



Банк'с Софт Системс

XX

Subsystem “Bank-Client”

Client Part Administrator’s Manual

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Here it is assumed that the client has the system installed (system installation is detailed in the **Installation Manual**).

BS-Client™ has a customizable menu, so all descriptions of menu items correspond to the menu set-up of the system installation disc.

Since it is the bank that specifies the types and formats of documents and directories in the client part, all the instructions on particular types and formats are those of the system installation disc.

Introduction

The present manual will describe the main system features for a client part administrator. As all the settings are pre-defined at the bank during generation of the installation disc, we will mainly consider various **BS-Client** settings that allow for optimum client workplace configuration and processing of incoming documents.

Users Rights System Setup

Sessions Distribution

Tip: Information in this chapter may be of use to you in the following two cases only:

1. you are working with a database other than **Access**;
2. you are customizing user rights different from those supplied.

In the other cases the present chapter will be of informative character and to be used as reference material only.

BS-Client works with a database in the multi-session mode. By session here we mean a session of connection between the application and the database.

BS-Client uses Base Manager to distribute sessions. In the general (initial) case sessions are distributed as follows:

- The main session, Default, is used directly by the application kernel,
- Scheduler's session
- Transport subsystem's session,
- Additional session for the transport subsystem.

Thus, the RBS system uses at least 4 sessions provided that the transport subsystem and scheduler are running.

The number of sessions is open to increase during operation.

The transport subsystem and scheduler are the most active system elements. Hence, they might take additional sessions.

The number of sessions being used by the scheduler is defined by the number of simultaneously running auto-procedures. For instance, the auto-procedure exporting a document into the bank part and the one requesting an account statement from the bank part can run simultaneously. Each of them will use an additional session. Thus, the highest possible quantity of sessions used by the scheduler will be limited by the highest possible quantity of parallel auto-procedures + one scheduler's "personal" session. Theoretically this is the total number of created auto-procedures + 1.

The number of sessions occupied by the transport subsystem is governed by the relevant RBS interface settings.

- Select **Tools → Transport → Options**.
 - ⇒ The **Transport Options** dialog box appears.
- Go to the **General** tab.

Transport Options

Main | **General** | Advanced

Time slices

Send non-acknowledged packages after (days)

Attempts to receive session

Time to hold session, ms.

Interval between attempts to receive session, ms.

Use sessions

Maximum quantity of sessions for transport

Maximum quantity of sessions for application

Erroneous packages

Save erroneous packages

☒ Save erroneous packages to DB

Maximum space for bad packages, Mb

☒ Save erroneous packages to file

Maximum folder size, Mb

Save to folder ...

Save Close

**Maximum quantity of sessions
for transport**

can be more or equal to zero;

**Maximum quantity of sessions
for application**

must be more or equal to 1.

Greater number of main and additional sessions noticeably affects the transport system's performance in case it has bulky workload (exchange of documents).

The total number of sessions the transport subsystem can take is therefore equal to the sum of these two parameters + 1 for transport subsystem's main session.

Additional sessions can be taken by procedures started manually from the RBS interface. For example, when you start to export a document to the ABS from the Payment Orders scroller.

The total quantity of sessions the Base Manager can make available for all subsystems is defined in users' profiles.

- Select **Tools** → **Service** → **System of Rights** → **Assign Rights** (go to the **Profiles** tab and select a profile).
- Click on **Settings for the database**.
 - ⇒ The **Settings for the database** dialog box appears.

Settings for the database

Minimum number of sessions
0

Maximum number of sessions
1

Wait for a session, msec
600000

Keep connection without requests, msec
300000

Transaction (access) timeout, msec
60000

Table prefix

Ok Cancel Help

Maximum number of sessions

Zero will mean unlimited number of BaseManager sessions. Any other value will imply that the total number of BS-Client's sessions cannot exceed the specified value. With this setup, in case the number of occupied sessions reaches the maximum and one of the subsystems requests an additional one, an error message appears and the subsystem waits for a session to free;

the default value is 5, it can be lowered for tellers; the default value will only do for relatively small banks using Sybase;

Fill-in guidelines:

Access - 1, PERFORMANCE CRITICAL;

MSSQL - 255, CRITICAL; a smaller number is allowed, but no less than 20;

Oracle - 10 (tentative value); can be made bigger or smaller; be careful, however, not to exceed the number of licenses;

Sybase - 10 (tentative value); can be made bigger or smaller; be careful, however, not to exceed the number of licenses.

Tip: For details on **Settings for the database** see [User Profiles Setup](#).

