Glossary

To be able to use the BPM tool integrated with the Comarch ERP Standard application, it is worth getting to know the following terms:

Acitvity

Elementary component of each BPM process. Activities are used to control a process, get object, execute actions on them, get and operate data in a company database.

BPM Configuration Tool

Application guiding user step by step through the stages of BPM services configuration.

BPM process

Set of sequenced operations and calculations which, following one another. Processes may replace or extend the existing system functionalities or function as a new functionality.

BPM Process Designer

Application used to create, control and handle BPM processes.

BPM Server

Service ensuring proper functioning of global BPM processes. The service runs in the background of BPM processes and it is not necessary to interrupt the work with the Comarch ERP Standard system.

Global process

Process which uses BPM Server service in order to run. Global processes are executed in the background and do not disturb

users working with the system. They can be started with the use of schedules, startup events or manually. Global processes allow for

Inbox Service Host

Service necessary for task inbox functioning. If the service is not enabled, the user cannot log-in to the task inbox and receive information form BPM processes.

Local process

Process which does not BPM Server service in order to run. Such processes mainly extend Comarch ERP Standard's logic by an additional validation or slightly modify objects. Execution of a process is integrated with Comarch ERP Standard's functioning. Local Process must be always started with the use of startup events.

Problem Solver

Application used for solving problems regarding communication between BPM Server, company database and Service Broker service.

creating decisions which should be made by the user and which affect further execution of a process.

Process monitoring

Tool for tracking the execution status of all the BPM. It allows for tracking, step by step, operations executed by a process. With the use of the process monitoring it is possible to, for example, reveal errors in a process created by the user.

References

.dll libraries which contain add-ons dedicated to BPM process designer, e.g., new startup events, new activities, business objects, etc.

Service Broker

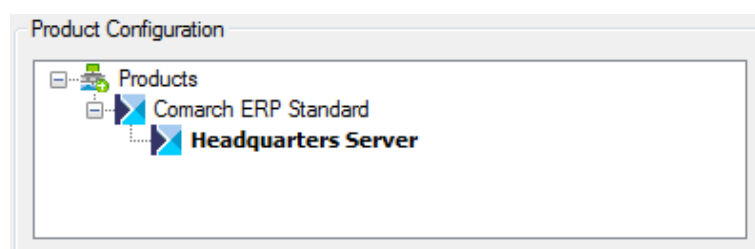Service functioning on SQL server. It is used for queuing BPM processes.

Task inbox

Platform for receiving information and making decisions, which are sent to a user by BPM process. For a proper functioning of the task inbox, the Inbox Service Host service must be enabled. The task inbox is available from the level of Comarch ERP Standard application.

Installing the application

Comarch ERP Standard BPM application is installed automatically together with Comarch ERP Standard, on the server workstation.

In the case of a client workstation, process designer, BPM services or Problem Solver tool are not included in the installation. It is possible to connect the system to an external [task inbox.](#)
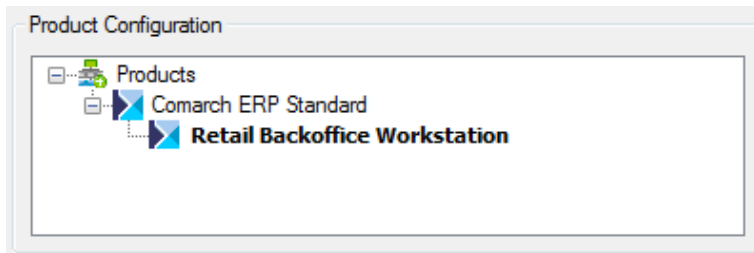
Tree of products for a client
workstation

After installing the application, on the desktop, shortcuts to process designer and process configuration too, are related. Detailed description of the installation process can be found in category *<<Comarch ERP Standard Auto Update>>.*

Note
In the main Comarch ERP Standard directory, you can find 32-bit versions of BPM process designer and BPM configuration tool, which are dedicated to 32-bit operating systems

Basic configuration

Before starting to use BPM application, it is necessary to properly configure the system. It is done with the use of BPM configuration tool. The application intuitively guides a user through all the steps of the configuration. By default, after

installing the component Comarch ERP Standard – Headquarter Server, the application shortcut is placed on the desktop. An alternative method of starting the configuration tool is clicking on a button available in the Comarch ERP Standard logon window.
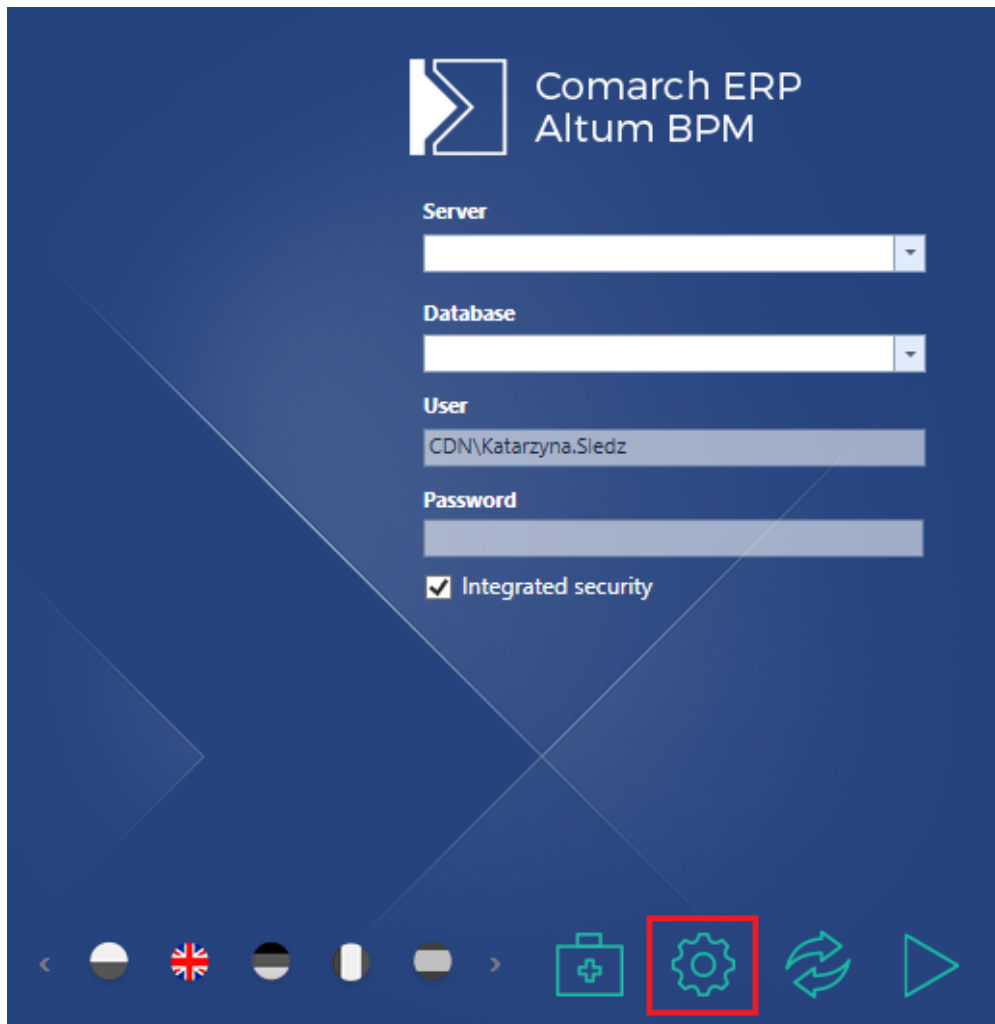
Starting BPM configuration tool in the logon window

