

Spagic Console

Author

Daniela Butano

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1 Document Goal

The goal of this document is to provide you with an introduction on using the Spagic Console.

2 Versions History

Version/Release n°:	1.0	Date	29/06/2007
Description	First release (English version)		

3 Introduction

Spagic Console is the Enterprise Monitoring released by open source Spagic platform.

Spagic Console contains:

- **System monitoring** to visualize resources such as the threads, the memory, the queues used by ESB platform;
- **Service monitoring** to visualize processes/instances and their properties, processes flows and execution s processes flows, relevant data. This feature allows to restart the processes in error state, one at a time or more at a time;
- **Business indicators (BAM)** to visualize reports and dashboards, realized on SpagoBI, easy extendible through the realization of report and dashboard towards its own business intelligence indicators.

The application was developed using the Ajax technique to increase the page's interactivity, speed, functionality.

The url to launch the application is: <http://host:port/Spagic/>.

3.1 Requirements

Software requirements to use the Spagic Console application:

- ✓ Database MySQL or Oracle
- ✓ Apache Tomcat 5.5.17 <http://tomcat.apache.org>
- ✓ JDK 1.5.0_11 or later <http://java.sun.com/>
- ✓ Mozilla Firefox 2.0.0.x <http://www.mozilla.com>

3.2 Installation

To install Spagic Console follow the next steps:

1. Create into a database a new schema "*spagobi*" for SpagoBI environment, create a new user "*spagobi*" with password "*bispago*" and associate him the schema privileges for writing and reading. Execute the "*spagobi-
<database type>.ddl*", released with Spagic in the package *spagic-console/DDL*, to create the tables, and execute the script *loadSpagobi-
<database type>.sql* to load the configuration data.
2. Install the Apache Tomcat 5.5.17; to install it refer to its installation documentation (<http://tomcat.apache.org>)
3. Install the web application SpagicConsole, you should copy into *apache-tomcat-5.5.17/webapps* folder the *Spagic.war* released with Spagic.
4. **If you used a configuration different from the default suggested in this document**, before starting Tomcat it 's necessary to verify the following Spagic Console **configuration files** and update them:
 1. *!SpagicConsole\WEB-INF\conf\cms.xml*: set the location of the SpagoBI CMS repository in the *value* attribute of the "*repository_path*" parameter, if you installed the folder externally to the Web application. For example, if you installed *cmsspagobi* folder into "C:\temp\cmsspagobi" set the value attribute as *value="/temp/cmsspagobi"*;



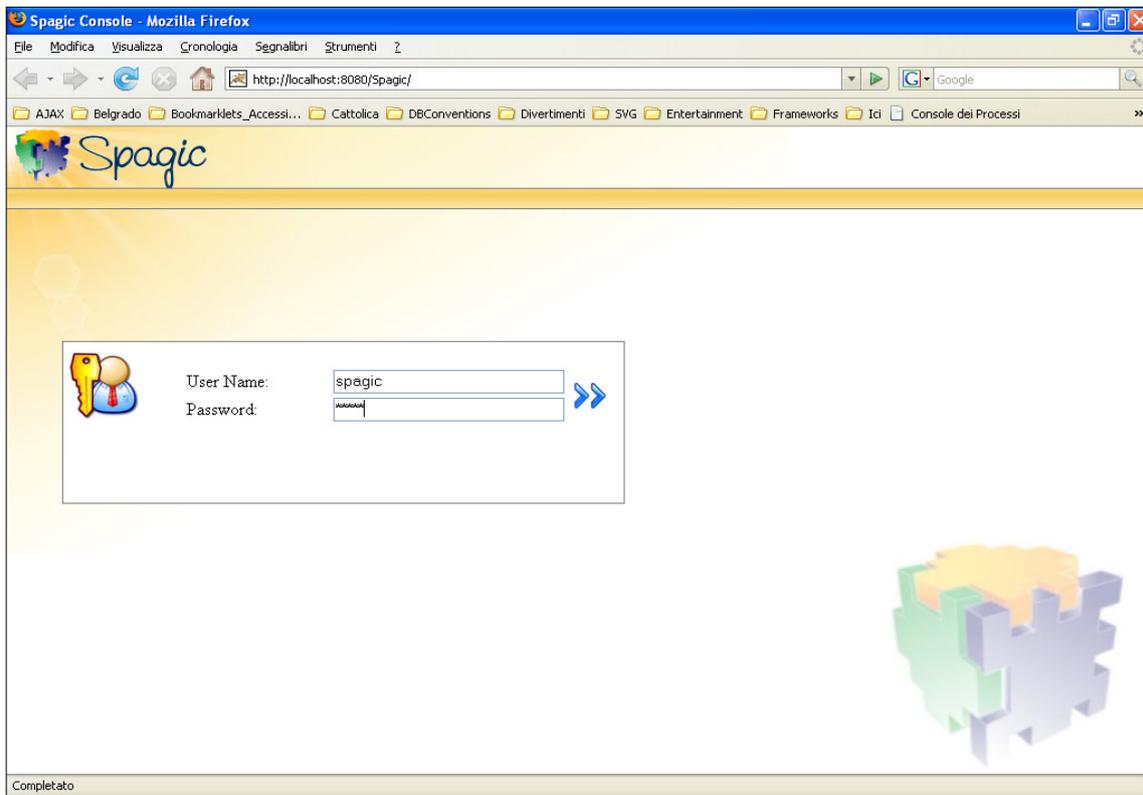
2. `\\SpagicConsole\\WEB-INF\\conf\\data_access.xml`: set the values of parameters `connectionString`, `user`, `userPassword` with the proper values to connect to the persistent layer metadb (default schema is "smx" and default user is "smx");
3. `\\SpagicConsole\\WEB-INF\\conf\\spagobi\\spagobi.xml`: in the parameter `<HIBERNATE-CFGFILE>` set the location of Hibernate configuration file used by `SpagoBI`. If you installed MySQL database, the file used is `\\SpagicConsole\\WEB-INF\\classes\\hibernate.cfg.mysql.xml`.
Update the Hibernate configuration file with the proper values to connect to SpagoBI schema (default schema is "spagobi").
4. `\\SpagicConsole\\WEB-INF\\conf\\jmx\\server.xml`: set the `jmxUrl` to the URL for connecting to ServiceMix by JMX. The URL is written by ServiceMix on its console, on the startup.
5. Update the Hibernate configuration file `\\SpagicConsole\\WEB-INF\\classes\\hibernate.cfg.xml` so it could link to Spagic database (default schema and user is "smx");
6. If you used `UDDI`, update the file `\\SpagicConsole\\WEB-INF\\classes\\Serviceregistry.properties` to set the URL of jUUDI application and all the parameters for the Spagic database connection.

4 Authentication

You can start the application from : <http://localhost:8080/Spagic/> .

The first page being seen from the Spagic Console is the authentication page.

Insert the user name and the password given to you by the administrator and press the button 



Once the user name and password are confirmed the application shows those menu voices to which the user is enabled.

These are the foreseen characteristics:



System – allows the access to the services offered by the Service Manager used, at present ServiceMix3.1. It is possible to observe the system parameters – such as the number of threads used, the memory, and the classes uploaded run-time.



Service – consents the visualization of the processes (definitions, characteristics, flow, endpoints) and the processes' instances (dynamic flow, messages, important data, advanced search).