Thus, when this parameter is not zero, the following inequality holds:

"Maximum no. of DB sessions" \geq "Default session (1)" + "Scheduler's session (1)" + "Parallel auto-procedures (N)" + "Main transport session (1)" + "Number of additional transport sessions (M)" + "Number of transport sessions for application needs (K)" + "Number of sessions occupied by auto-procedures started from RBS interface (L)."

It should be noted that **Maximum number of database sessions** is associated with a profile. In its turn, a profile is associated with a system user. Therefore, we are considering the quantity of database sessions occupied by a RBS instance, started by a certain user associated with this profile.

Tip: For details on profile setups see User Profiles Setup under Users Rights System.

Users Rights System

General Description

The system of rights comprises the levels of privileges, roles, and profiles:

Privilege

Enabling (or vice versa, disabling) an action. System privileges are predefined and non-editable. Each one defines an action strictly. For example, the privilege VIEW_ANY_USER_TABLE will enable a user to view any non-system tables. A privilege can be defined by one or more parameters. Thus, for instance, the privilege EDIT_TABLE_RECORD has two associated parameters (a table name and filter). A user can insert new privileges into the list. Added privileges will not be processed. However, external modules will be informed if the current user has rights to such a privilege and will cope with insufficient rights, etc.

Note: For the description of system privileges see **List of BuiltIn Privileges**.

Role

Set of privileges. A role is defined by a set of privileges (with parameters) and a set of roles it comprises. Associated privileges can be granted and revoked. All the privileges within embedded roles are deemed associated with the master role. The revoked privilege status dominates the granted one. Roles are editable and customizable.

Profile

Set of rules governing a password lifecycle (expiry date/time, time constraints, etc.) and system options (main screen form, language, etc.) etc.). A composition of parameters will remain invariant. Their values can be changed. The system allows for several profiles.

User

System user. Each user will have his/her own login and password. A user can be assigned only one profile and one or more roles and even separate privileges.

Note: Rules for naming roles, profiles, users, privileges:
The first character must be Latin, the others may be Latin characters, digits, or an underline.

List of BuiltIn Privileges

Privileges define access type and rights to database objects. Currently, the system has a set of main privileges defining rights to modify, create, handle database objects.

Tables access privileges	
VIEW_ANY_SYSTEM_TABLE	Right to view contents of any system table.
EDIT_ANY_SYSTEM_TABLE	Right to modify contents of any system table.
VIEW_ANY_USER_TABLE	Right to view contents of any user (not system) table.
EDIT_ANY_USER_TABLE	Right to modify contents of any user (not system) table.
EDIT_TABLE_RECORD (Attributes: TableName, Filter)	Right to edit TableName records fitting the Filter
VIEW_TABLE_RECORD (TableName, Filter)	Right to view TableName records fitting the Filter
APPEND_TABLE_RECORD (TableName, Filter)	Right to insert a record fitting the Filter into TableName.
DELETE_TABLE_RECORD (TableName, Filter)	Right to delete TableName records fitting the Filter
VIEW_ANY_QUERY	Right to execute any SQL queries of the SELECT type.
EXECUTE_ANY_QUERY	Right to execute any SQL queries
System structures access	
DROP_ANY_TABLE	Delete any user table
CREATE_ANY_TABLE	Create any table

VIEW_ANY_DSP_STRUCTURE	Right to view any DSP structure
VIEW_DSP_STRUCTURE_OF_TYPE	Right to view DSP structures of specified types.
VIEW_DSP_STRUCTURE	Right to view a specified DSP structure.
MODIFY_ANY_DSP_STRUCTURE	Right to modify any DSP structure.
MODIFY_DSP_STRUCTURE_OF_TYPE	Right to modify DSP structures of specified types.
MODIFY_DSP_STRUCTURE	Right to modify a specified DSP structure.
DELETE_ANY_DSP_STRUCTURE	Right to delete any DSP structure.
DELETE_DSP_STRUCTURE_OF_TYPE	Right to delete DSP structures of specified types.
APPEND_ANY_DSP_STRUCTURE	Right to insert any DSP structure
APPEND_DSP_STRUCTURE_OF_TYPE	Right to insert DSP structures of specified types.
EDIT_USER_LOCALIZED_RESOURCES	Right to modify user localized resources.
EDIT_ALL_LOCALIZED_RESOURCES	Right to modify any localized resources.
Rights to administer user part	
VIEW_ANY_USER	Right to view users, the list of roles, profiles, and privileges.
CHANGE_ANY_USER	Right to modify rights of a user's profile and password (as well as modify roles, profiles, and privileges).
BLOCK_ANY_USER	Right to block any user.
Rights to work in the system	
CONNECT	Right to log in
START_TRANSPORT	Right to start transport
STOP_TRANSPORT	Right to stop transport
START_SHEDULER	Right to start scheduler
STOP_SHEDULER	Right to stop scheduler
Rights to execute operations	
EXECUTE_ANY_OPERATION	Right to start any operation
EXECUTE_SCHEME	Right to start any scheme operation
EXECUTE_OPERATION	Right to start any specified operation
EXECUTE_TABLE_OPERATION	Right to start a table or documentary operation fitting a filter.