To perform processes correctly, it is necessary to select the company database with which the application will cooperate and name or IP address of the server of the database.
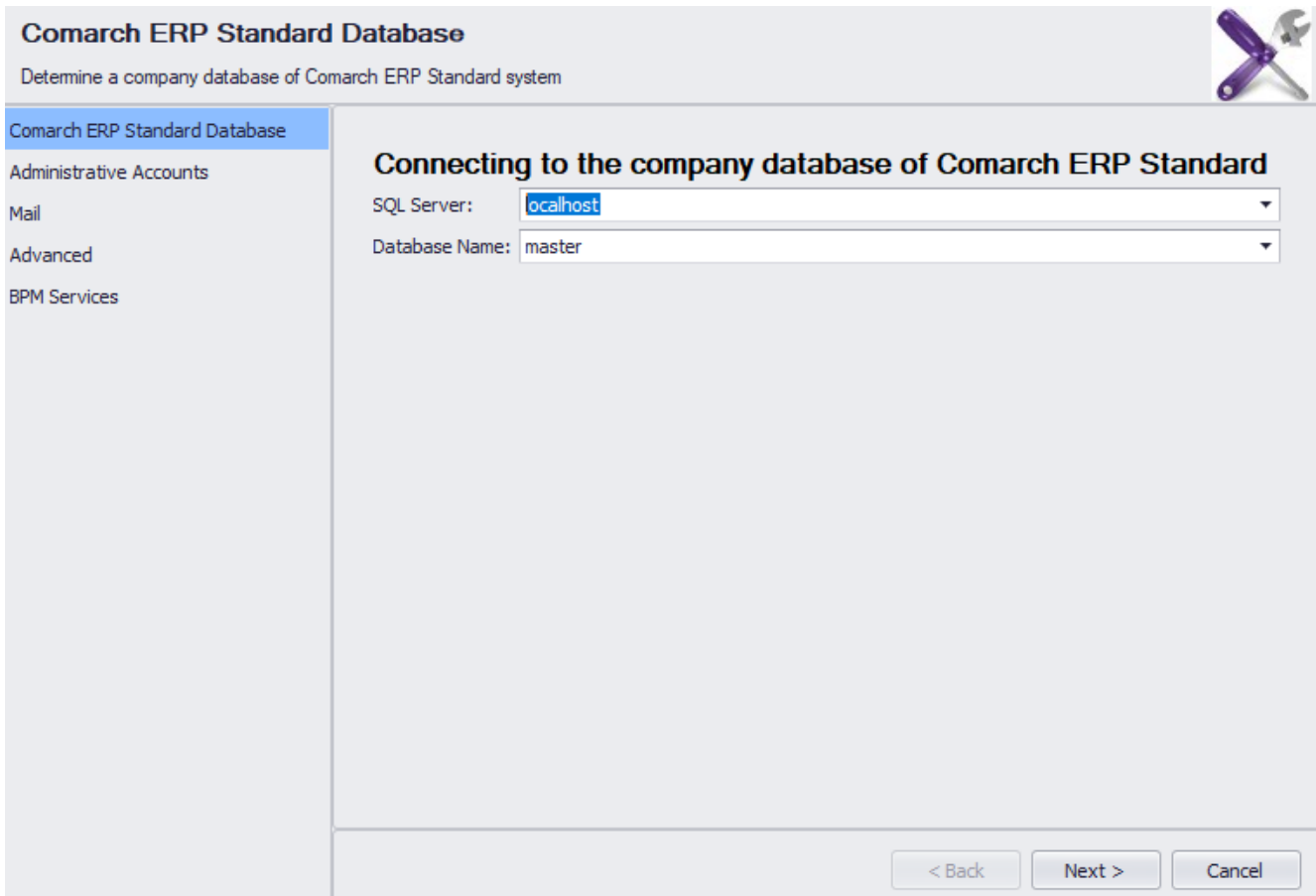
Database selection window

Next, the access to the database must be authorized with the use of an operator with appropriate <<permissions>> granted. In the window, also the center, within which the BPM service functions, is selected.

Access data configuration window

Note
It is recommended to make sure that the account specified for
the BPM services belongs to the *B2_admin* operator group and
selected center is on the top of the rights structure. Such
configuration ensures bigger flexibility when it comes to
execution of processes in several centers or companies and
handling of permissions itself can be modified directly
through processes.

Configuration of the mail account data is not required for the
basic functioning of processes. Detailed description of the
functionality can be found in article *<<Mail account
configuration>>*.