Reports - allows the displaying of the reports concerning the processes and their instances.



Dashboards – to display the dashboards.

5 Processes displaying

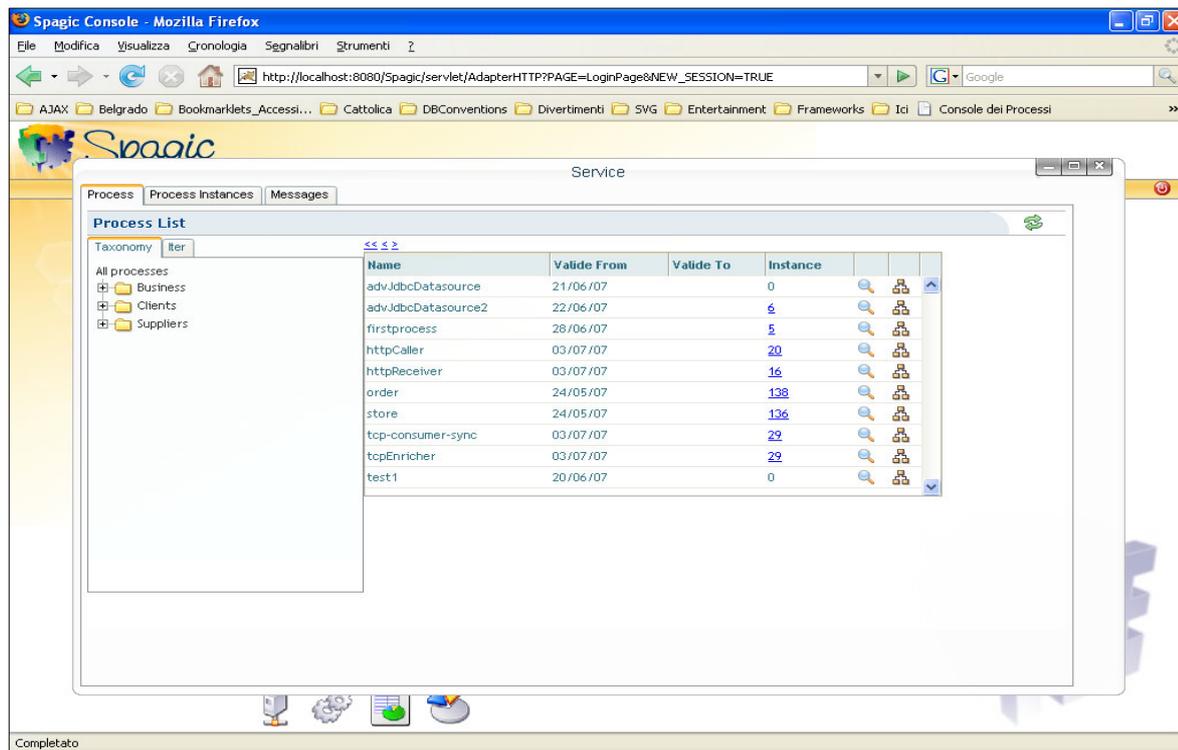
By pressing the **Service** icon a window containing the following two tabs is being displayed:

- **Processes Definition**
- **Processes Instances**
- **Messages**

The *Processes Definition* tab contains: on the left side – a section allowing the user to make a search by taxonomy or by iter; on the right side – the listed processes, ordered by process name. If no search is made, the list will contain all the processes. When more versions are available, only the latest versions will be displayed.

The list contains:

- *Name* of the process defined in the Spagic Studio;
- *Start Date* that corresponds to the process publication date on the repository;
- *End Date* that corresponds to the publication date of a new version of the process. A process cannot be executed after the its End Date;
- *Instances* contains the number of instances associated with the process; the instances can be seen by clicking on the link;
-  Icon allowing to see detailed information;
-  Icon for displaying the process graph;



On top of the right side of the page, you can find the button that allows you to update the list. In this version, when the list is updated, any filter parameter will be lost.

5.1 Search

It is possible to search the processes by taxonomy or by iter, using the section on the left side of the page containing the list of the processes.

5.1.1 Search by taxonomy

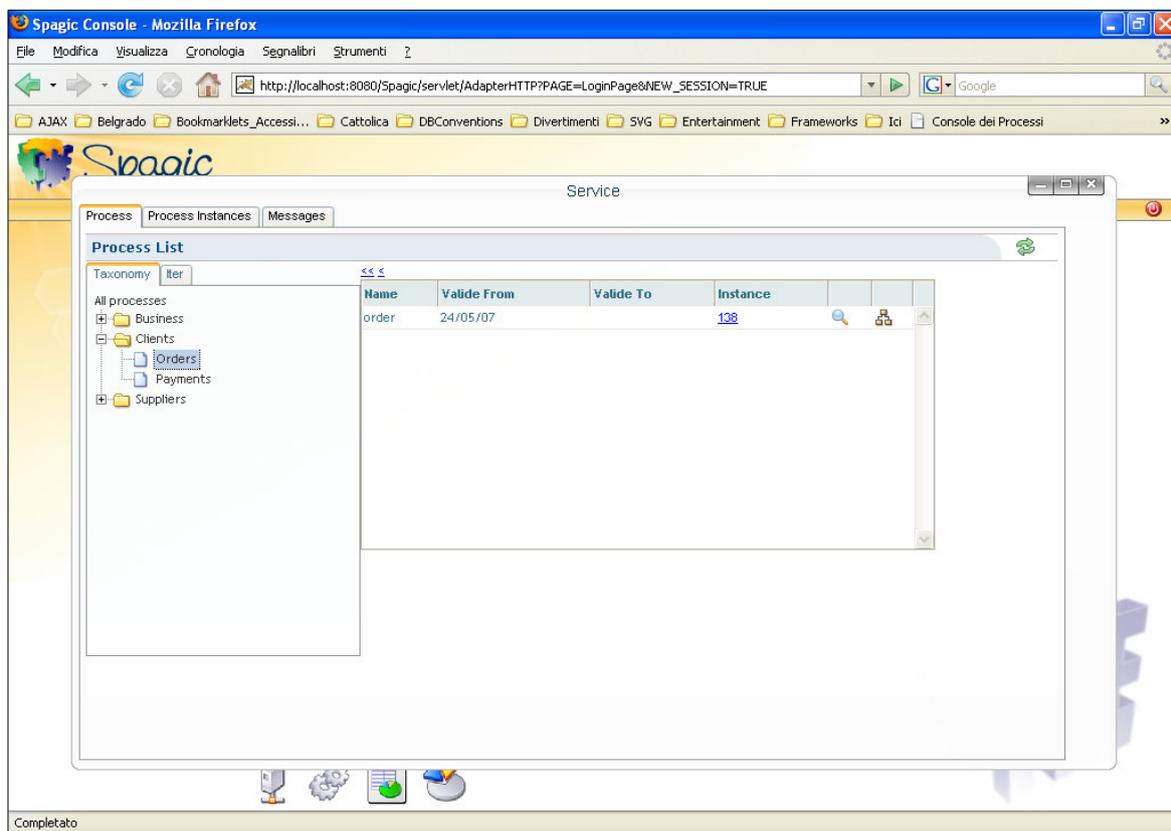
Spagic Studio offers the possibility of cataloguing by taxonomy a process published on the database.

The taxonomies (*Client* and *Supplier*, on the example in the image below) contain the classifications (on the example below, *Order* and *Payments* are the classifications of the taxonomy *Client*).

A process can be associated with more classifications, even of the same taxonomy.

When you choose a taxonomy from the taxonomies tree (the taxonomies are the folders), the classifications that the taxonomy contains are being displayed.

When you choose a classification, the processes list is being updated and will contain only the processes belonging to that classification.



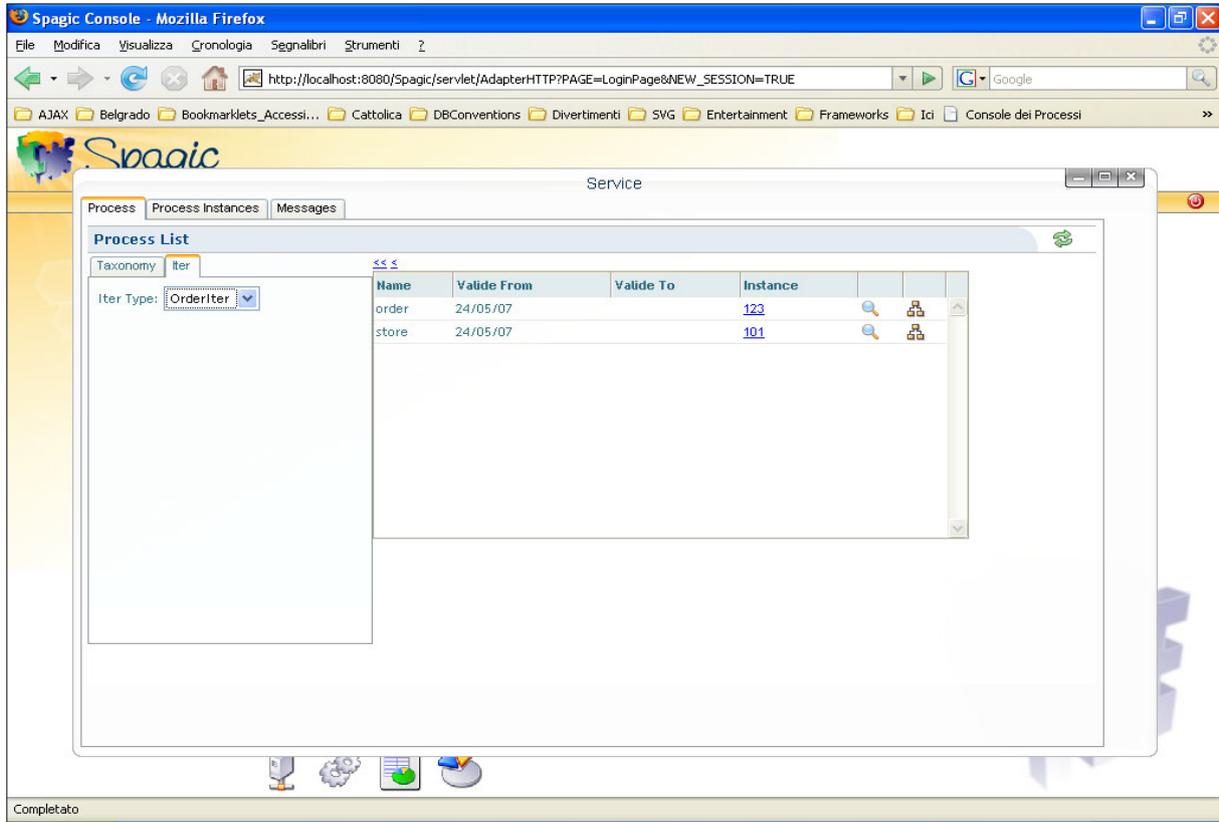
5.1.2 Search by iter

It is possible to make a search by iter, choosing the *Iter Type* combo. The list is automatically updated when you choose an element of the combo.

If you choose "Any Iter", all the processes will be displayed.

If you choose "No Iter", only the processes with no iter associated will be displayed.

If you choose a specific iter, the processes associated with that iter will be displayed; the *Instances* field contains the number of instances associated with that iter, that may not be equal to the total number of instances (because of the fact that, for instance, the association iter-process has been made subsequently).

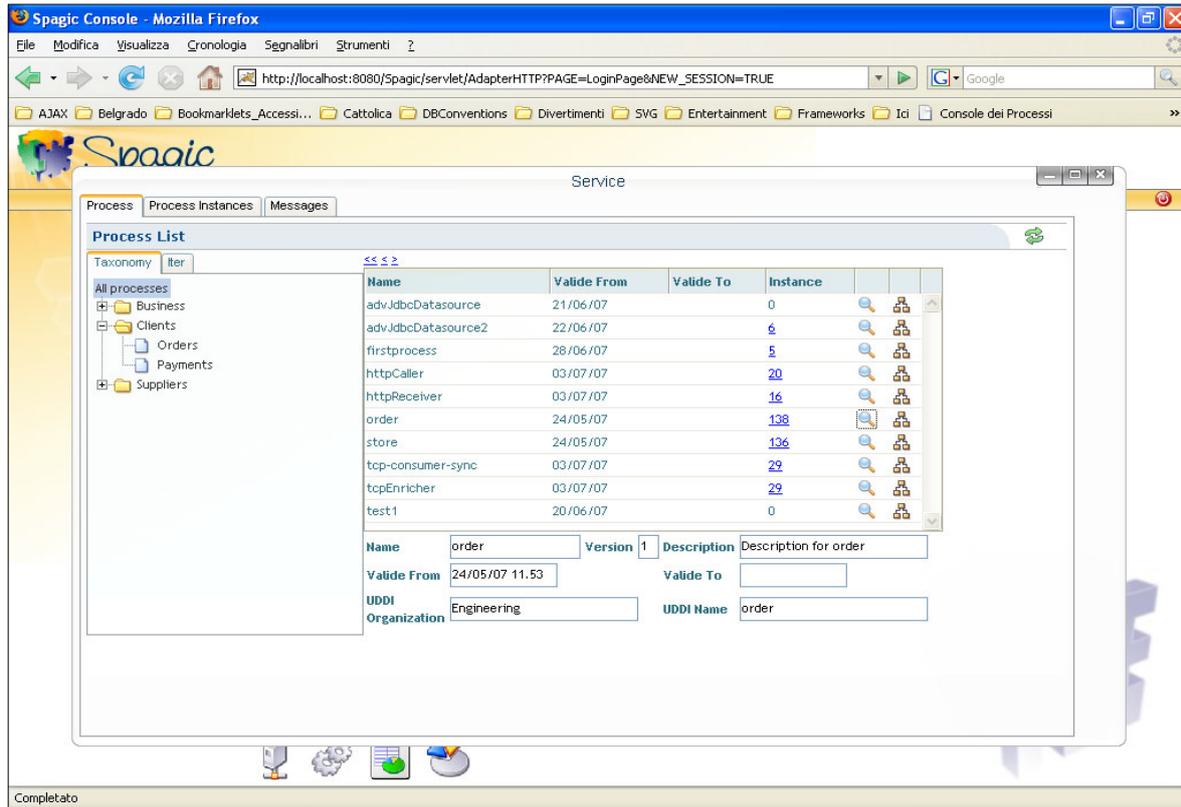


5.2 Process Detail

Choosing the icon  from the processes list, you can see further details:

- *Version*, is always the latest version of the selected process;
- *Description* of the process (it is not possible yet to classify the description in Spagic Studio);
- *UDDI Organization*, contains the organization to which the process belongs;
- *UDDI Name*, name of the service that coincides with the name of the process.

When you choose a new element from the list, the details are automatically updated.



The screenshot shows the Spagic Console interface in a Mozilla Firefox browser window. The main content area displays a 'Process List' table with columns for Name, Valide From, Valide To, and Instance. The 'order' process is selected, and its details are shown in a form below the table.

Name	Valide From	Valide To	Instance
advJdbcDatasource	21/06/07		0
advJdbcDatasource2	22/06/07		6
firstprocess	28/06/07		5
httpCaller	03/07/07		20
httpReceiver	03/07/07		16
order	24/05/07		138
store	24/05/07		136
tcp-consumer-sync	03/07/07		29
tcpEnricher	03/07/07		29
test1	20/06/07		0

Details for the selected 'order' process:

Name	order	Version	1	Description	Description for order
Valide From	24/05/07 11:53	Valide To			
UDDI Organization	Engineering	UDDI Name	order		

5.3 Graphical representation of the process

Choosing the icon  from the processes list, it is possible to display the process graph.

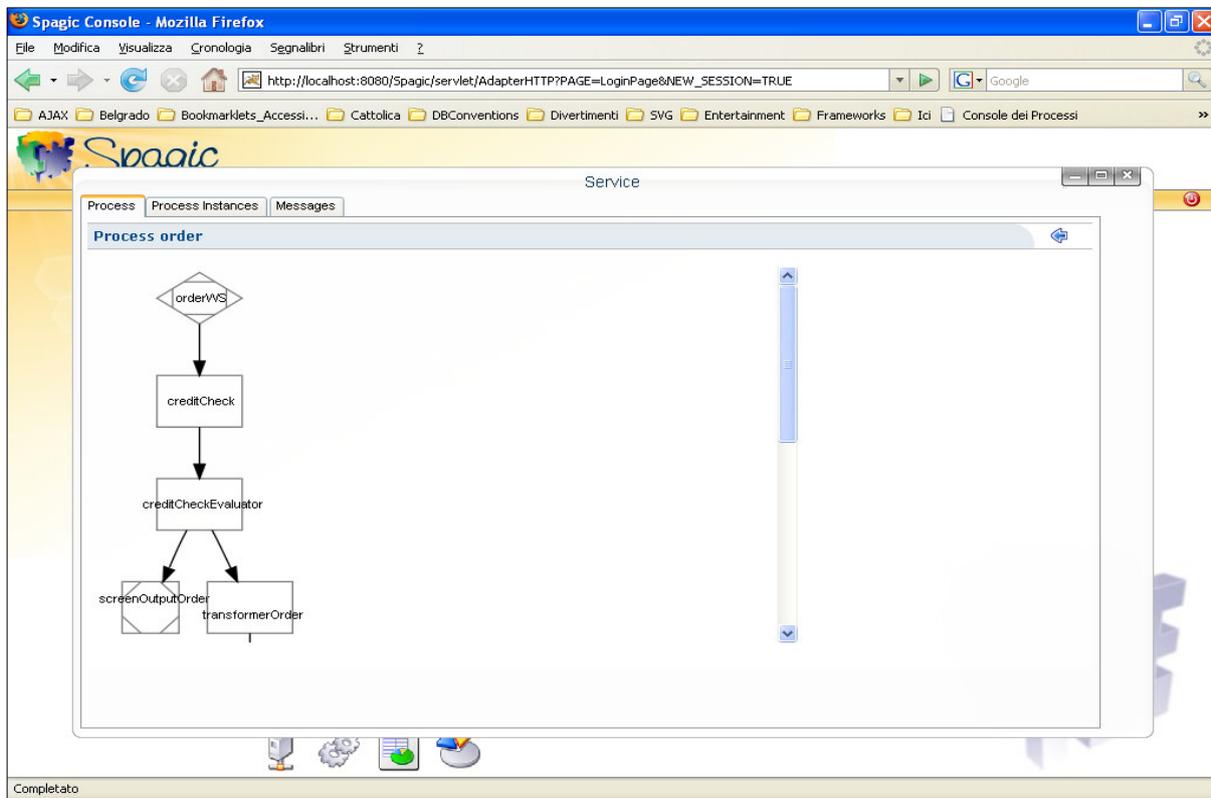
The process graph is, by definition, a static view; it shows the process components: the binding components (represented by a rhombus), the service engine (represented by a rectangle) and the direction of the process flow (represented by the arrows).

Clicking on the single element of the graph it's possible to display a window containing *Name* and *Description* of the endpoint and *Service*, that is the type of the used component (servicemix-lwcontainer XsltComponent, for instance) and *Properties*.

Using the mouse you can change the position of the window or its dimensions, you can minimize it or close it.

When you choose a new element of the graph, the data in the window are updated.

 Clicking this button you can turn back to the processes list.



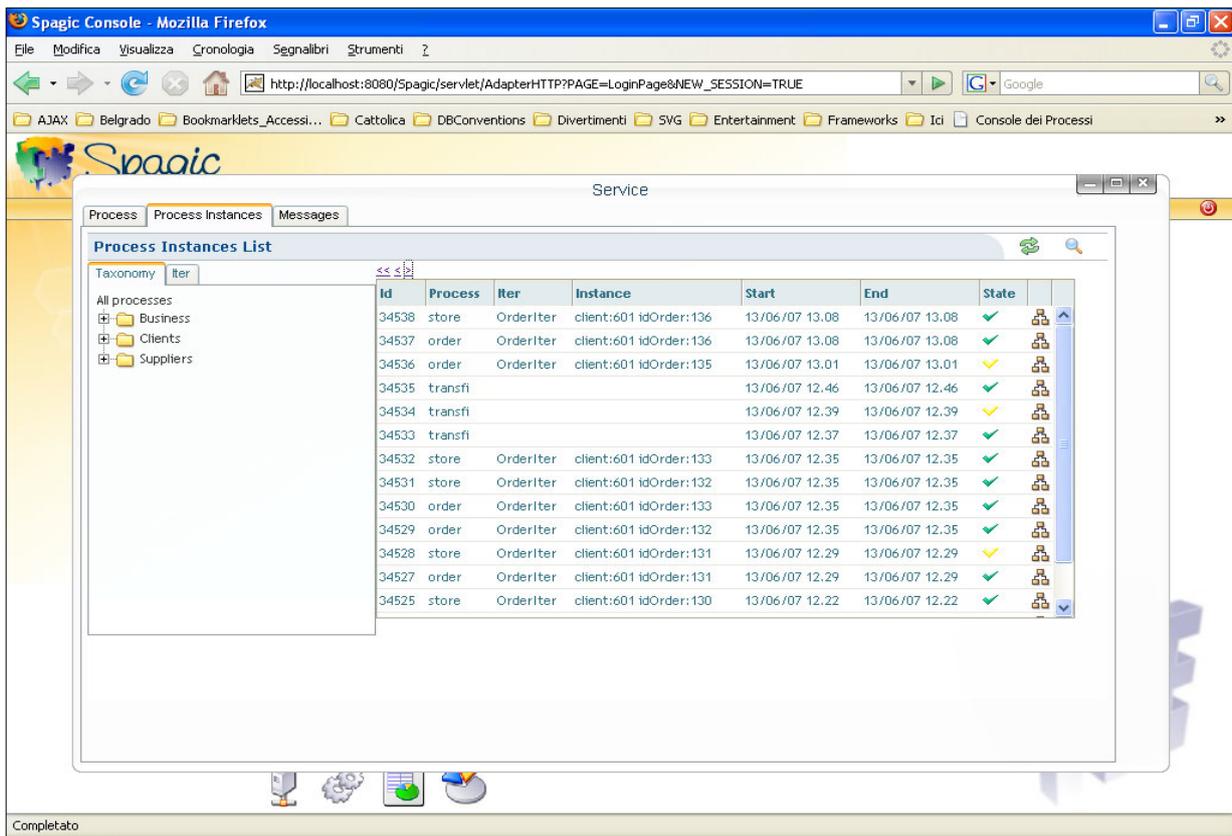
6 Processes instances displaying

By pressing the **Service** icon and the *Process Instances* tab, the page containing the instances of process is being displayed.

The page contains: on the left side – a section allowing the user to make a search by taxonomy or by iter; on the right side – the listed instances, ordered by start execution. If no search is made, the list will contain all the process instances.

The list contains:

- *Id* of process instance;
- *Nome* of the process defined in Spagic Studio;
- *Iter* associate to the instance;
- *Instance* containing the attributes with their values that identify the iter;
- *Start* of execution of the process;
- *End* of execution of the process ;
- *State* to visualize the state of the instance that could assume tree possible values: the *executed* state (green flag) , the *active* state (yellow flag) or the *fault* state (red flag)
- Icon to display the process execution as a graph 



On top of the right side of the page, you can find, in order, the button that allows you to update the list, the button to visualize the *Advanced Search* page and the button to do massive restart of processes.

6.1 Search

It is possible to search the process instances by taxonomy or by iter, using the section on the left side of the page containing the list of the process instances.

6.1.1 Search by taxonomy

Spagic Studio offers the possibility of cataloguing by taxonomy a process published on the database.

When you choose a taxonomy from the taxonomies tree (the taxonomies are the folders), the classifications that the taxonomy contains are being displayed.

When you choose a classification, the instances list is being updated and will contain only the instances belonging to that classification.

6.1.2 Search by iter

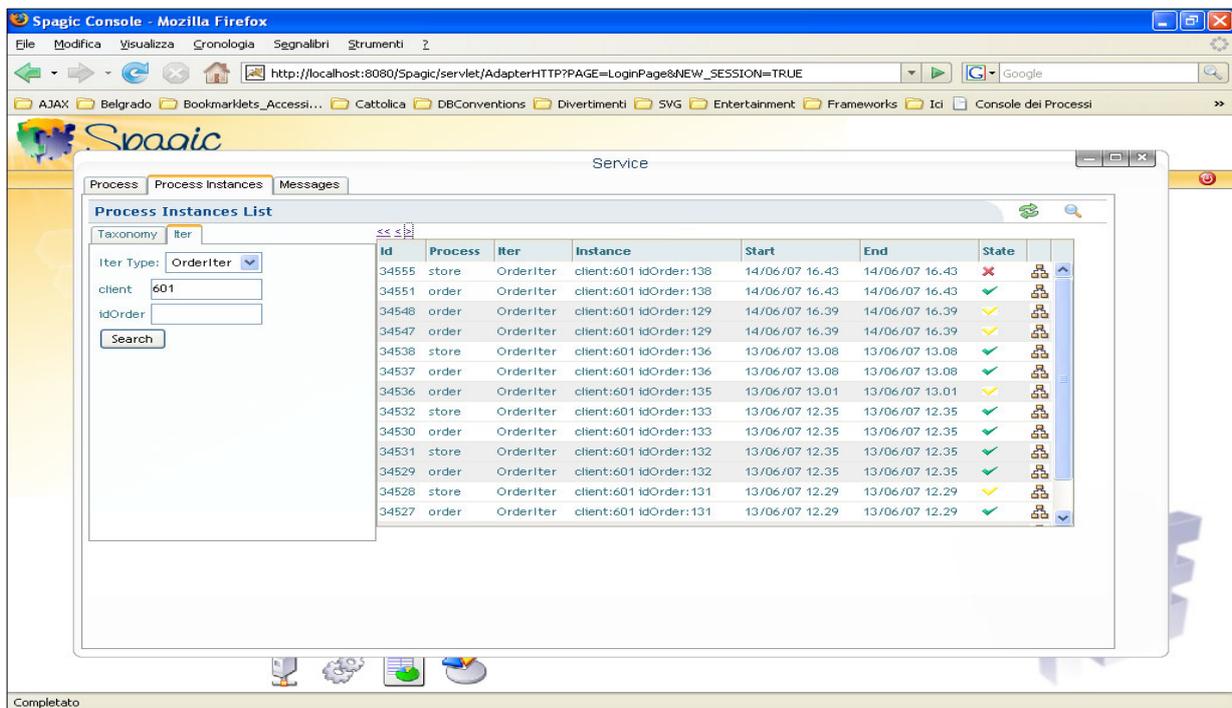
It is possible to make a search by iter, choosing the *Iter Type* combo. The list is automatically updated when you choose an element of the combo.

If you choose "Any Iter", all the instances will be displayed.

If you choose "No Iter", only the instances with no iter associated will be displayed.

If you choose a specific iter, the instances associated with that iter will be displayed; in this case the instances are order by iter instance and not by *Start* of execution. The instances are grouped by iter instance, using the alternate background color.

When you choose an iter, you can specify the search using the attributes dynamically displayed under the *Iter Type* combo. The search is a LIKE search.



The screenshot shows the Spagic Console interface in Mozilla Firefox. The main window displays the "Process Instances List" table. On the left, there are search filters: "Iter Type" set to "OrderIter", "client" set to "601", and "idOrder" with a search button. The table has columns: Id, Process, Iter, Instance, Start, End, and State. The data is as follows:

Id	Process	Iter	Instance	Start	End	State
34555	store	OrderIter	client:601 idOrder:138	14/06/07 16.43	14/06/07 16.43	✗
34551	order	OrderIter	client:601 idOrder:138	14/06/07 16.43	14/06/07 16.43	✓
34548	order	OrderIter	client:601 idOrder:129	14/06/07 16.39	14/06/07 16.39	✓
34547	order	OrderIter	client:601 idOrder:129	14/06/07 16.39	14/06/07 16.39	✓
34538	store	OrderIter	client:601 idOrder:136	13/06/07 13.08	13/06/07 13.08	✓
34537	order	OrderIter	client:601 idOrder:136	13/06/07 13.08	13/06/07 13.08	✓
34536	order	OrderIter	client:601 idOrder:135	13/06/07 13.01	13/06/07 13.01	✓
34532	store	OrderIter	client:601 idOrder:133	13/06/07 12.35	13/06/07 12.35	✓
34530	order	OrderIter	client:601 idOrder:133	13/06/07 12.35	13/06/07 12.35	✓
34531	store	OrderIter	client:601 idOrder:132	13/06/07 12.35	13/06/07 12.35	✓
34529	order	OrderIter	client:601 idOrder:132	13/06/07 12.35	13/06/07 12.35	✓
34528	store	OrderIter	client:601 idOrder:131	13/06/07 12.29	13/06/07 12.29	✓
34527	order	OrderIter	client:601 idOrder:131	13/06/07 12.29	13/06/07 12.29	✓

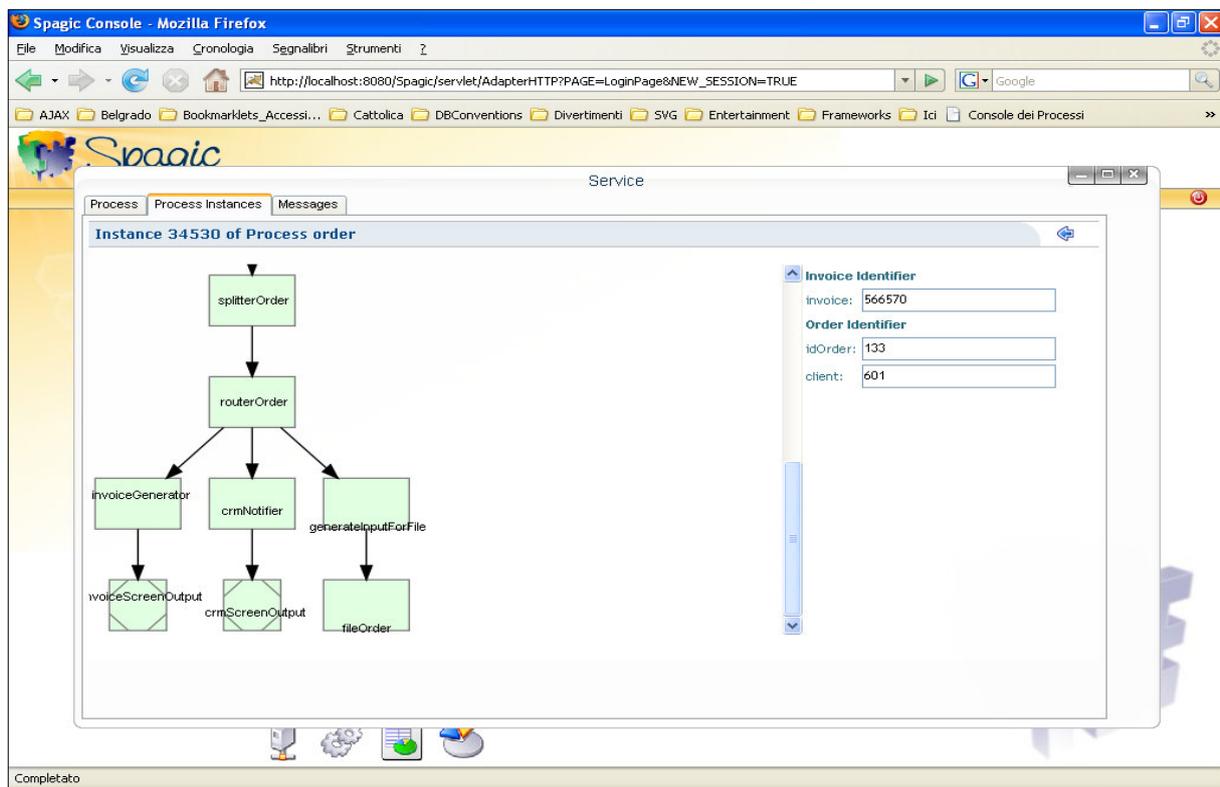
6.2 Graphical representation of the process execution

Choosing the icon  from the instances list, it is possible to display the process execution graph.

The graph is composed by the binding components (represented by a rhombus) and the service engines (represented by a rectangle); the direction of the execution flow is represented by the arrows.

The color of the component represents the component state: the green color means *executed*, the yellow color means *active* and the red means *fault*.

On the right side of the page all the relevant data associate to the endpoints composing the process are visualized, group by the catalog. The relevant data are defined in Spagic Studio. On the example in the image below, we have two catalog *Invoice Identifier* and *Order Identifier* containing in order the relevant data: *invoice* and *idOrder*, *client*.



Clicking on the single element of the graph it's possible to display a window containing two tabs: *Details* and *Relevant Data*. Using the mouse you can change the position of the window or its dimensions, you can minimize it or close it.

When you choose a new element of the graph, the data in the window are updated.

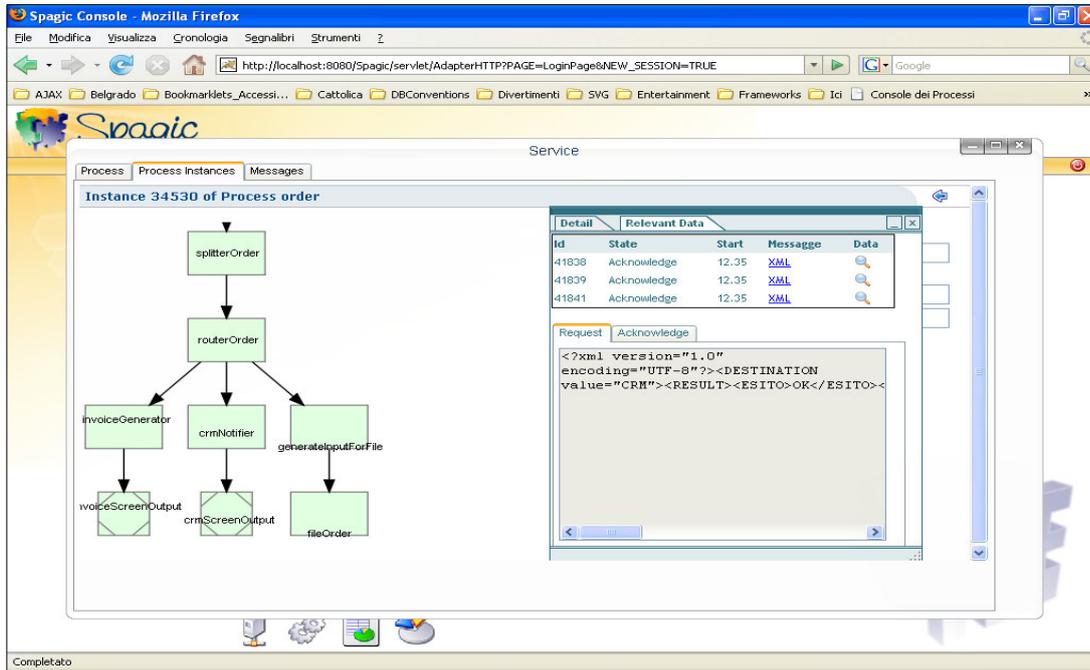
The *Detail* tab, as in the processes, contains *Name* and *Description* of the end-point and *Service*, that is the type of the used component (servicemix-lwcontainer XsltComponent, for instance) and *Properties*.

The *Relevant Data* tab contains the exchange messages having as target the component selected. The list display the *State*, the *Start* of the message reception, the link to visualize the XML message and the link to visualize the relevant data contained in the message.

On the example in the image below, by selecting the *routerOrder* component, three messages having as a target the *routerOrder* component are displayed.

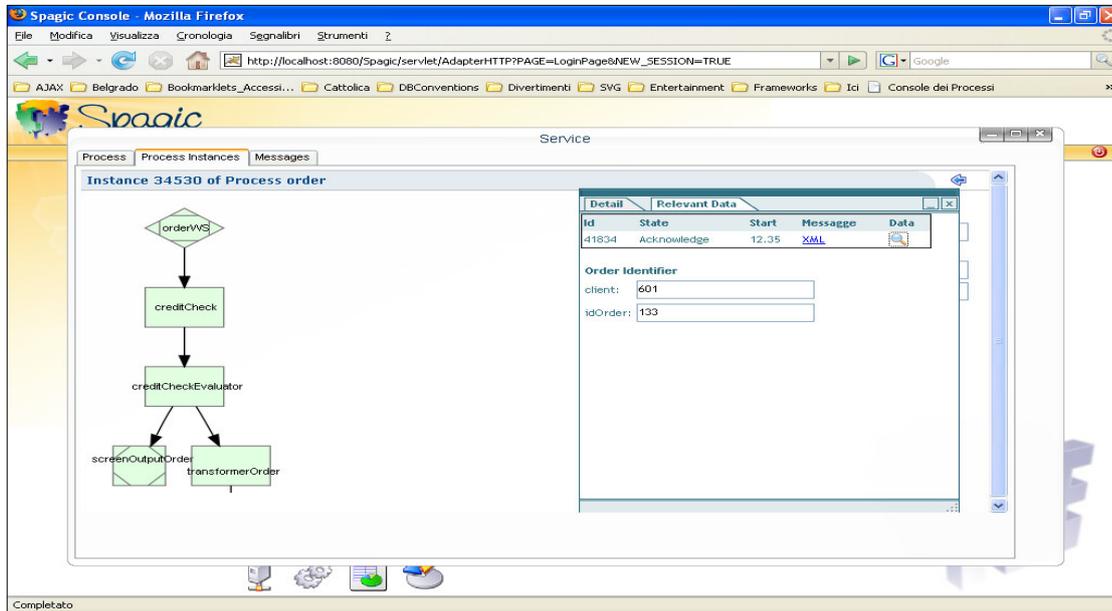
By selecting the *XML* link, the *XML* message is visualized. Because is a mep INONLY, there are two parts:

INONLY_ACTIVE message displayed as *Request* and INONLY_DONE displayed as *Acknowledge*.



On the example in the image below, by selecting the *creditCheck* component, the messages list is refreshed.

By clicking on *Data*, the relevant data contained in the message are displayed.



6.3 Single restart

This feature will be released in the final Spagic release.

This function allows restarting the execution of a process in the *Fault* state. Only process instances in the fault state (visualized in the list with a red flag) can be restarted. The restart functionality creates a new instance that is equal to the previous until to the component that generated the error, subsequently is a new execution of the process.

Before restarting a process, it is possible to modify manually the exchange messages in the *Fault* state.

Performing the following steps:

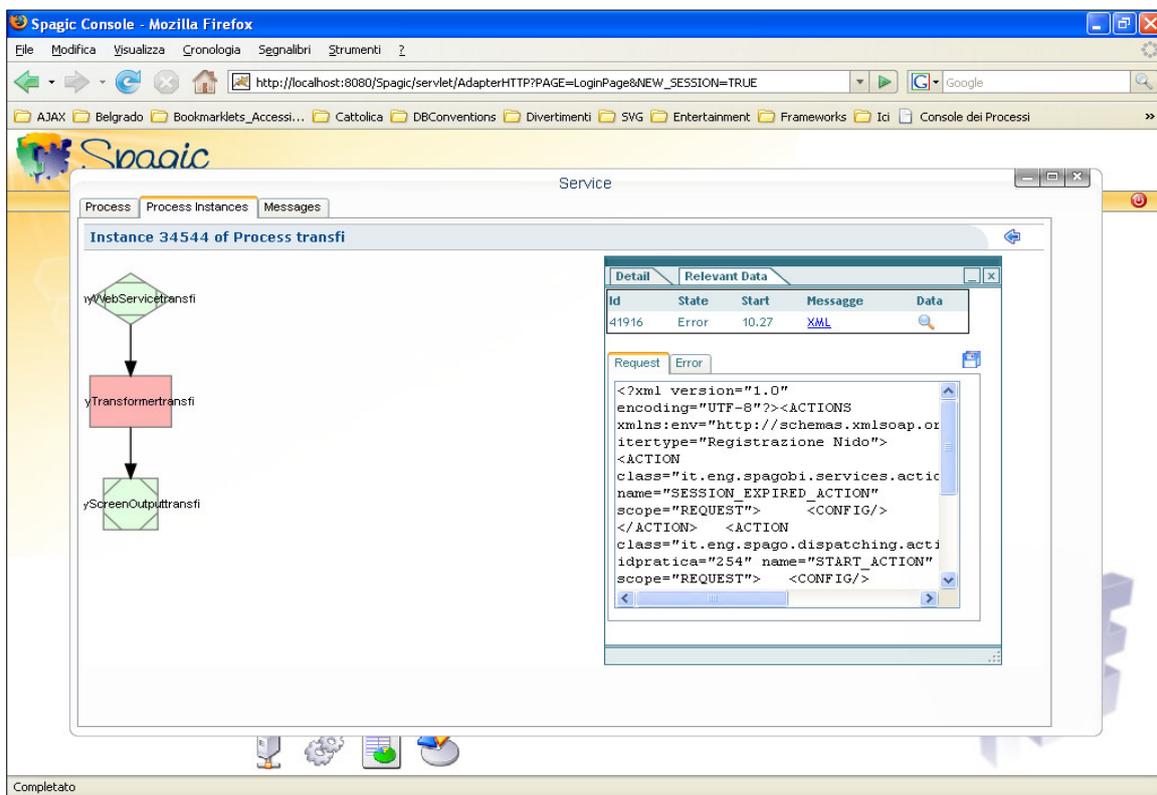
1. Selection of the component that generated the error (visualized with the red color), in the graph representing the process execution;
2. Selection of the *Relevant Data* tab;
3. Selection of the message in the *Error* state;

The message detail will be displayed. On the example in the image below, the message is composed by two parts: the *Request* and the *Error*.

To modify the message, select the *Request*, edit the content and save it clicking *Save* button. It is possible to modify more messages for a unique execution (for example all messages having as source the splitter component), obviously only the messages input to a component can be modified.

To restart the execution, select on the top right side, the icon  *restart*. If no problems occur, the page is being reloaded with the new instance.

It is possible re-starting a process more than one time.



7 Messages Displaying

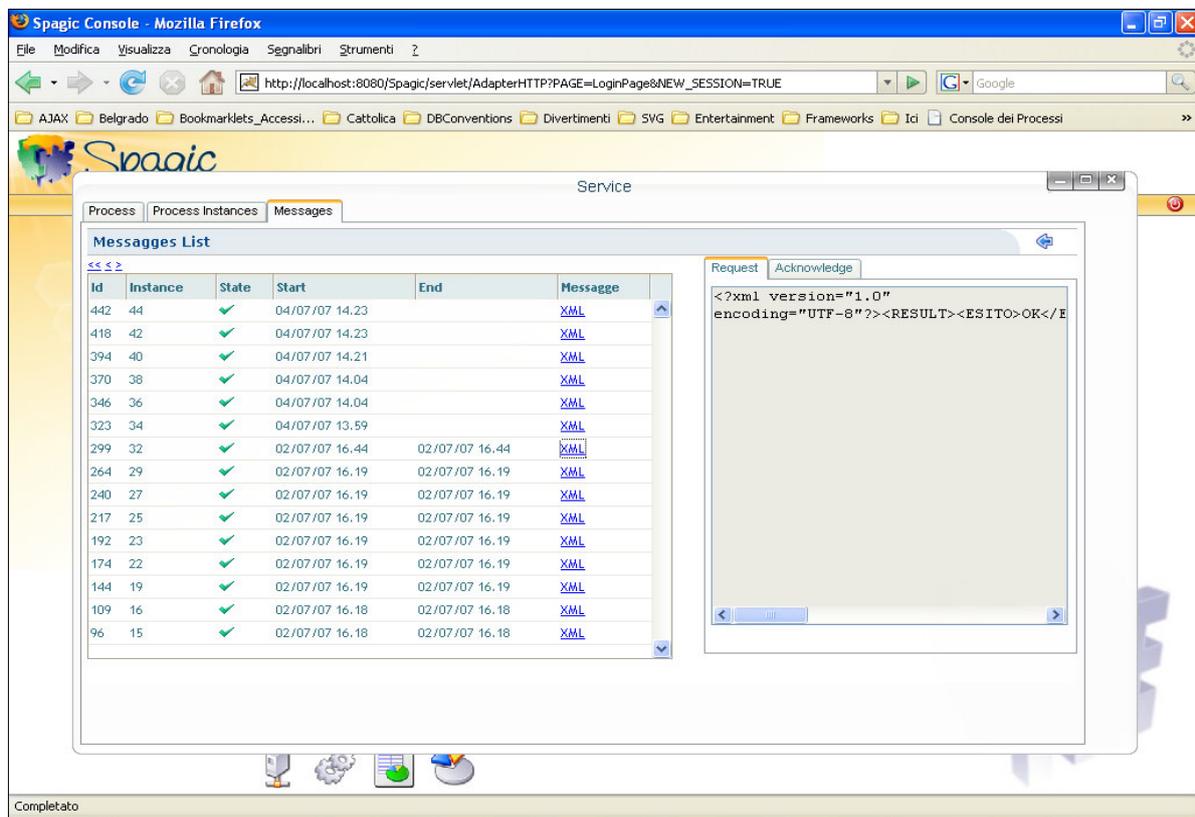
Spagic Console allows visualizing all the exchange messages by selecting a component belonging to a process. By pressing the **Service** icon and the *Messages* tab, a filter page is being displayed.

The page contains:

- *Process*: to select a process between those published in the MetaDB. By selecting the process, will be displayed:
 - The *Component* field containing all components belonging to the process,
 - All attributes associates to endpoints composing it;
- *Component*;
- *From To*: with the calendar it is possible to select year, month, day, hours and minutes;
- *State* containing the possible state relative to process instance: *Executing*, *Executed*, *Fault*;

By clicking the button *Search* a list of exchange messages will be display.

By selecting the *XML* link in the elements of the list, the messages composing the exchange messages will be visualized on the right side.

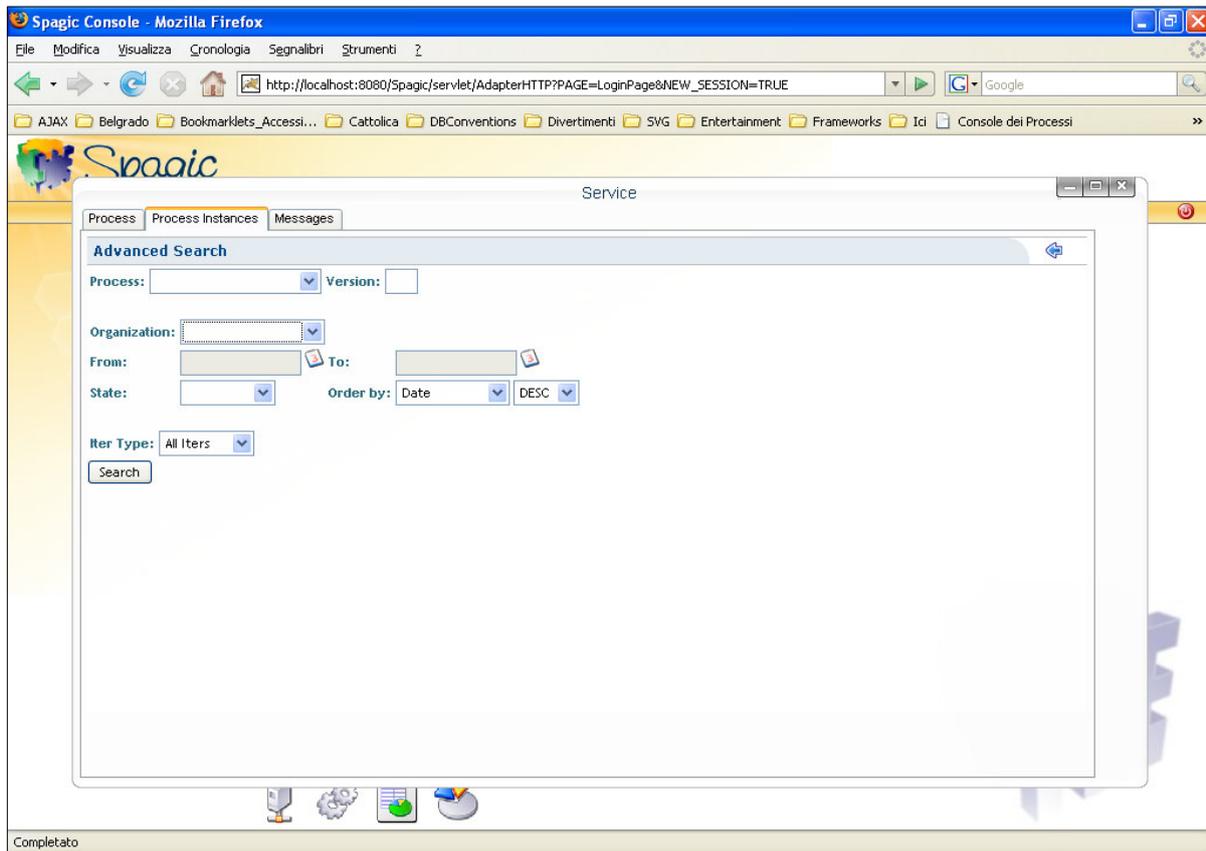


8 Advanced Search

Selecting the icon  *Advanced Search* in the *Process Instances* list, on the top of the right page, the *Advanced Search* page is displayed.

The page contains:

- *Process* to select a process between those published in the MetaDB. By selecting the process, will be displayed:
 - The *Version* field containing the last version published in the database. Modifying it, it is possible to visualize to process instances relative to previous versions.
 - All attributes associates to endpoints composing it;
- *Organization* contains all organizations defined in the service registry;
- *From To*: with the calendar it is possible to select year, month, day, hours and minutes;
- *State* containing the possible state: *Executing*, *Executed*, *Fault*;
- *Order by* follows to order the list by fields: *Date*, *Organization*, *Process* (ASC or DESC)
- *Iter Type* follows to select an iter and the attributes that identify it



9 Massive restart

This feature will be released in the final Spagic release.

The massive restart is an extension of the single restart functionality; it allows to restart, more at a time, the processes executions in the *Fault* state, it doesn't allow to modify the message exchanges .

To use the *Massive Restart* feature, select the relative icon on top of the right side of the page *Process Instances*, a filter page will be displayed.

By clicking the *Search* button, a process instances list will be visualized, on top of the list, there is the icon to launch the process implementing the massive restart.