System Rights Setup

- To customize the system of rights, go to the **Administer Users Rights** window, available at **Tools → Service → System of Rights → Assign Rights**.

The 'Administer Users Rights' window has four tabs: Users, Profiles, Roles, and Privileges. The 'Users' tab is active, displaying a table with the following data:

User	Status	Profile	Roles	Privileges
DBA		Default	ADMINISTRATOR	
OPERATOR		Default	ADMINISTRATOR	
SYSDBA		Default	ADMINISTRATOR	

On the right side of the table, there are buttons: Add, Delete, Edit, Disable, and Confirm. At the bottom right, there are buttons: Close and Help.

There are four tabs on this form: **Users**, **Profiles**, **Roles**, and **Privileges** (see [General Description](#)).

- To modify a user's rights, go to the **Editing user's rights window**. To open it, double click on a user or select it and click on **Edit**.




The 'Editing user's rights window' contains the following fields and controls:

- User name:** Text field with 'USER' entered.
- Password:** Text field with 'xxx' entered.
- Confirm password:** Text field with 'xxx' entered.
- Roles:** Text field with 'USER' entered.
- Available roles:** List box containing ADMINISTRATOR, EXPLORER, SECURITY_MANAGER, SYSTEM, and DESIGNER (selected).
- Profile:** Dropdown menu.
- Privileges:** Empty text field.
- Buttons:** Change the password at the next login (checkbox), Disable (checkbox), Clear passwords history, Add, Delete, Edit, Ok, Cancel, and Help.

You can set up the following user options in the appeared window: **Password**, **Profile**, **Roles**, and **Privileges**.

- The following check-boxes are available for **Password** setup:
Change the password at the next login at the next attempt to log in, the system will display a password expiry message and will prompt the user to change it, followed by entering the old one;
Disable the option will block the system for the given user: at the next attempt to log in, a system blocking notification will appear.

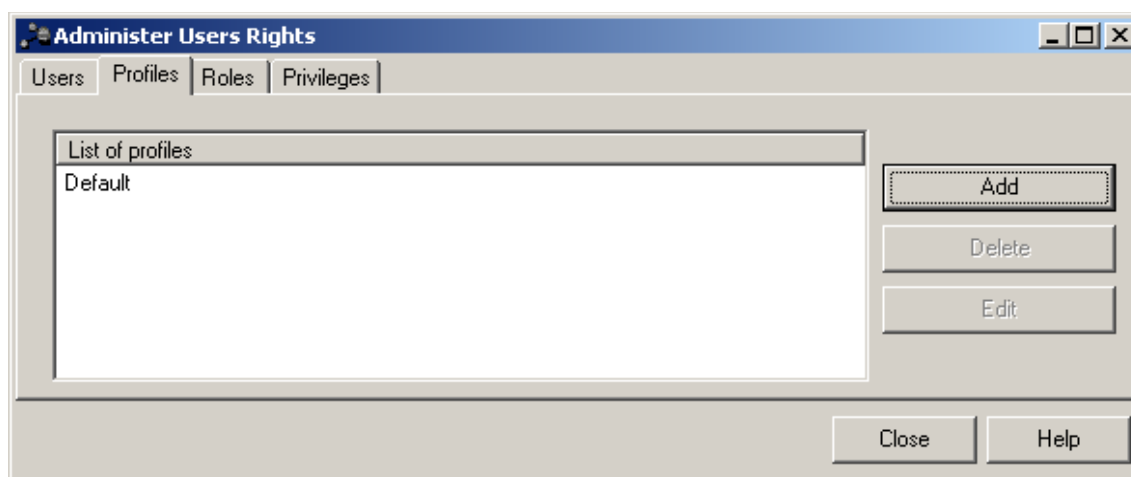
Attention! When you insert a new User with a password or when you change passwords of registered users, the system will not capture these passwords in the history. Therefore, a User will be able to change a current password to the same one once, should it differ from the first registered password. To overcome the problem, create Users with blank passwords and check the **Change password option at the next log-in**. Thus, at the next log-in the User will enter a password that will be captured in the history and should s/he need to change the password, the system will react adequately.

- To set up the **Profile**, click on  next to the field and select a value on the drop-down list.
 - To set up **Roles**, use  and  to insert required roles from the list of available ones or to remove unneeded ones. To add a new privilege, delete or edit registered ones, use the relevant buttons.
- Tip:** For details on roles, privileges, and profiles, see [General Description](#) and **List of BuiltIn Privileges**.

User Profiles Setup

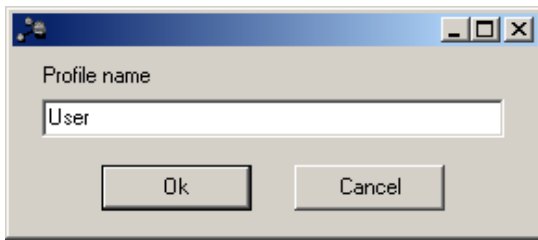
Profiles is an authority level of primary importance. Profiles define such options as whether or not to start scheduler and transport at startup if logged in by a user owing the profile. **Main startup form** is also indicated in profiles. Main startup form, usually **MainCbankForm**, will define overall system functionality. In creating unique startup forms, you can remove or add some functionality by modifying the main form's menu and icon toolbar. Main form can be modified in the 'Dictman' application program.

- Select **Tools→Service→System of Rights→Assign Rights**.
- Go to the **Profiles** tab.

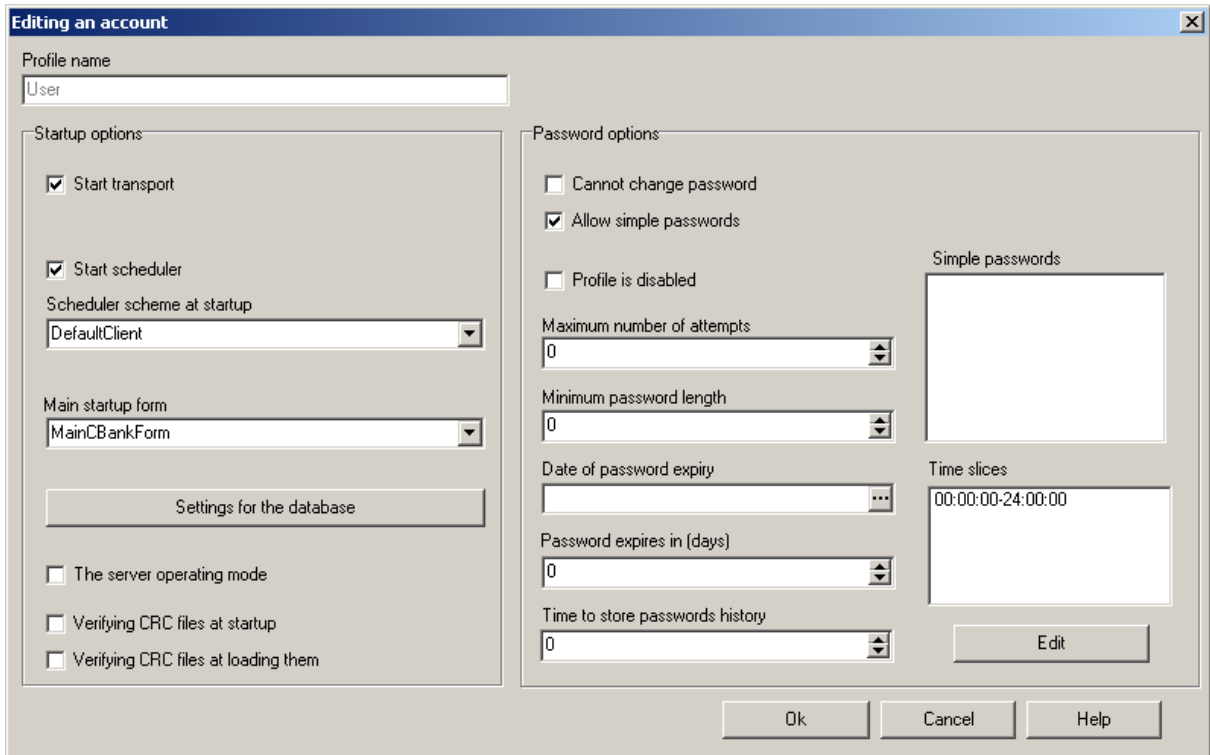


- If will contain a couple of buttons.
- | | |
|---------------|---------------------------|
| