existing resource, the values are not modified.

Value

In the event that information is not included in the source, the values of certain fields can be entered manually, using this column. This field value is the same for all imported events.

Global variables

*In a text heading, the following values can be added as a fixed value for an import:*

- $USERNAME yields the ID of the user who ran the import;
- $NOW yields the date and time when the import was run;
- $DATENOW yields the day when the import was run;
- $TIMENOW yields the timestamp at which when the import was run.

Now

In Date-type headings or properties, it is possible to give the start data for the import (“Now”) as the value for the date to be imported.

To do this, check the box opposite the selection of date.
Multiple values

The insertion of multiple values is possible, in headings of the form types:

- Multiple choice list type heading,
- Attachment type heading.

To achieve this, in the source the values to be imported must be specified, separated by the character “/”.

Automatic assignment

For the importation of specific values, it is possible to do an automatic assignment of the resources to existing events. (See Assignment)

The following window appears:

Three pieces of information may be added:

Sort in ascending order

If this case is selected, the choice of the resources to be assigned will be in ascending order. If not, it will be in decreasing order.

Sort headings

Chose the headings that define the automatic assignment criteria.

Example: If the heading “Name” is the only sort heading and the ascending order box has been checked, the resources are assigned in the alphabetic order of Names:
1. Assignment of Albert as the first event,
2. Then assignment of Bertrand as a second event,
3. Etc...

Resource filter

This filter is used to define the resources to be assigned to events.

To assure that the automatic assignment is only applied to the available resources, a resource filter
should be chosen with the events filter criteria > does not contain an events filter > To be Requested.

Key

For each entry in the source of the import, it is possible to check whether the information already exists
as an event in the schedule, thanks to the notion of a key.

A key is a Unique ID formed from one or more headings and/or properties. A key therefore allows a
distinction to be made between insertions or updates.

There are two possible options:

- If no heading/property is checked as being the key, this is the insertion of new events.
- If one or more headings/entities are selected as being a key, this is an update of existing events, and
  potentially the insertion of new events.

See Import mode

Parent key

- This functionality is only used for a vertical hierarchy (See Events hierarchy).

For each entry in the source of the import, it is possible to check whether the parent-event already exists
as an event in the schedule, thanks to the notion of a key.

The parent key can therefore be used to find the parent event to create or update subsidiary events.

If the parent event does not exist, the subsidiary events cannot be imported or updated.

Modification to an import context

To modify an import context, go to General settings then Click on the context to be modified.

The corresponding part is then enabled. Modify the characteristics (see Creation of an import context),
then click on Validate to save any modifications.

Delete an import context

To delete an import context, go to General settings then Click on the context > Delete.
The following message appears:

![Question dialog box](image)

Click on:
- **Yes**, to definitively delete the context,
- **No** to cancel the deletion.

### Amalgamation of values (snowballing)

It is possible, when importing into an events note or a text or multi-line text type heading, to amalgamate (snowball) the value imported with the existing value instead of replacing it.

This mechanism is added if the imported value starts with the character $+.

For a multi-line heading, the imported value is added to a new line.

There are three possible options:
- Use of the **Value** column, with the prefix $+,
- Import of specific values with the prefix $+,
- Addition of the prefix $+ to the source.

### 3. USE

After having configured the context it should be run.

There are a number of types of trigger:
- Manual import,
- Import by service,
- Automatic import,
- Import by URL,
- Import/Export chain,
- Import of an export or export of an import.
See Import/Export triggers
Chapter III. Import of resources or events from a mailbox

1. DEFINITION

This functionality enables you to import information taken from the e-mails of a specific mailbox into VISUAL PLANNING.

This is only possible in the ENTERPRISE version of VISUAL PLANNING.

This module uses an existing SMTP server to import e-mails.

2. PREREQUISITES

Technical prerequisites

This module requires an operational SMTP server with the VISUAL PLANNING **MAIL.Receive** settings correctly entered.

See [Sending an e-mail by SMTP server](#).

Functional prerequisite

To link the e-mail account to the context for importing resources or events, you must save the account’s username and password in the Admin Center’s external access manager.

See [Configuration for external access](#).

The address is built as follows:

```
protocol://email_address
```

where **protocol** can take the values **imap** or **pop3**.
3. CONFIGURATION

E-mails can be imported from a mailbox via a resource import or an event import.

The data source is a CSV file generated by the VISUAL PLANNING server by calling the following URL:
http://vp_server/importmail.do?ACCOUNT=exemple-adresse@mail.com

Where:
- **vp_server** is the address of the VISUAL PLANNING server;
- the **ACCOUNT** setting is the e-mail address where the e-mails will be retrieved.

**Defining the import URL**

This URL address can take the following settings (separated in the URL by an **and**):

- **ACCOUNT**: Specifies the e-mail address where the e-mails will be retrieved.
- **FOLDER**: Specifies the name of the folder in the mailbox from which the e-mails will be imported,
- **DELAY**: Specifies a delay in minutes. Only e-mails whose reception date is later than the current date
minus this delay will be retrieved. If the value is -1, all the e-mails marked as unread will be retrieved.
  If in this case the protocol is IMAP, they are marked as read once they have been imported.
- **MAX_MESSAGES**: Specifies the maximum number of messages retrieved by the import.

The conditions of the **DELAY** and **MAX_MESSAGES** settings are combined. In other words, the first limit reached determines the imported e-mails.
Creating the import context

Once the URL has been built, in General Settings > Right-click on Imports/Exports > Create a context:

- of resource import on the required dimension,
- of event import.

Definition of the import context

When configuring the import context, in the Source tab:

- the Type must be equal to Csv File,
- and the Path to the e-mail export URL.

```
<table>
<thead>
<tr>
<th>Format</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
</tr>
<tr>
<td>Settings</td>
</tr>
<tr>
<td>Separator</td>
</tr>
<tr>
<td>Encoding</td>
</tr>
<tr>
<td>Path</td>
</tr>
</tbody>
</table>
```

Once these two settings have been entered correctly, it is possible to match up the VISUAL PLANNING headings (created previously either in the dimension or in the form) with the information returned by the URL.
The information returned by the URL is:

- **ID**: Unique e-mail identifier,
- **DATE**: E-mail reception date,
- **FROM**: Sender’s e-mail address,
- **SUBJECT**: Subject of the e-mail,
- **TO**: Recipient’s e-mail address,
- **CC**: E-mail addresses of recipients in copy,
- **BODY**: Body of e-mail text,
- **ATTACHMENTS**: URL for access to attachments that will first be downloaded on the VISUAL PLANNING server,
- **IMAGES**: URL for access to images contained in the e-mail that will first be downloaded on the VISUAL PLANNING server,
- **EML**: URL for access to the complete e-mail file in .eml format which will first be downloaded on the VISUAL PLANNING server.

### 4. USE

After configuring the context, importing of e-mails is performed in the same way as a standard import of resources or events.
Chapter IV. Resources export

1. DEFINITION

The export of resources is used to export a grouping of resources from a single dimension in a schedule to a destination outside of VISUAL PLANNING.

The export of resources can be used for:

- for the creation of a schedule using the same resources;
- To remove data from VISUAL PLANNING for use in another program by exporting the data in a format acceptable to the second program.

An export of resources, using a unique destination, which might be:

- A CSV file format,
- A worksheet (or a tab) in an Excel file,
- An XML document format,
- A database table of one of the following formats:
  - MSAccess,
  - MySQL,
  - Oracle,
  - SQL Server,
  - PostgreSQL,
  - MariaDB.

2. PREREQUISITES

Technical prerequisites

The technical prerequisites vary with the technology used by the destination.

The principal being that the destination exists and that VISUAL PLANNING has correct access.

Other pre-requisites may appear depending on the trigger used to start the export.

Functional pre-requisites

This functionality has no indispensable pre-requisites.
However, for correct use, it is recommended that:

- A heading is created, named VPEXPORT, of the following format:
  - Boolean,
  - Text,
  - or Multi-line text.

The latter is capable of stocking the date and time of last export, the login used and the context name for the export, excluding the Boolean function, which is checked once the export has been completed.

### 3. CONFIGURATION

The export contexts must be saved before triggering them.

**Create an export context**

To create a new export context, go to General settings > Right click on Resource Export > Create an export context for > Select the dimension.

The corresponding part is then enabled:
Then enter any differing characteristics, then click on:

- **Validate** to save the context,
- **Reset** otherwise.

These characteristics are as follows:

**Name**

Give a name to the export context.

**Description**

Give a description of this context. The description is optional.
History

This represents the creation date and time and the most recent change to the context, together with the login of the user who implemented the actions.

This characteristic cannot be edited.

Definition

This is a definition of this context.

See Definition of the resource export context.

Mark the treatment

This checkbox, if checked, is used to save the date, time and login details of the use exporting the resource.

See below.

URL "call"

The activation of this option authorizes the triggering of this context using a URL from outside of VISUAL PLANNING.

Activating authentication

The activation of this option is used to protect the URL using Basic Access Authentication.

User ID

Define the identity (login) for the URL if authentication has been activated.

Password

Define the password for the URL if authentication has been activated.

Resource creation/modification

This checkbox is used to activate the triggering of the context during the creation and/or modification of resources.

It cannot be activated for files on the disk or for an Access database.

Event creation/modification

This checkbox is used to activate the triggering of the context during the creation and/or modification of events.
Activated
This checkbox is used to activate the export by service trigger.

Triggers
This option is used to define the triggers for an export by service.

Reporting activated
This checkbox is used to transmit a report, by mail, for the results of each export trigger.

Prerequisites: An SMTP server must be configured as automatic mails are involved. See Automatic sending of e-mail

Sender
Define the e-mail address to be used as sender for the reporting by mail.
This parameter is only active and needed when the Reporting activated checkbox is selected.

Recipients
Define the address(es) the reporting by mail is to be sent to.
This parameter is only active and needed when the Reporting activated checkbox is selected.

Definition of the export context

Destination tab
The unique export destination can be of the type:
- Database,
- XML file,
- Excel file,
- or CSV file.

Depending on the type chosen, the parameters required for the export are different.
Standard format

For *.CSV files

You must define the following parameters:

**Type**
In this case the value should be **CSV file**.

**Separator**
The separator in the destination file can be:
- Semicolon,
- Full stop,
- Space,
- Comma,
- Tab
- or Vertical Bar.

**Encoding**
The type of encoding is to be chosen to match the OS used on the server:
- Default (System encoding): the encoding used by the client machine,
- UTF8: encoding used for Anglophone OS (Windows, Unix),
- Windows-1252 (European standard)

**Path**
Specify the access path, the latter may contain:
- A destination file of the type *.CSV. If the file does not exist it will be created during the export,
- A URL-type address,
A standard text of the type `Import=NomDuContexteExport` used for imports and exports.

**For Excel files**

You must define the following parameters:

**Type**

In this case the value should be **Excel file**.

**Path**

Define the path for access to the file in the format *.XLS or *.XLSX.

**Worksheet**

Define the worksheet of the source file to be imported.

**For XML files**

You must define the following parameters:

**Type**

In this case the value should be **XML File**.

**Path**

Define the path for access to the file in the format *.XML.

**Databases**

If the import is from a database, you must choose the type “Database”.
You must define the following parameters:

**Type**

In this case the value should be **Database**.

**DBMS**

Define the Database Management System used:

- MSAccess,
- MySQL,
- Oracle,
- SQLServer,
- PostgreSQL,
- or MariaDB.

**Connection settings**

Connection settings differ with the type of DBMS chosen. By clicking on **Connection Settings** a new window will appear:

<table>
<thead>
<tr>
<th></th>
<th>MSAccess</th>
<th>MySQL, SQLServer, PostgreSQL, MariaDB</th>
<th>Oracle</th>
</tr>
</thead>
<tbody>
<tr>
<td>SID</td>
<td>#</td>
<td>#</td>
<td>#</td>
</tr>
<tr>
<td>Password</td>
<td>#</td>
<td>#</td>
<td>#</td>
</tr>
<tr>
<td>Path</td>
<td>#</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Port</td>
<td>#</td>
<td>#</td>
<td>#</td>
</tr>
<tr>
<td>Server</td>
<td>#</td>
<td></td>
<td>#</td>
</tr>
</tbody>
</table>
To validate these settings, click on:

- **OK**,  
- or **Cancel** to return backwards.

**Database**

Define the name of the database to be used for the import.

**Table**

Choose the table or view to be imported.  
This list is empty until the database has been identified.

**Add if no match**

This parameter is useful and can be accessed for an export to a database (other than MSAccess).

For an export to a database, the export involves, by default, the insertion of new data.

This checkbox, if not checked, is used to check, within the destination database, whether the data already exists, and only create it if it doesn’t.

The **key** used for this verification is defined in the Correspondence tab.

**Filter**

It is possible to restrict the export to just some of the resources. To do this, select from this list, the resource filter to apply to the data to be exported.

**Stored procedure**

This parameter is useful and can be accessed for an export to a database (other than MSAccess).
The name of the stored procedure should be defined.

Stored procedures should only have the following two parameters:

- operational **retcode** OUT and type INTEGER: must be set to the value 0 if successful,
- operational **message** OUT and type VARCHAR: must contain explicative text, made available to the user.

**Import context to follow**

This parameter is useful and can be accessed for an export to a database (other than MSAccess).

This is used to launch another import context once the stored procedure has been run.

The user should choose an import context from those listed.

The list of proposed imports are of the type:

- Database,
- URL.

**Correspondence tab**

This tab is used to create equivalence links between the source, which is one of the dimensions of the schedule, and which is, depending on the case, either a file, a worksheet or a table.

This equivalence is defined on a field by field basis.

![Correspondence tab image]

Simply fill in the table, which contains three columns:
Dimension

This column contains the names of headings and the attributes chosen for the export.

By clicking on , it is possible to export:

- Each heading of the dimension,
- Each heading of the “dependent” resources,
- Several headings at once if the user clicks on (Select all attributes). This is useful when a large number of headings are involved in the export,
- A log of resource history,
- The names given to daily and hourly calendars,
- The internal identifier (UID) for the resources.

In terms of the calculated headings, only the daily headings can be exported.

Destination

Select, for each heading or attribute to be exported, the corresponding destination field. If no destination is given, the attribute or heading will not be exported.

- For a file, the name, by default, is that of the heading or attribute. It is possible to modify this name by clicking on the corresponding Destination field.
- For a table, the names are taken from the list of fields in the Destination table.

Key

To export towards a table in a database, it is possible to choose a key by ticking one or more Key? boxes.

See Add if no match

For an export to a file, it is possible to define the order of the columns in the export file, using the arrows . This order also defines the order of the resources exported into the file.

Modification of an export context

To modify an export context, go to General settings then Click on the context to be modified.

The corresponding part is then enabled. Modify the characteristics (see Creation of an export context), then click on Validate to save any modifications.
Deleting an export context

To delete an export context, go to General settings then Click on the context > Delete.

The following message appears:

Click on:

- **Yes**, to definitively delete the context,
- **No** to cancel the deletion.

4. USE

Trigger

After having configured the context it should be run.

There are a number of types of trigger:

- Manual export,
- Export by service,
- Automatic export,
- Export by URL,
- Import/Export chain,
- Import of an export and export of an import.

See Import/Export triggers

Event markings

In the event the context uses treatment markings, certain data is stored within the event exported, in a heading named **VPEXPORT**, if it exists. (See Functional pre-requisites above).
Export to multiple imports

It is possible to define, from within the path of an export context, multiple import resources. This allows the user to feed multiple imports from a single export.

To do this, you must define, within the export path, the imports that this export is to provide data, separated by a semi-colon.

For example, within the context of the exporting of Personnel, the names of the various import contexts liable to trigger this export must be entered: "EXPORT=Import contracts;import worksites". In this case, if the export is triggered, the imports are, in turn, triggered in the order declared.
Chapter V. Exporting Events

1. DEFINITION

The export of events is used to export a grouping of events from a schedule to a destination outside of VISUAL PLANNING.

An export of events, using a unique destination, which might be:

- A CSV file format,
- A worksheet (or a tab) in an Excel file,
- An XML document format,
- A database table of one of the following formats:
  - MSAccess,
  - MySQL,
  - Oracle,
  - SQL Server,
  - PostgreSQL,
  - MariaDB.

2. PREREQUISITES

Technical prerequisites

The technical prerequisites vary with the technology used by the destination.

The principal being that the destination exists and that VISUAL PLANNING has correct access.

Other pre-requisites may appear depending on the trigger used to start the export.

Functional pre-requisites

This functionality has no indispensable pre-requisites.

However, for correct use, it is recommended that:

- A heading header is created, named VPEXPORT, of the following format:
  - Boolean,
  - Text,
  - or Multi-line text.
The latter is capable of stocking the date and time of last export, the login used and the context name for the export, excluding the Boolean function, which is checked once the export has been completed.

3. CONFIGURATION

It is necessary to save the import contexts before running them.

Create an export context

The creation of a new export context is done from General settings > Right click on Events export > Create an events export context.

The bottom heading is then enabled:

Then enter any differing characteristics, then click on:

- **Validate** to save the context,
Reset otherwise.

These characteristics are as follows:

**Name**
Give this import context a name.

**Description**
Give a description of this context. This data is optional.

**History**
This represents the creation date and time and the most recent change to the context, together with the login of the user who implemented the actions.

This characteristic cannot be edited.

**Definition**
This is a definition of this context.

See **Definition of the events export context**.

**Mark the treatment**
This checkbox, if selected, is used to save the date, time and login details of the use exporting the events.

See **below**.

**URL “call”**
The activation of this option authorizes the triggering of this context using a URL from outside of VISUAL PLANNING.

**Activating authentication**
The activation of this option is used to protect the URL using Basic Access Authentication.

**User ID**
Define the identity (login) for the URL if authentication has been activated.

**Password**
Define the password for the URL if authentication has been activated.
Event creation/Modification
This checkbox is used to activate the triggering of the context during the creation and/or modification of events.

It cannot be activated for files on the disk or for an MSAccess database.

Activated
This checkbox is used to activate the export by service trigger.

Triggers
This option is used to define the triggers for an export by service.

Reporting activated
This checkbox is used to transmit a report, by mail, for the results of each import trigger.

Prerequisites: An SMTP server must be configured as automatic mails are involved. See Automatic sending of e-mail

Sender
Define the e-mail address to be used as sender for the reporting by mail.

This parameter is only active and needed when the Reporting activated checkbox is selected.

Recipients
Define the address(es) the reporting by mail is to be sent to.

This parameter is only active and needed when the Reporting activated checkbox is selected.
Definition of the export context

Destination tab

Standard format

For *.CSV files

You must define the following parameters:

Type
In this case the value should be CSV file.

Separator
The separator in the destination file can be:

- Semicolon,
- Full stop,
- Space,
- Comma,
- Tab
- or Vertical Bar.

Encoding
The type of encoding is to be chosen to match the OS used on the server:

- Default (System encoding): the encoding used by the client machine,
- UTF8: encoding used for Anglophone OS (Windows, Unix),
- Windows-1252 (European standard).

Path
Specify the access path, the latter may contain:
A destination file of the type *.CSV. If the file does not exist it will be created during the export,
■ A URL-type address,
■ A standard text of the type `Import=NomDuContexteExport` used for imports and exports.

**For Excel files**

- **Format**
- **Type**: Excel file
- **Settings**
- **Path**: 
- **Sheet**: 

You must define the following parameters:

**Type**

In this case the value should be **Excel file**.

**Path**

Define the path for access to the file in the format *.XLS or *.XLSX.

**Worksheet**

Define the worksheet of the source file to be imported.

**For XML files**

- **Format**
- **Type**: XML file
- **Settings**
- **Path**: 

You must define the following parameters:

**Type**

In this case the value should be **XML File**.

**Path**

Define the path for access to the file in the format *.XML.
**Databases**

If the import is from a database, you must choose the type “Database”.

You must define the following parameters:

**Type**

In this case the value should be **Database**.

**DBMS**

Define the Database Management System used:

- MSAccess,
- MySQL,
- Oracle,
- SQLServer,
- PostgreSQL,
- or MariaDB.

**Connection settings**

Connection settings differ with the type of DBMS chosen. By clicking on **Connection Settings** a new window will appear:

<table>
<thead>
<tr>
<th></th>
<th>MSAccess</th>
<th>MySQL, SQLServer, PostgreSQL, MariaDB</th>
<th>Oracle</th>
</tr>
</thead>
<tbody>
<tr>
<td>SID</td>
<td></td>
<td></td>
<td>#</td>
</tr>
<tr>
<td>Password</td>
<td>#</td>
<td>#</td>
<td>#</td>
</tr>
<tr>
<td>Path</td>
<td>#</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
To validate these settings, click on:

- **OK**,
- or **Cancel** to return backwards.

### Database
Define the name of the database to be used for the import.

### Table
Choose the table or view to be imported.

This list is empty until the database has been identified.

### Add if no match
This parameter is useful and can be accessed for an export to a database (other than MSAccess).

For an export to a table, the export is considered, by default, to the insertion of new data.

This checkbox, if not checked, is used to check, within the destination database, whether the data already exists, and only create it if it doesn’t.

The **key** used for this verification is defined in the **Correspondence** tab.

### Date format
The user should choose the format used for writing the dates during an export, from:

- dd/MM/yyyy,
- yyyy-MM-dd,
- MM/dd/yyyy,
- or dd.MM.yyyy.

**Filter**

It is possible to restrict the export to certain events.

To do this, simply select an events filter.

**Period**

It is also possible to select a period of time during which is found the events to be exported.

**Type of intersection**

Finally, it is possible to select the intersection between events and a time period, from the following choices:

- Intersects with period,
- Covers the period,
- Entirely within the period,
- Starts within the period,
- Ends within the period.

**Stored procedure**

This parameter is useful and can be accessed for an export to a database (other than MSAccess).

The name of the stored procedure should be defined.

Stored procedures should only have the following two parameters:

- operational retcode OUT and type INTEGER: must be set to the value 0 if successful,
- operational message OUT and type VARCHAR: must contain explicative text, made available to the user.

**Import context to follow**

This parameter is useful and can be accessed for an export to a database (other than MSAccess).

This is used to launch another import context once the stored procedure has been run.
The user should choose an import context from those listed.

The list of proposed imports are of the type:

- Database,
- URL.

**Correspondence tab**

This tab is used to create equivalence links between the source, which is a set of events in the schedule, and which is, depending on the case, either a file, a worksheet or a table.

This equivalence is defined on a field by field basis.

![Image of Export events window](image)

Simply fill in the table, which contains several columns:

**Property**

This column contains the names of headings and the parameters chosen for the export.

By clicking on ![add button](image), it is possible to export:

- The general and temporal properties of the events,
- Each heading of each dimension,
- The name of each resource, in the form of identification headings,
- Several headings at once if the user clicks on *(Select all attributes)*. This is useful when a large number of headings are involved in the export,
- Each heading of each form,
- The fixed value, the value per unit and the coefficient for each valuation item,
- The internal identifier (UID) for the events.
In terms of the calculated headings, only the daily headings can be exported.

## Destination

Select, for each heading or property to be exported, the corresponding destination field. If no destination is given, the property or heading will not be exported.

- For a file, the name, by default, is that of the heading or property. These names can be modified.
- For a table, the names are taken from the list of fields in the Destination table.

## Key

To export towards a table in a database, it is possible to choose a key by ticking one or more **Key?** boxes.

See [Add if no match](#)

For an export to a file, it is possible to define the order of the columns in the export file, using the arrows [▲ ▼]. This order also defines the order of the resources exported into the file.

## Modification of an export context

To modify an export context, go to **General settings** then **Click on the context to be modified**.

The corresponding part is then enabled. Modify the characteristics (see [Creation of an export context](#)), then click on **Validate** to save any modifications.

## Deleting an export context

To delete an export context, go to **General settings** then **Click on the context > Delete**.

The following message appears:
Click on:

- **Yes**, to definitively delete the context,
- **No** to cancel the deletion.

## 4. USE

### Trigger

After having configured the context it should be run.

There are a number of types of trigger:

- Manual export,
- Export by service,
- Automatic export,
- Export by URL,
- Import/Export chain,
- Import of an export and export of an import.

See [Import/Export triggers](#).

### Event markings

In the event that the context used includes processing markers, the log and context name are saved within the event exported:

- in a heading of the form named `VPEXPORT`, if this exists. (See Functional pre-requisites [above](#))
- in the events note if this heading does not exist.

### Export to multiple imports

It is possible to define, from within the path of an export context, multiple imports. This allows the user to feed multiple imports from a single export.

To do this, you must define, within the export path, the imports that this export is to provide data, separated by a semi-colon.
Chapter VI. Export events report

1. DEFINITION

This functionality is used to manually export, or use a URL call to produce an Events Report from VISUAL PLANNING for an external destination, which may be:

- A CSV file format,
- A worksheet (or a tab) in an Excel file.

2. PREREQUISITES

The export of an events report requires the creation and display of an events report first.

3. CONFIGURATION

The configuration for the export of an events report cannot be saved. This configuration must be re-defined for each use.

For a URL call, the predefined export format is Excel (*.xlsx).

4. USE

Triggering an export event report

To export an events report, click on the view of the events report to be exported then go to the menu Planning > Export Block > Export events report

The following window opens:
Define the export parameters then click on **Validate** to start the export of the events report.

**For *.CSV files**

The files supported are of the type *.CSV.*

You must define the following parameters:

- The **separator** in the destination file can be:
  - Semicolon,
  - Full stop,
  - Space,
  - Comma,
  - Tab
  - or Vertical Bar.

- The **encoding** of the exported file, which may be:
  - Default (System encoding),
  - UTF8,
  - Windows-1252 (Windows).

- The **path** giving access to the destination file. If the file does not exist, it will be created during the export.

**For Excel files**

The files supported are of the type *.XLS* or *.XLSX.*
You must define the following parameters:

- The **path** giving access to the destination file. If the file does not exist, it will be created during the export.
- And the destination **worksheet** in the file. If the **worksheet** does not exist, it will be created during the export.

**Export report**

When an export is completed, the **Export Report** window will appear to display a summary of the operation.

**Export correct**

Once the export has been completed, the following message appears:

![Export finished](image)

**Pre-existing data**

During the export, if the data is already found within the file, the following message appears:

![Overwrite existing data?](image)

You must then specify:

- Overwrite the existing data by clicking on **Yes**,
- or, Modify the export parameters by clicking on **No**.

**Export incorrect**

If the export parameters do not permit the export to take place, a message will be displayed, inviting you to check the export parameters.
You should then attempt to restart an export with the correct parameters until an Export Correct message appears. (See above)

**Triggering an events report export using a URL**

It is possible to trigger the export of an events report using a URL generated during the configuration of the events report itself.

To export the events report, copy the URL from the configuration window of the events report, right clicking on the name of the report > Display export URL.

The following window appears:

Copy and paste this URL into a browser and run the browser page to execute the request.

**Without initial authentication**

The following window opens.

Select your destination folder and click on OK to start the export.

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With authentication

The following window opens.

Enter the user name and password completed in the configuration of the events report and click OK to validate.

The following window opens.

Select your destination folder and click on OK to start the export.
Chapter VII. Import/Export triggers

1. DEFINITION

The triggers are used to launch the import and export contexts for resources or events.

2. PREREQUISITES

Manual triggering is only possible with the VISUAL PLANNING ONE version.

All other triggers require VISUAL PLANNING ENTERPRISE.

3. LIST OF TRIGGERS

There are various types of trigger for imports/exports:

Manual

**DEFINITION**

Manual imports or exports allow users to manually trigger an import or export context for resources or events.

A manual export may function using:

- A *.CSV file format;
- A worksheet (or a tab) in an Excel file;
- A database table of one of the following formats:
  - MSAccess,
  - MySQL,
  - Oracle,
  - SQL Server,
  - PostgreSQL,
  - or MariaDB.

**USE**

**Triggering a context**

To manually trigger an import or export context, go to Planning > Export or Import block, then:
Export events > Click on the right arrow > select context;
Import events > Click on the right arrow > select context;
Resources export > Click on the right arrow > select context;
Import resources > Click on the right arrow > select context.

A window, similar to the following, will then appear:

Question

Do you want to export resources with context 'Export context Job 1'?

Click on Yes to start the import or export.

Exporting a selection

It is possible to export a selection of resource or events using a pre-defined context.

To do this:

Right click on a selection of events > Export events > Select the context;
Or, Right click on a selection of resources > > Select the context.

A window, similar to the following, will then appear:

Question

Do you want to export resources with context 'Export context Job 1'?

Click on Yes to start the export.

Only the selected resources or events which belong within the filter defined in the context will be exported.
Importing a selection

It is possible to trigger an import of resources or events from a selection.

To do this:

- **Right click on a selection of resources** > Import resources > Select the context;
- **Right click on a selection of events** > Import events > Select the context.

A window, similar to the following, will then appear:

![Import context confirmation](image)

Click on Yes to start the import.

This functionality is only available for an update import.

Export report

When an export is completed, the **Export Report** window will appear to display a summary of the operation.

Export correct

When the export is completed, the report gives the number of data items exported and, if this is followed by an import, the number of data items imported.
Export incorrect

If the export parameters do not allow the export to continue, the following message appears:
You should then attempt to restart an export with the correct parameters until an Export Correct message appears. (See above)

**Import report**

When an import is completed, the **Import Report** window will appear to display a summary of the operation.

**Import correct**

If the import settings have been correctly completed, a message of this type will appear:
Import incorrect

If the import parameters do not allow the import to continue, the following message appears:
You should then attempt to restart an import with the correct parameters until an Import Correct message appears. (See above)

No resource defined

The existence of events and, implicitly, the importation of events, requires a minimum of one resource, to attach the imported events to.

If no resource is defined in the import context, the following message appears:

No correspondence defined

If no correspondence is defined, the following message appears:
Service

In this case the import/export context is triggered by service at a pre-defined frequency.

Import by service

DEFINITION

An import by service operation is used to trigger, based upon a pre-defined frequency, an import of the data into VISUAL PLANNING.

This functionality only covers:

- Import of Resources,
- Import of Events.

This functionality allows one to regularly and effectively implement the pre-defined and pre-configured import contexts.

This service functions regardless of whether the source is:

- a CSV file,
- an Excel file,
- or a Database.

PREREQUISITES

Technical prerequisites

This functionality is only available with VISUAL PLANNING ENTERPRISE.

The import/export function must have been started before the automatic imports are triggered.

Functional prerequisite

The “import by service” requires:

- The preparation of the file or database source,
The definition of an import context.

**CONFIGURATION**

**Configuration of import service**

To configure the triggering of the import by service function, in **General settings > Imports/exports** > **Click on the import context for resources or events**.

The corresponding part is then enabled:

![Import context](image)

To find out more about these characteristics, see [Resource import](#) or [Event import](#).

The following characteristics only involve the triggering by service context.

**Activated**

This checkbox allows the user to activate or deactivate the services for the import context in question.

**Triggers**

The triggers are used to define:
■ the import frequency,
■ the source file (for imports from a file),
■ Actions to be applied to the file after treatment (for imports from a file).

By clicking on the button ➔

The following window opens:

This window gives a definition of the list of import context services.

To add a new import by service, click on the Add button.

This signifies that one can trigger the launch of an import context as often as required, without having to define multiple contexts.

**Frequency**

We can identify two types of frequency:

■ **Every day**, at a defined time;
■ **Every DD**, at a defined time (E.g.: every Monday);
■ **Every X minutes**;
■ **Every month**, on the.

**Information**

■ If the frequency has been defined as being **Every day at**, then you must include the **time**,
■ If the frequency has been defined as being **Every X minutes**, then you must include the number of minutes,
■ If the frequency has been defined as being **Every month at**, then you must include the day, month and time.
File
For imports from an Excel file or a CSV, you must define the address of the file used by the service. As opposed to the path defined for imports, this file must be accessible from the server.

Actions
Finally in order to define the treatments to be applied to the imported file, after completion of the import.

- **Deletion**: Definitively deletes the file imported.
- **Archive**: Renames the imported file using the extension `.yyyyMMddHHmmss` (example: `import file.20180404165412.csv`),
- **None**: No treatment will be applied to the imported file.

USE
The import, by service, of the data into VISUAL PLANNING, does not require a specific use. The end user will see that the data has been modified without any further manipulation, transparently.

The log of the stored event or resource uses the name of the context as a user name.

To assure that the service functions, the following elements must be activated.

These actions must be undertaken by an administrator:

1. The VISUAL PLANNING server must be running,
2. The “by service” trigger of the import or export context must be activated,
3. The import/export services of the schedule must be activated (Admin Center > Right click on planning > Activate import/export service) See Planner management
4. The import/export services for the application must be activated: See Services management

Export by service

**DEFINITION**

An export by service operation is used to trigger, based upon a pre-defined frequency, an export of the data from VISUAL PLANNING.

This functionality only covers:

- The export of resources,
- The export of events.

This functionality allows one to regularly and effectively implement the pre-defined and pre-configured export contexts.
This works whether the destination is:

- a CSV file,
- an Excel file,
- an XML file,
- or a Database.

**PREREQUISITES**

**Technical prerequisites**

This functionality is only available with VISUAL PLANNING ENTERPRISE.

The import/export function must have been started before the automatic imports are triggered.

**FUNCTIONAL PREREQUISITE**

The “export by service” requires:

- The preparation of the file or database destination,
- The definition of an export context.

**CONFIGURATION**

**Export trigger parameters**

To configure the triggering of the export by service function, in General settings > Imports/exports > Click on the export context for resources or events.

The corresponding part is then enabled:
To find out more about these characteristics, see Resource export or Events export.

The following characteristics only involve the triggering by service context.

**Activated**

This checkbox allows the user to activate or deactivate the services for the export context in question.

**Triggers**

The triggers are used to define:

- the export frequency,
- the destination file (exports to a file).

By clicking on the button \[\]

---

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The following window opens:

![Window screenshot]

This window gives a definition of the list of export context services.

To add a new export by service, click on the Add button.

This signifies that one can trigger the launch of an export context as often as required, without having to define multiple contexts.

**Frequency**

We can identify two types of frequency:

- **Every day**, at a defined time;
- **Every DD**, at a defined time (E.g.: every Monday);
- **Every X minutes**;
- **Every month**, on the.

**Information**

- If the frequency has been defined as being **Every day at**, then you must include the time,
- If the frequency has been defined as being **Every X minutes**, then you must include the number of minutes,
- If the frequency has been defined as being **Every month at**, then you must include the day, month and time.

**File**

For imports from an Excel file or a CSV, you must define the address of the file used by the service.

As opposed to the path defined for exports, this file must be accessible from the server.

**USE**

The export, by service, of the data in VISUAL PLANNING, does not require a specific use.
In this case the user does not see the data export. The export is transparent.

To assure that the service functions, the following elements must be activated.

These actions must be undertaken by an administrator:

1. The VISUAL PLANNING server must be running.
2. The “by service” trigger of the import or export context must be activated,
3. The import/export services of the schedule must be activated (Admin Center > Right click on planning > Activate import/export service) See Planner management
4. The import/export services for the application must be activated: See Services management

**Automatic**

**DEFINITION**

The automatic imports and exports are a method of triggering imports and exports which occurs during the creation and/or modification of an event or a resource.

The possible choices are as follows:

- The creation/modification of an event triggers the export of this event,
- The creation/modification of an event triggers an import for the updating of this event,
- The creation/modification of an event triggers the export of one of the resources for this event,
- The creation/modification of an event triggers an import for the updating of one of the resources for this event,
- The creation/modification of an event triggers the export of this resource,
- The creation/modification of an event triggers an import for the updating of this resource.

**USE**

The use is transparent to the user as the import or export takes place during the creation or modification of resources or events in the schedule.

To activate automatic imports and exports, check the corresponding criteria in the context.

<table>
<thead>
<tr>
<th>Activated</th>
<th>Resource's creation/modification:</th>
<th>Event's creation/modification:</th>
</tr>
</thead>
</table>
URL

DEFINITION
This functionality, unique to VISUAL PLANNING ENTERPRISE, is used to trigger, outside of VISUAL PLANNING, the creation of an import/export context for a schedule.

In this case the import/export context is triggered by a URL.

ACTIVATION OF THE URL
To activate the triggering of an import or export using a URL, the option must be activated in the import/export context, by clicking the box Call via “URL”.

“URL” call: ☐

OBTAINING THE URL
To get the URL triggering the import/export context for resources or events, right click on the name of the context > display URL.

The following window will open and display a URL used to trigger the import or export.

Simply copy this URL and use when required.

EXPORTS VIA URL
It is also possible to complete exports using a URL, specifically built along the following syntax.
Simple URL

For resources

SERVER_IP/resourceexport.do?PLANNING=nom_planning and EXPORT=nom_contexte

Where:

- SERVER_IP is the URL giving access to the VISUAL PLANNING server, without the final /index.jsp,
- nom_planning is the name of the schedule in question,
- nom_contexte is the name of the export context.

For events

SERVER_IP/eventexport.do?PLANNING=nom_planning and EXPORT=nom_contexte

Where:

- SERVER_IP is the URL giving access to the VISUAL PLANNING server, without the final /index.jsp,
- nom_planning is the name of the schedule in question,
- nom_contexte is the name of the export context.

URL with named variables

When the URL contains a named variable, defined in the filter, the export context will export the events or resources defined by the resource filter or events filter and nominated by the variable.

All existing blank spaces in the planning name, the name of the export context or the values in the variable must be transformed into a “space” character “ “ or “_” or “+” or even “%20”.

The response is the result for the export context.

For resources

SERVER_IP/resourceexport.do?PLANNING=nom_planning and EXPORT=nom_contexte and NOM_DE_LA_VARIABLE_1=valeur1 and NOM_DE_LA_VARIABLE_N=valeurN

Where:

- SERVER_IP is the URL giving access to the VISUAL PLANNING server, without the final /index.jsp,
- nom_planning is the name of the schedule in question,
- nom_contexte is the name of the export context,
- NOM_DE_LA_VARIABLE_1 et NOM_DE_LA_VARIABLE_N represent the name of the variable defined by a filter,
- valeur1 and valeurN represent the value taken by the named variable.
For events

SERVER_IP/eventexport.do?PLANNING=nom_planning and EXPORT=nom_contexte and NOM_DE_LA_VARIABLE_1=valeur1 and NOM_DE_LA_VARIABLE_N=valeurN

Where:

■ SERVER_IP is the URL giving access to the VISUAL PLANNING server, without the final /index.jsp,
■ nom_planning is the name of the schedule in question,
■ nom_contexte is the name of the export context,
■ NOM_DE_LA_VARIABLE_1 et NOM_DE_LA_VARIABLE_N represent the name of the variable defined by a filter,
■ valeur1 and valeurN represent the value taken by the named variable.

IMPORTS VIA URL

It is also possible to complete imports using a URL, specifically built along the following syntax.

Simple URL

For resources

SERVER_IP/resourceimport.do?PLANNING=nom_planning and IMPORT=nom_contexte and FILE=adresse_fichier

Where:

■ SERVER_IP is the URL giving access to the VISUAL PLANNING server, without the final /index.jsp,
■ nom_planning is the name of the schedule in question,
■ nom_contexte is the name of the import context,
■ adresse_fichier represents the address for access to the file on the VISUAL PLANNING server, the name of which as well as its extension.

For events

SERVER_IP/eventimport.do?PLANNING=nom_planning and IMPORT=nom_contexte and FILE=adresse_fichier

Where:

■ SERVER_IP is the URL giving access to the VISUAL PLANNING server, without the final /index.jsp,
■ nom_planning is the name of the schedule in question,
■ nom_contexte is the name of the import context,
■ adresse_fichier represents the address for access to the file on the VISUAL PLANNING server, the name of which as well as its extension.
URL with named variables

When the URL contains a named variable, defined in the filter, the import context will import the events or resources defined by the resource filter or events filter and nominated by the variable.

All existing blank spaces in the planning name, the name of the export context or the values in the variable must be transformed into a “space” character “ ” or “_”, or “+” or even “%20”.

The response is the result for the import context.

For resources

SERVER_IP/resourceimport.do?PLANNING=nom_planning and IMPORT=nom_contexte and NOM_DE_LA_VARIABLE_1=valeur1 and NOM_DE_LA_VARIABLE_N=valeurN

Where:

■ SERVER_IP is the URL giving access to the VISUAL PLANNING server, without the final /index.jsp,
■ nom_planning is the name of the schedule in question,
■ nom_contexte is the name of the import context,
■ NOM_DE_LA_VARIABLE_1 et NOM_DE_LA_VARIABLE_N represent the name of the variable defined by a filter,
■ valeur1 and valeurN represent the value taken by the named variable.

For events

SERVER_IP/eventimport.do?PLANNING=nom_planning and IMPORT=nom_contexte and NOM_DE_LA_VARIABLE_1=valeur1 and NOM_DE_LA_VARIABLE_N=valeurN

Where:

■ SERVER_IP is the URL giving access to the VISUAL PLANNING server, without the final /index.jsp,
■ nom_planning is the name of the schedule in question,
■ nom_contexte is the name of the import context,
■ NOM_DE_LA_VARIABLE_1 et NOM_DE_LA_VARIABLE_N represent the name of the variable defined by a filter,
■ valeur1 and valeurN represent the value taken by the named variable.

FTP and WebDAV

DEFINITION

WebDAV is an extension to the HTTP protocol, used to simplify the management of files using remote servers.

FTP is a File Transfer Procedure involving remote servers.
PREREQUISITES

The import/export using FTP or WebDAV protocols are only possible using CSV or EXCEL files types.
You need an FTP and/or WebDAV server, depending on the protocol used.

CONFIGURATION

When defining an import/export context for the resources or events, the Path parameter must be completed as follows:

- Click on the button.
- Enter the FTP or WebDAV link to the file, by entering the user.

The server name and password are defined from within Admin Center (See Configuration for external access).

Example for FTP:

FTP://bla/blablabla/monfichier.csv

or FTPS://bla/blablabla/monfichier.csv if using an SSL certificate

Example for WebDAV:

webdav://bla/blablabla/monfichier.csv

or webdavs://bla/blablabla/monfichier.csv if using an SSL certificate

The username and password are provided by the client.
The SSL certificate is installed on the JAVA VM used by the VISUAL PLANNING server

FUNCTIONALITIES

The post-processing functionalities cannot be used via the HTTP protocol as it renders it impossible to manipulate the source files.

Here is a table clarifying these notions:

<table>
<thead>
<tr>
<th>Functionality</th>
<th>Local folder</th>
<th>HTTP protocol</th>
<th>WebDAV protocol</th>
<th>FTP protocol</th>
</tr>
</thead>
<tbody>
<tr>
<td>Export</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>File processing after import (deletion/archiving)</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>
Chains

**DEFINITION**

The import/export context may be triggered by the completion of another context, potentially using a stored procedure.

The following options are available:

<table>
<thead>
<tr>
<th>Initial context</th>
<th>Stored procedure</th>
<th>Context triggered next</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resources export</td>
<td>with or without</td>
<td>Import of resources</td>
</tr>
<tr>
<td>Exporting events</td>
<td>with or without</td>
<td>Importing events</td>
</tr>
<tr>
<td>Import of resources</td>
<td>with or without</td>
<td>Importing events</td>
</tr>
<tr>
<td>Importing events</td>
<td>with or without</td>
<td>None</td>
</tr>
</tbody>
</table>

**PREREQUISITES**

This type of trigger only operated with database-type import/export contexts.

**CONFIGURATION**

The configuration of import or export context must be completed in advance.

The trigger for the second context is configured in the **Definitions** tab of the first context.

**USE**

The use is as transparent as possible for the user in terms of the triggering of the initial context.

**Import of an export or export of an import**

In this case, the import or export context is triggered by its use as a source or destination of another context.
Chapter VIII. Data types

1. IMPORT/EXPORT WITH MySQL OR MariaDB

<table>
<thead>
<tr>
<th>SQL Data Types</th>
<th>Text</th>
<th>Multi-line text</th>
<th>Single choice list</th>
<th>Multiple choice list</th>
<th>Boolean</th>
<th>Counter</th>
<th>Numerical</th>
<th>Hour date</th>
<th>Attachment</th>
<th>Barcode</th>
<th>Resource (*)</th>
<th>Operation (**)</th>
<th>Control column (**)</th>
<th>Geolocation</th>
<th>Password</th>
<th>Signature</th>
</tr>
</thead>
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</tbody>
</table>

STILOG IST, all rights reserved
**Importing Exporting and Publishing data**

(*): Persistent headings only

(**): For export only

**MySQL Data Types not included:**

- SMALLINT, TINYINT, MEDIUMINT, BIGINT, FLOAT, DOUBLE, BIT, CHAR, TINYTEXT, LONGTEXT, BLOB, DATE, TIME, TIMESTAMP

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### 2. IMPORT/EXPORT WITH SQLSERVER

<p>| Headings              | Text | Multi-line text | Single choice list | Multiple choice list | Boolean | Counter | Numerical | Hour date | Attachment | Barcode | Resource | Operation | Control column | Geolocation | Password | Signature |
|-----------------------|------|-----------------|--------------------|----------------------|---------|---------|----------|----------|------------|---------|----------|-----------|----------------|-------------|----------|
| Data Types            |      |                 |                    |                      |         |         |          |          |            |         |          |           |                |             |          |           |
| BIT                   | x    |                 | x                  |                      |         |         |          |          |            |         |          |           |                |             |          |           |
| CHAR                  | x    | x               | x                  | x                    | x       | x       | x        | x        | x          | x       | x        | x         |                |             |          |           |
| DATETIME              | x    |                 |                     |                      |         |         |          |          |            |         |          |           |                |             |          |           |
| DECIMAL               | x    |                 |                     |                      |         |         |          |          |            |         |          | x         |                |             |          |           |
| FLOAT                 | x    |                 |                     |                      |         |         |          |          |            |         |          | x         |                |             |          |           |
| IMAGE                 | x    |                 |                     |                      |         |         |          |          |            |         |          | x         |                |             |          |           |
| INT                   | x    |                 |                     |                      |         |         |          |          |            |         |          | x         |                |             |          |           |
| NCHAR                 | x    | x               | x                  | x                    | x       | x       | x        | x        | x          | x       | x        | x         |                |             |          |           |
| NUMERIC               | x    |                 |                     |                      |         |         |          |          |            |         |          |           |                |             |          |           |
| NVARCHAR              | x    | x               | x                  | x                    | x       | x       | x        | x        | x          | x       | x        | x         |                |             |          |           |
| REAL                  | x    |                 |                     |                      |         |         |          |          |            |         |          | x         |                |             |          |           |
| TEXT                  | x    | x               |                     |                      |         |         |          |          |            |         |          | x         |                |             |          |           |
| VARCHAR               | x    | x               | x                  | x                    | x       | x       | x        | x        | x          | x       | x        | x         |                |             |          |           |</p>
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(*) Persistent headings only

(**) For export only

**SQL Server Data Types not included:**

BIGINT, SMALLINT, TINYINT, DATE, DATETIME2, DATETIMEOFFSET, SMALLDATETIME, TIME, TIMESTAMP, NTEXT, GEOGRAPHY, GEOMETRY, HIERARCHYID, SMALLMONEY, SQL_VARIANT, UNIQUEIDENTIFIER, BINARY, VARBINARY, XML
### 3. IMPORT/EXPORT WITH ORACLE

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(*) Persistent headings only

(**) For export only

**ORACLE Data Types not included:**

CHAR, NCHAR, NVARCHAR2, LONG, LONGRAW, RAW, ROWID, UROWID, NCBLOB, BFILE, TIMESTAMP, INTERVAL YEAR, INTERVAL DAY, BINARY DOUBLE, BINARY FLOAT, XMLTYPE
4. NOTES

Columns not permitted to be left blank

The creation of a record in a table of the database must set a value for those columns not permitted to be left blank, and for which there is no defined default value.

This is always true, therefore also in the event of a record created by an export from VISUAL PLANNING.

If these columns have no default value, the export must provide a value (choice of characteristic in the definition of the context) and each entity exported must actually have a value for the chosen characteristics. Otherwise, when exporting, you will get:

![Report](image)

Format not accepted

When defining an export context, if the columns in the chosen table are of a format not accepted by VISUAL PLANNING, a message is added to the server log.

For example: 2012-10-09 12:31:00.821 WARNING MySQLConnection.getTables (line 330): Unknown columnname=exchange._tinyint type=TINYINT size=3

Character chain

The data provided for import, in the form of a character chain, must respect the format expected by the database (Date, Time, Number, etc.).
Format incompatible

The importation of data of a format not compatible with the destination, in VISUAL PLANNING, will lead to the addition of a message in the Server Log.

For example: 2012-10-09 14:24:59.290 SEVERE HeadingType.setValue (line 210): Bad format for heading'Entier': varchar

Tips for data imports

The importation of data exported from Visual Planning is operational. Do not hesitate in using it to discover the data formats when using a Text-type column.
Chapter IX. Printing

1. DEFINITION

Printing is a function used to print the schedule data.

It is possible to print out:

- A view,
- A resource,
- An event.

In each case, the result of the print command may be:

- Either a sheet of paper,
- Or, a PDF file.
Chapter X. Printing a view

1. DEFINITION

The print view command, as its name indicates, prints out a view.

One can either produce hardcopy version or create PDF documents.

It is possible to print out Kanban views and Events Maps.

2. CONFIGURATION

A print view command may or may not be configured. For optimized use, it is recommended that each print is created along with a print context.

Page layout

Before creating a print context, you must define the default page layout.

To do this use the menu Planning > Printing and click on Page Layout.

The following window opens:
Define the page layout characteristics.

To optimize the operation, ideally you should save the configuration to a favorite display.

Then click on **OK** to validate the page layout.

**Preview**

It is possible to view a preview of a future print job by clicking on **Planning > Print**, then clicking on **Preview**.

The Preview window appears. This window may differ in appearance.

Modify the print parameters if necessary and click on **Validate** to display the preview.

The buttons to the top left of the screen allow the user to:
Start the print job,
Zoom in,
Zoom out,
Change the magnification level,
Quit the preview.

3. USE

Print

It is possible to directly print out a view, without using the Preview feature.

To do this use the menu Planning > Printing and click on Print.

The following window appears. Modify the print settings and click on the Validate button.

The printer selection window will then appear. Modify the print parameters if necessary and click on Validate to start the print job.
It is possible to directly print out a view in PDF form, without using the Preview feature.

To do this use the menu **Planning > Printing** and click on **PDF**.

The following window appears. Modify the print settings and click on the **Validate** button.

The following window appears. Select a destination folder for the file and click on **Save** to start the printing of the PDF.
Chapter XI. Printing an event

1. DEFINITION

Printing an event involved printing out a single event in tabular format.

This is in two headings:

■ The top section is a table, holding the headings for the resources used in an event (those who’s dimension guides the view displayed).
■ The bottom section is a table containing the characteristics of the event.

One can either produce hardcopy version or create PDF documents.

2. CONFIGURATION

For correct use of the print function, it is recommended that the configuration be saved to a Favorite display.

Preview

To do this, you must display a view. (Schedule view, Diary view, Events view, Gantt events view, Events map view or Kanban events view).

Then, right click on event > print > preview.
The following print settings window will open:

Define the parameters for this print job then click on Validate to display the preview.

Headings
Choose the resource headings to be displayed during the print job.
Adjustment

To adjust printing to the page size.

The possible adjustments are:

- None,
- To the page,
- To the width,
- To the height.

The row height when printing on several pages is adjusted to the maximum height encountered during the entire printed period.

Page footer

To define the printing footer:

The following buttons enable you to define automatic information:

- : Page number,
- : Number of pages,
■ Print date,
■ Print time,
■ Schedule name,
■ View name,
■ Name of user,
■ Name of permission group.

You can also type in a specific text directly in the relevant zone.

Header
To define the printing header:

The following buttons enable you to define information automatically:

■ Page number,
■ Number of pages,
■ Print date,
■ Print time,
■ Schedule name,
■ View name,
■ Name of user,
■ Name of permission group.
You can also type in a specific text directly in the relevant zone.

**Page layout**

The following window appears, where you can define the default *page layout* settings for the selected view:

![Page Setup Window](image)

You must specify the page layout characteristics in this window.

You can save this page layout definition in a favorite display.

You must then click on **OK** to validate the page layout.

**Show logo**

Check this box to show the logo top left in the printing output.

**Select logo**

The logo is an image file that can be displayed in the printing output.

This image is unique for the entire schedule.

Click on [...] to display the following window:
You must then look through the directories to select an image file, and click on the **Open** button.

### Print according to editor

This option allows a selection to be made based upon the **events editor** model to be used for the print job. The value should be left blank for a default editor.

## 3. USE

### Starting a hardcopy print job

To start a hardcopy events print job, **right click on the event > print**.

The following window opens:

![Print Setup Window](image)

The print setup parameters may be modified if necessary. (See [Preview](#))
Then click on the **Validate** button.

The printer setup selection window will then appear:

![Printer setup window](image)

Now click on **OK**.

This will start the print job.

**Creation of a PDF file**

To start a PDF events print job, **right click on the event > PDF**.

The following window opens:

![PDF creation window](image)

The print setup parameters may be modified if necessary. (See [Preview](#))
Then click on the **Validate** button.

Select the folder localization for the saving of the PDF file, using the following window:

Click on **Save**.

This starts the creation of the PDF file.
Chapter XII. Printing a resource

1. DEFINITION

The printing out of a resource involves printing out its characteristics, as well as all or some of the events it is involved in.

This is in two headings:

- The upper heading is a table, containing the resource headings,
- The lower heading is a list of filtered resource events.

One can either produce hardcopy version or create PDF documents.

2. CONFIGURATION

For correct use of the print function, it is recommended that the configuration be saved to a Favorite display.

Preview

To do this a either a Schedule View or Resources View must be displayed.

Then, right click on resource > print > preview.

The following print settings window will open:
Define the parameters for this print job then click on **Validate** to display the preview.

These characteristics are:

**Period**
Define the **time period** for events to be printed.

**Events filter**
Choose or define the filter for events to be printed.

The events display mode and list of attributes displayed during the print job are configured in the default editor for the resource, under the Events tab.

Events can be displayed in a Detailed or Table view.

**Headings**
Choose the resource parameters to be displayed during the print job.

These parameters can be:

- The resource headings,
- the headings of dependent resources,
- The calendars and creation rule.
Adjustment

To adjust printing to the page size.

The possible adjustments are:

- None,
- To the page,
- To the width,
- To the height.

The row height when printing on several pages is adjusted to the maximum height encountered during the entire printed period.

Page footer

To define the printing footer:

The following buttons enable you to define automatic information:

- : Page number,
- : Number of pages,
Importing Exporting and Publishing data

- Print date,
- Print time,
- Schedule name,
- View name,
- Name of user,
- Name of permission group.

You can also type in a specific text directly in the relevant zone.

Header

To define the printing header:

The following buttons enable you to define information automatically:

- Page number,
- Number of pages,
- Print date,
- Print time,
- Schedule name,
- View name,
- Name of user,
- Name of permission group.
You can also type in a specific text directly in the relevant zone.

**Page layout**

The following window appears, where you can define the default page layout settings for the selected view:

You must specify the page layout characteristics in this window.

You can save this page layout definition in a favorite display.

You must then click on **OK** to validate the page layout.

**Show logo**

Check this box to show the logo top left in the printing output.

**Select logo**

The logo is an image file that can be displayed in the printing output.

This image is unique for the entire schedule.

Click on [...] to display the following window:
You must then look through the directories to select an image file, and click on the **Open** button.

**Print according to editor**

This option allows a selection to be made based upon the [resource editor](#) model to be used for the print job.

The value should be left blank for a default editor.

**3. USE**

**Starting a hardcopy print job**

To launch a hardcopy print job, **right click on the resource > print**.

The following window opens:
The print setup parameters may be modified if necessary. (See Preview)

Then click on the Validate button

The printer setup selection window will then appear:

![Print setup window]

Now click on OK.

This will start the print job.

**Creation of a PDF file**

To launch a PDF print job, right click on the resource > PDF.

The following window opens:

![PDF print setup window]
The print setup parameters may be modified if necessary. (See Preview)

Then click on the Validate button.

Select the folder localization for the saving of the PDF file, using the following window:

Click on Save.

This starts the creation of the PDF file.