In the tab *Advanced,* it is necessary to select server key and
insert key number so that the system is able to verify the
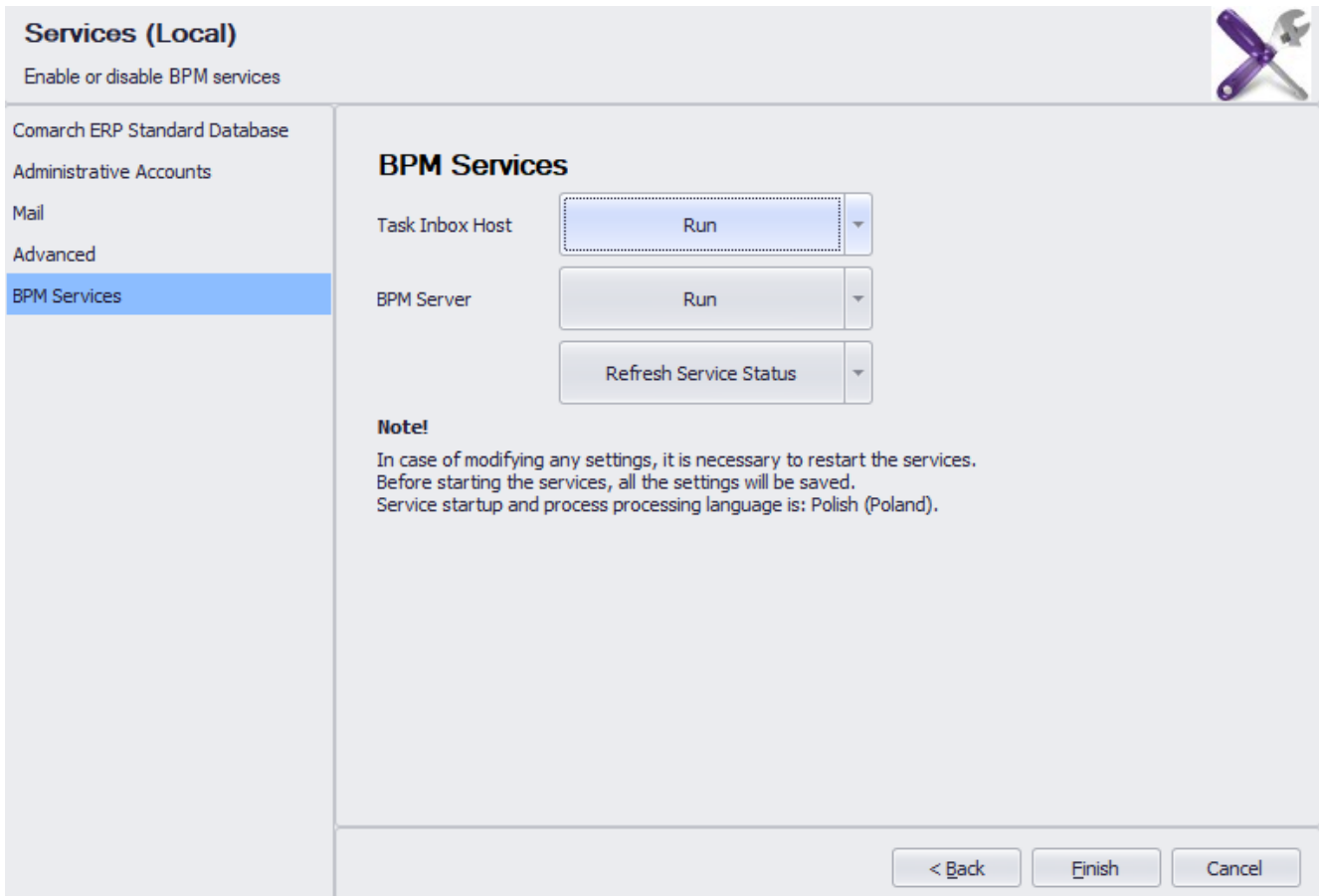license.

License configuration

Detailed description of the other parameters can be found in article *<<Advanced settings>>.*

The last step is starting BPM service with the use of [**Run**] button, available in *BPM Services* tab. The current status of services can be refreshed by clicking on [**Refresh Service Status**] button. BPM services are described in detail in *<<BPM services>>* article.
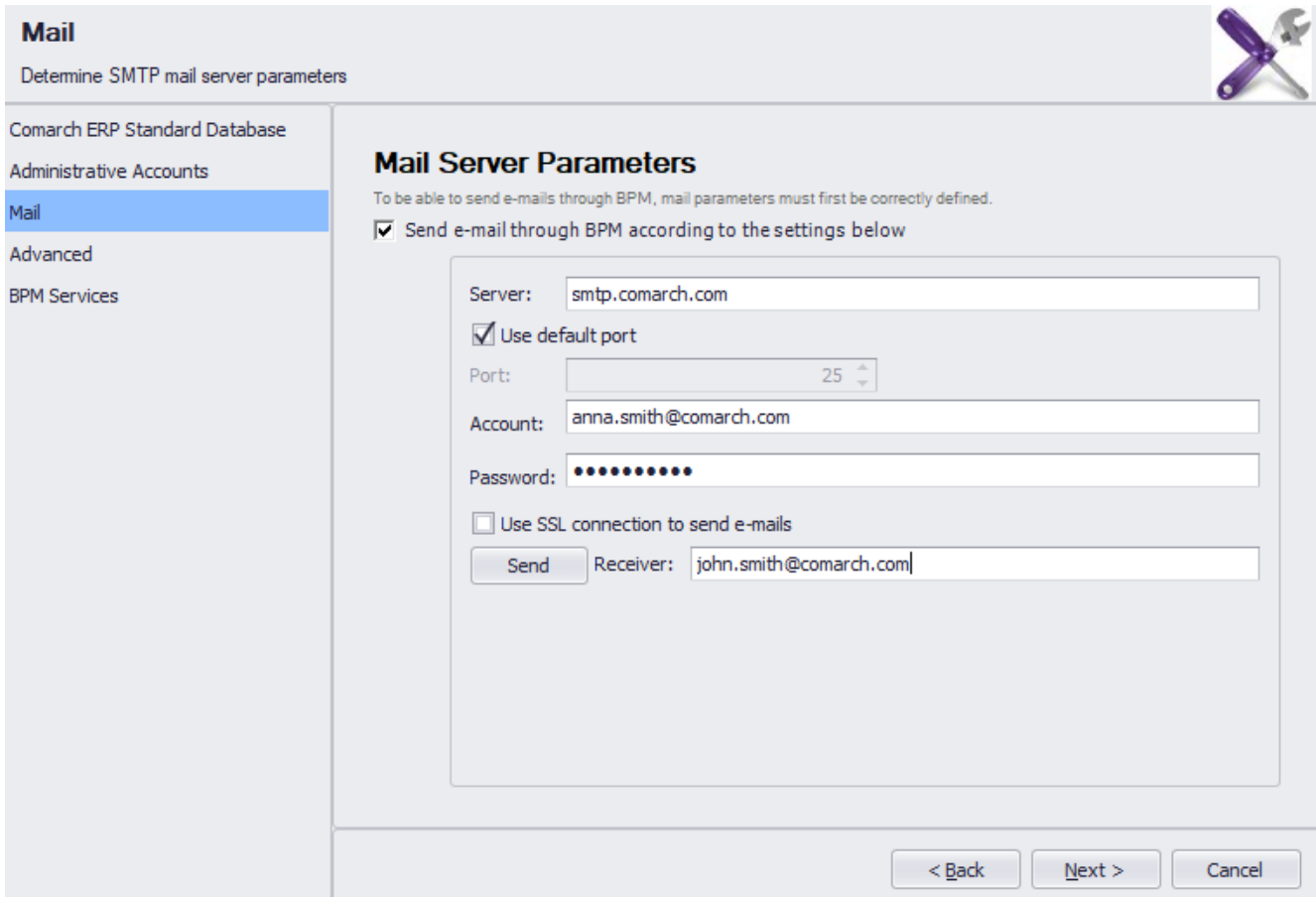
BPM service starting window

Mail configuration

BPM processes allow for sending e-mail messages. To do so, it is necessary to configure a mailbox from which the messages will be sent. There are two ways of configuring such mailbox:

- From the level of BPM configuration tool
- From the level of an employee form in Comarch ERP Standard

BPM configuration tool

Setting of correct parameters in the tab *Mail* of the BPM configuration tool:

Mailbox configuration for BPM

It is necessary to complete mail server parameters:

- **Server** — mail server name
- **Port** — upon unchecking the option *Use default port,* it is possible to specify the port through which BPM will communicate with the Inbox
- **Account** — address of e-mail account from which the messages will be sent
- **Password** — e-mail account login password
- **USE SSL connection to send e-mails** — enables to encrypt e-mails

Note

It is necessary to ask service provider for e-mail server parameters.
After entering all data, the user can send a test e-mail to the address entered in *Receiver field*.

Employee form

Configuration of mailbox from the level of the *E-mail Account tab* available on employee form in the Comarch ERP Standard system:

Configuration of e-mail account from the level of employee form

If the user wants to use mail server defined on the form of an employee, then, when adding *<<Send E-Mail>>* activity, in the tab *Advanced,* it is necessary to check *SMTP Local Configuration* parameter. If the parameter is unchecked, the system uses permissions defined in the BPM configuration tool.

Local e-mail configuration in Send E-Mail activity definition.

Advanced settings

In the tab *Advanced Settings* of the BPM configuration tool, it is possible to set one of additional parameters regarding the work with the system. Some of them are described in this article.
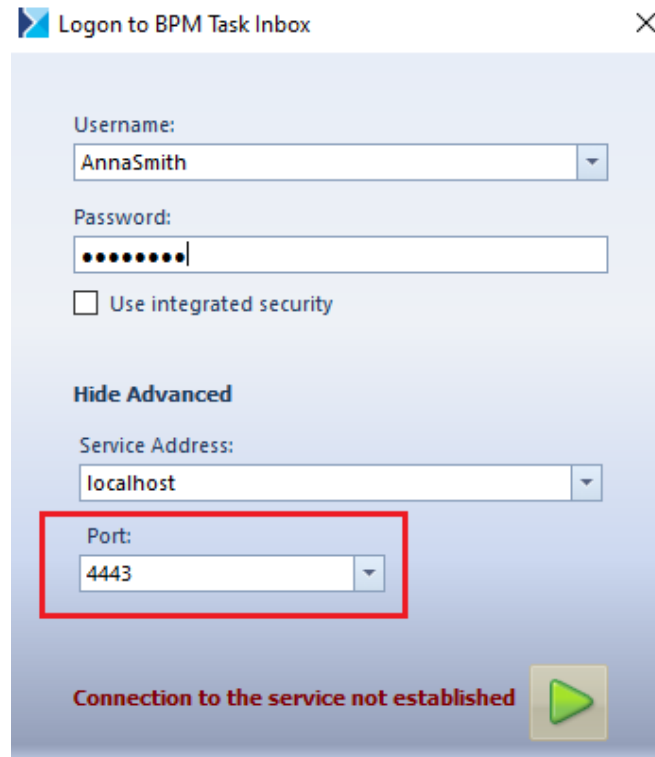

Advanced settings in the BPM configuration tool

The first two parameters are ports used for logging-in to the task inbox. By default, these are *4443* and *4444* ports.

Hint
If other than default ports are entered, it is good to
remember them, because it is necessary to enter them when
logging-in to the task inbox.

Selecting port during the access
to the task inbox.

Parameter *Number of Threads Converting Processes* determines to
what extent computer's processor will be loaded during the
execution of a process. The lower the value is, the lower
amount CPU resources is occupied.

Maximum Transaction Duration indicates time after which a BPM
process will interrupt its work even though the transaction is
not finished.

Example
In a database with several billion items, the user creates a
process which adds a specific attribute to each item. Since
there is a huge amount of data to elaborate and limited
computing power, such operation can take more than 15 minutes.

In such case it is good to modify the parameter *Maximum Transaction Duration,* by setting a higher value.
Otherwise, the user creates an incorrect process, which, at a certain stage, starts to execute an infinite loop. Thanks to the *Maximum Transaction Duration* parameter, the system does not cause computer's freezing because it interrupts the process execution after determined time.

It is also possible to set a specific port for the Service Broker service, BPM service language and encrypting of passwords.

Parameter *Continuation of interrupted instances* specifies whether the execution of processes interrupted for unseen reasons (e.g., computer shutdown because of a blackout) should be continued after restarting of the service.

If the parameter *Execution continuation in case of a tracking error* is checked, a process will be executed regardless of tracking errors. However, successive entries in [Process monitoring](#) related to that process instance may not contain full tracking data.
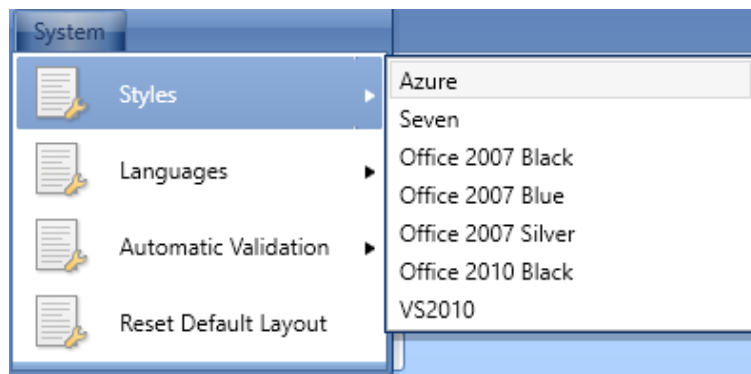
Process designer configuration

In the BPM process designer, with the use of [**System**] button, it is possible to customize layout, language and the settings of process validation.
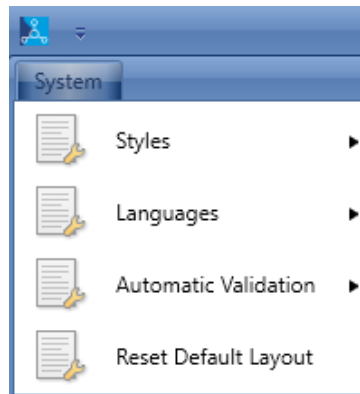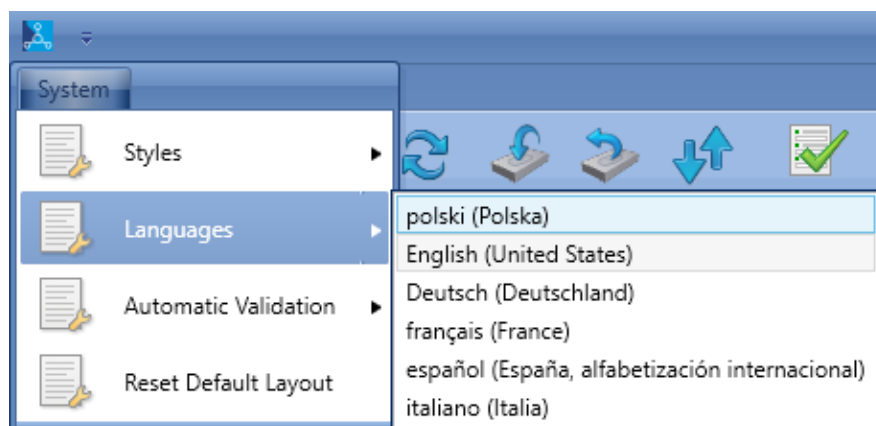
List of process
designer settings

Upon expanding the menu *Styles,* the user can change the look
of the application scheme. *Azure* style is set, by default.

Changing interface style

The menu *Languages* allows for setting selected application
language. Upon changing the language, it is possible to work
with the process designer in the selected language version.

Changing language

Note
For Windows 7 + .NET Framework 4.5 environment, it may happen
that no process can be created or modified after changing the
language. To solve the problem, install suitable language
packs: Microsoft .NET Framework 4.5 Language Pack.
In the menu *Automatic Validation,* it is possible to disable
validation of modified processes. More information regarding
Validator can be found in article *Process modification.*
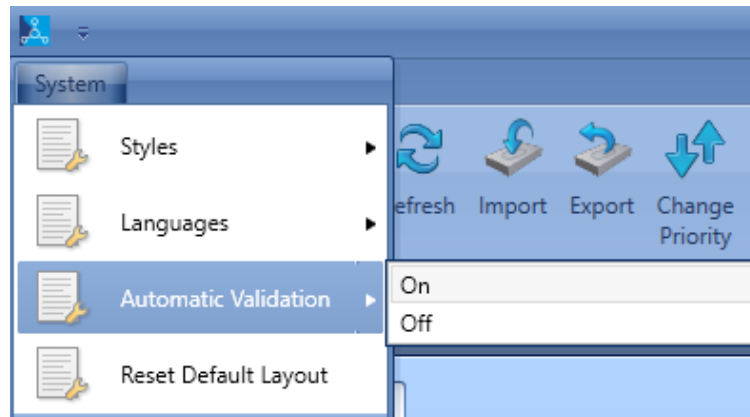
Modification of the settings of
automatic validation

Option *Reset Default Layout* allows for restoring previous
settings after restarting the application.

BPM Services

BPM services allow the communication between application
Comarch ERP Standard BPM and Comarch ERP Standard. The
services can be run by registration to the running operating
system services (button [**Run**]) or in console mode.

Services in console mode

In order to start services as a console program, it is necessary to select arrow placed on the right site of the [**Run**] button and select *Run as command-line program* option. With the use of this functionality, it is possible to preview server logs in real time.
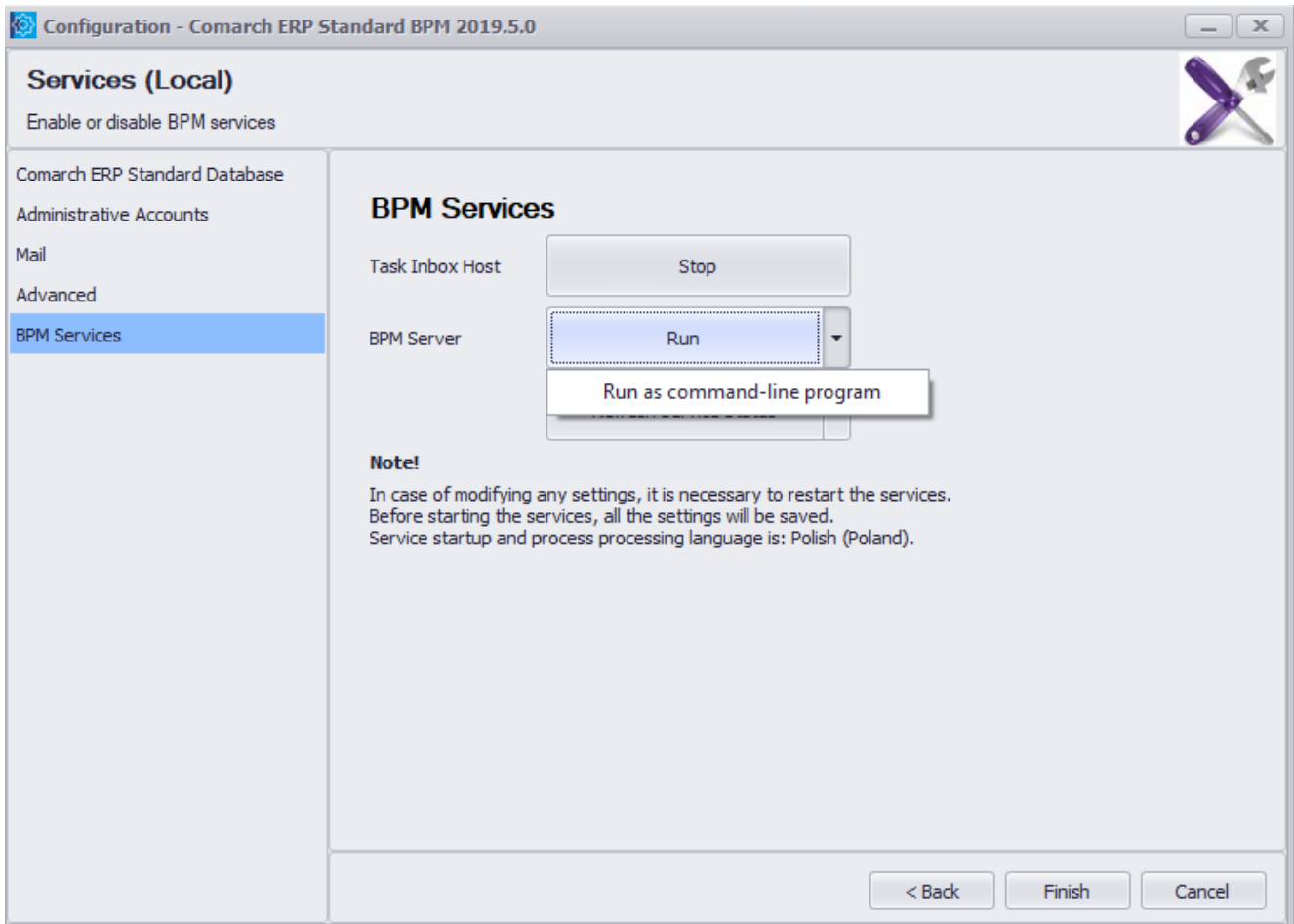

Starting BPM services as console program

[Alert] Closing the console window stops a given service. [/alert]

Registration of services

When changing services account, it is necessary to unregister services and register them again. To unregister services, click on the arrow button, places on the right side of [**Refresh Service Status**] button and select option *Unregister*

Services. On the buttons used for running and stopping services, appears information *Unregistered Service.*
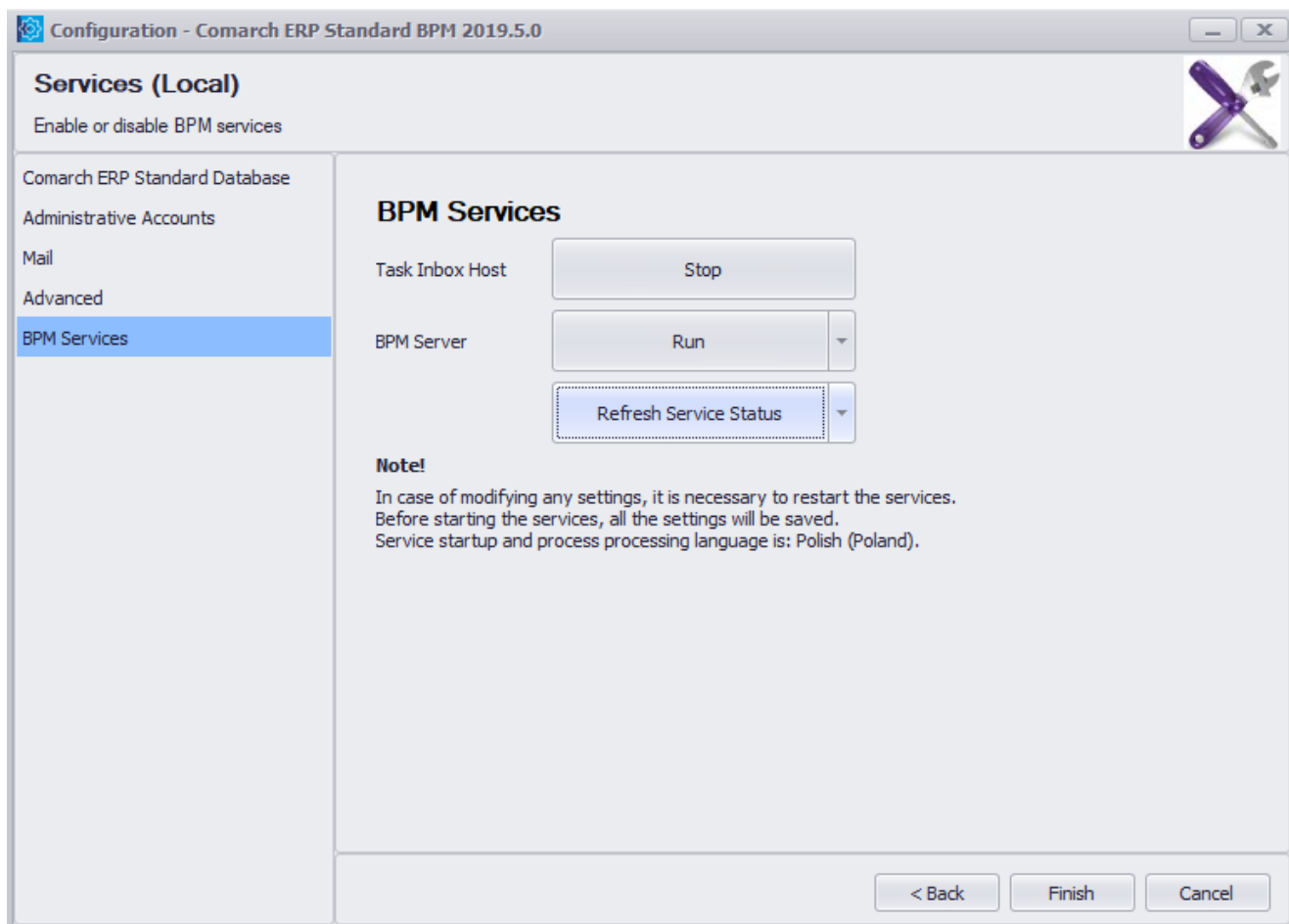

Configuration tool window in case of an unregistered BPM service

To register services, click on the [**Refresh Service Status**] button and select button [**Yes**] in the window with the following message. The message will be displayed also when opening *BPM Services* tab in case the services are not registered.
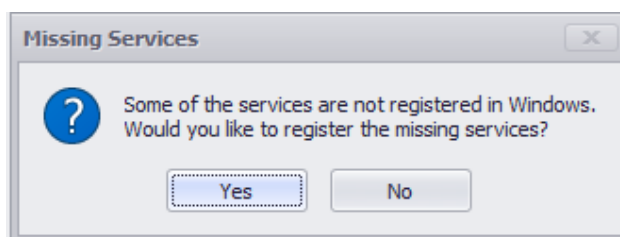
Information about missing services in the Windows system

Then, it is necessary to enter system user data for which the services are to be registered. From a drop-down list available in *User* field, it is also possible to select *Local system account* button. In such case, a service will be registered on the account currently used by the user.
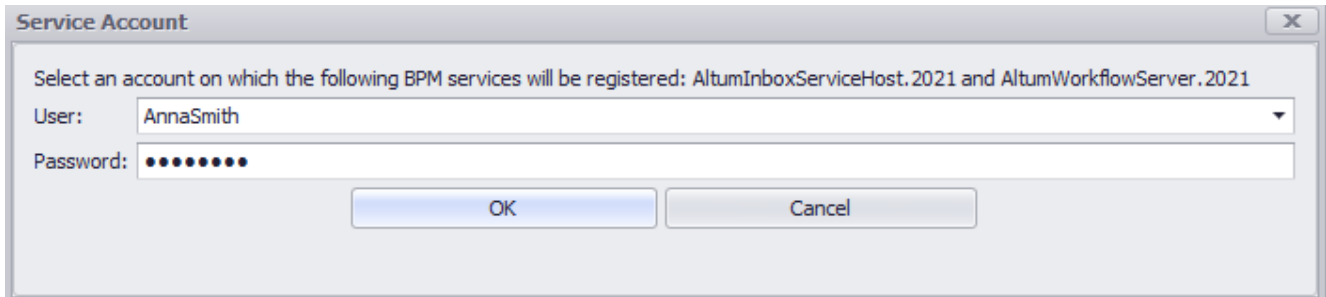
Access data necessary for registering BPM services

BPM server logs

The BPM server saves logs on an ongoing basis. They can be found in *C:\ProgramData\Comarch ERP Altum\Logs\.* The logs allow for analyzing historical events of the BPM server in order to verify its actions, execution of processes or starting up of schedules.

In the above-mentioned directory, there are also logs of BPM configuration tool, process designer and task inbox service.

Permissions

Permissions to BPM process designer

In the Comarch ERP Standard system, it is possible to modify permissions to BPM process designer The permissions are available from the level of *Configuration → Company Structure → Operator Groups → <group> → Objects*

Permissions to BPM process designer

Depending on the setting selected in the window, a user belonging to a gicven group can perform actions in BPM process designer in accordance with the following table:

Operations in BPM process designer	Read	Add	Modify	Delete
Entering BPM process designer	X			
Adding a process		X		
Editing an existing process	X			
Deleting a process				X
Saving a process			X	
Save as a process		X	X	
Change of publication			X	
Change of name			X	
Process simulation			X	
Import of processes		X	X	
Export of processes	X	X	X	
Process monitoring	X	X	X	
Import of business objects		X		
Deleting business objects				X

Operations in BPM process designer	Read	Add	Modify	Delete
Editing tracking profile			X	
Change of default tracking profile			X	
Deleting a profile			X	
Adding a tracking profile		X		
Deleting tracking data				X
Stopping an instance			X	
Automatic deletion				X
Adding an attachment		X		
Deleting an attachment				X
Saving an attachment to a file			X	
Connecting an attachment to a process			X	
Disconnecting an attachment from a process			X	
Previewing an attcahment	X		X	
Changing an attachment name			X	

Permissions to start particular processes

On the form of operator group, there is tab *Processes,* which allows for assigning processes published in designer to particular operator groups.
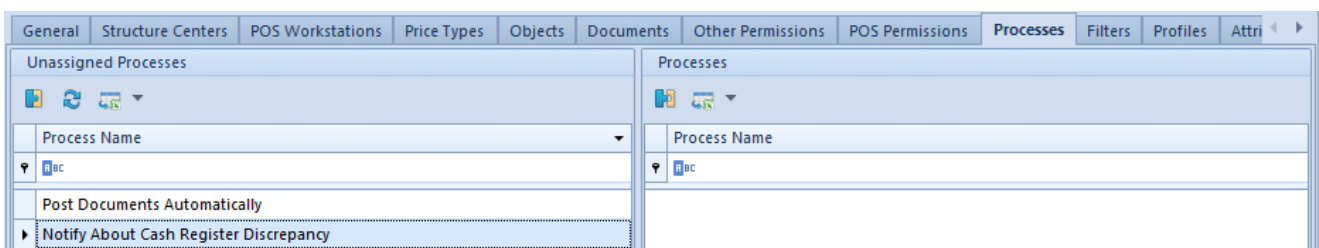
Assigning published processes to a given operator group

To permit an operator belonging to a given group to start a

global process from the level of the task inbox, an object or a list, it is necessary to check a given process in the window placed on the left side, select [**Attach**] button and save chabges. Permissions to processes are withdrawn in analogical way, by detaching a process.

Example
The administrator has imported a <<standard process>> *Post Documents Automatically* and published it. In order to make it possible to run the process only for employees from accounting department, the administrator can create *Accounting* group and grant permissions to the process to this group only.

Solving problems

Upon installing the Comarch ERP Standard BPM application, Problem Solver application becomes available. It is able to report the most frequent errors regarding the communication between a database and BPM or BPM services. Before starting work with the Problem Solver tool, it is necessary to make sure that the user logging-in to the application has system administration role (*sysadmin*) on SQL server.

Note
Before using the Problem Solver it is necessary to disable BPM services.

Note
It is recommended to run the Problem Solver after restoring a database from its backup copy or moving it to another SQL server.

The application can be started from the level of the main Comarch ERP Standard directory or by clicking on the first aid kit button, available in the Comarch ERP Standard BPM access window.
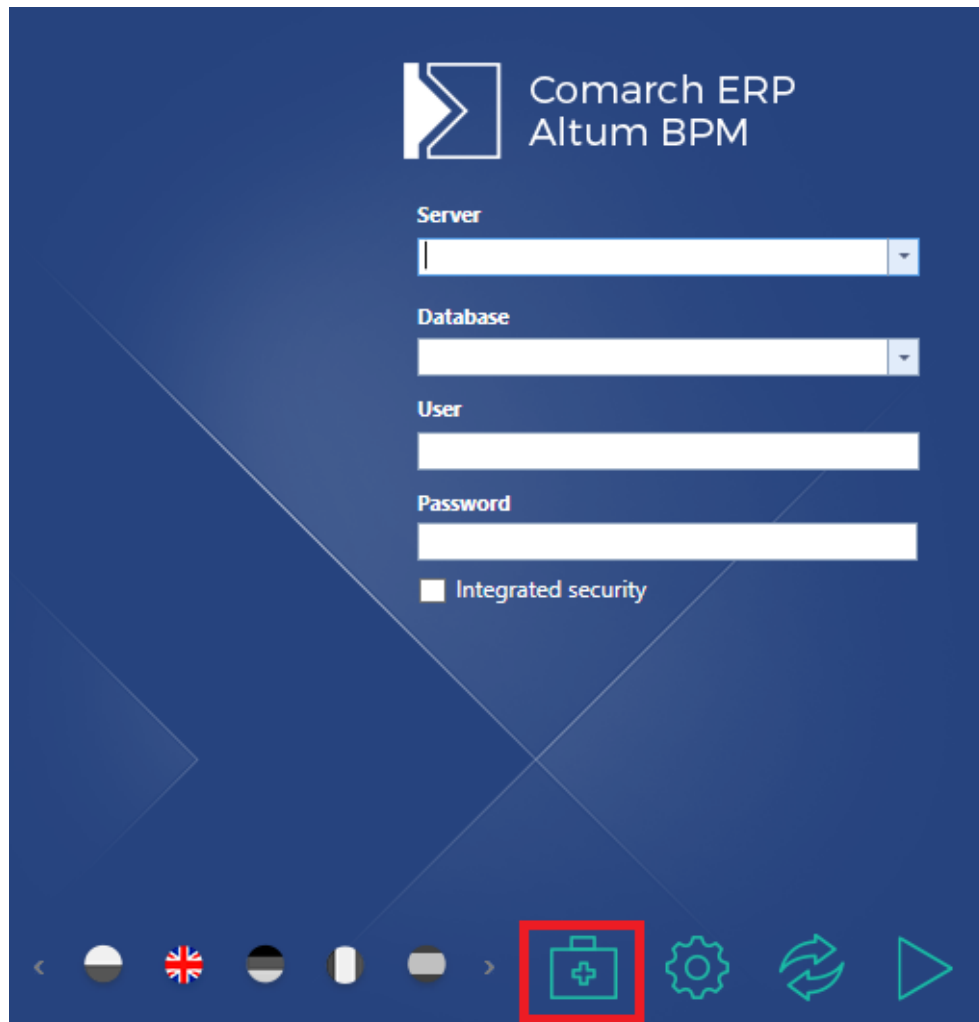
Starting problem solver from the level of BPM logon window

First two steps of work with the Problem Solver are very similar to those in BPM configuration tool – it is necessary to define database, SQL server and administrator's account access data.

Selecting server and database

Selecting administrator's account and center

In *Communication Recovery* tab, with the use of [**Fix Local Communication**] button, it is possible to execute a script on a database, which recovers communication between BPM services and Comarch ERP Standard. In that window, it is also possible to delete messages blocking the functioning of the Service Broker service.

Note
Using *Delete Messages* option is recommended only if there are blocking messages in a database, since it deletes also started process instances.
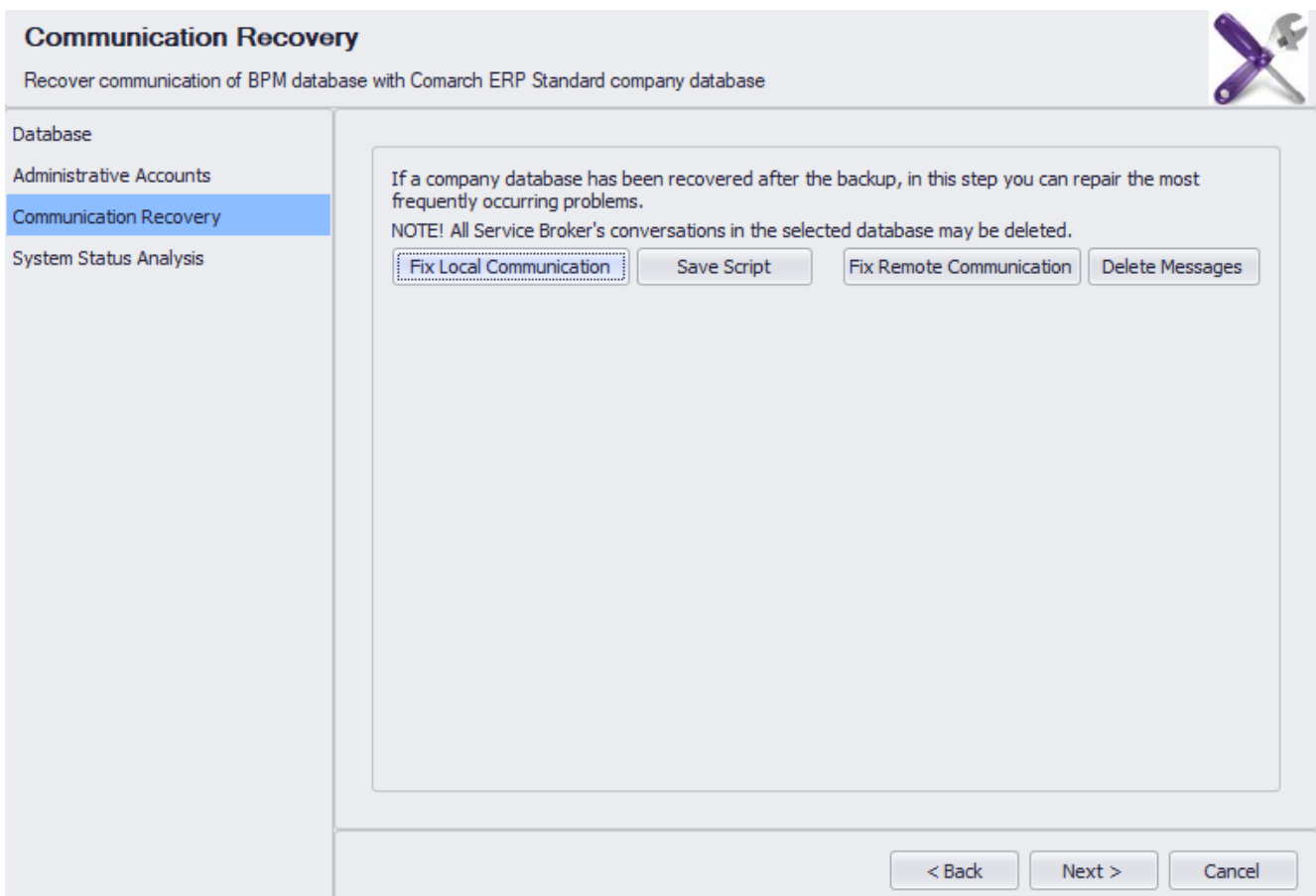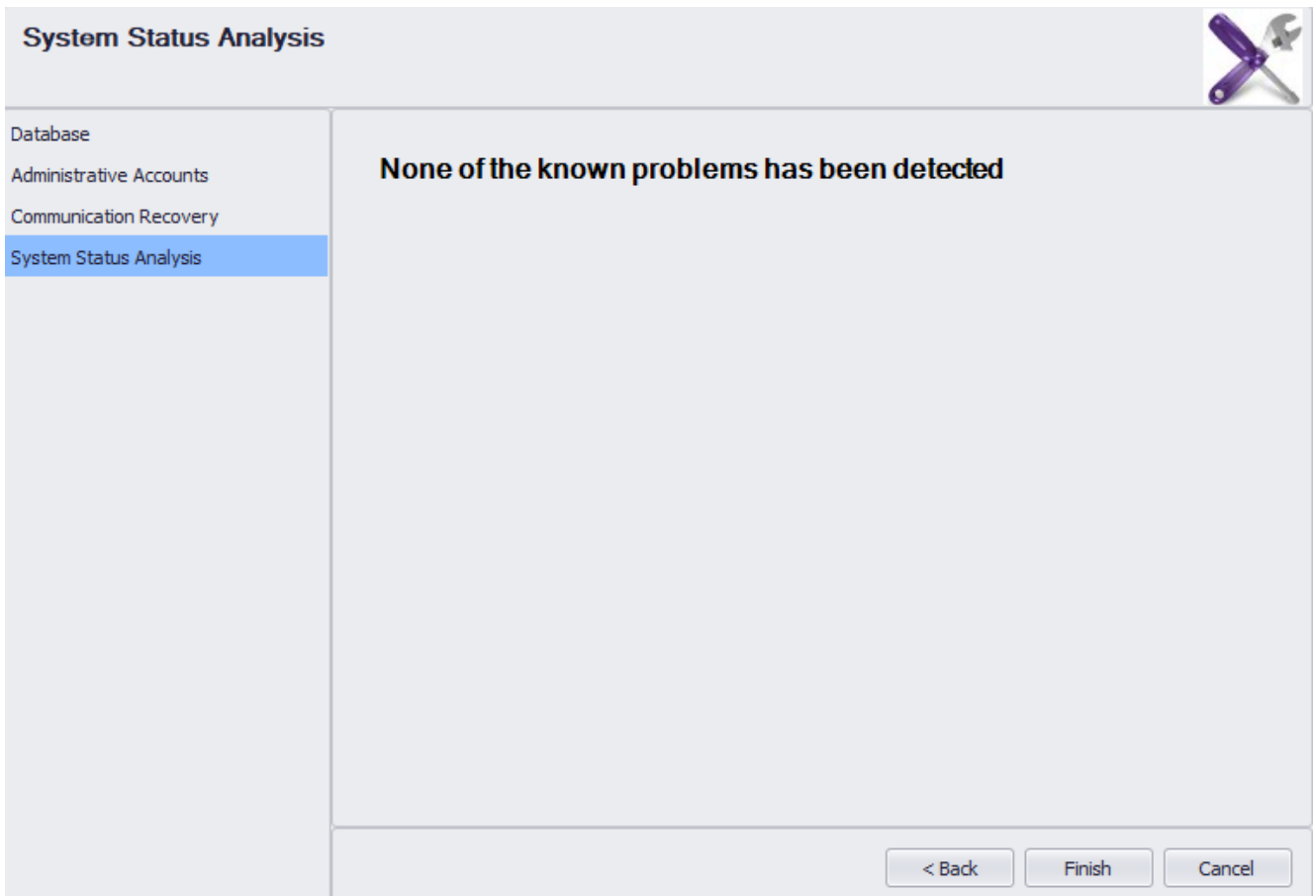

Communication recovery

Hint
When starting BPM server, communication recovery scripts are started automatically. If there are no other errors in the system, it is not necessary to start the Problem Solver tool.

Option *System Status Analysis* detects known system errors which can be fixed automaticaly.

Option System Status Analysis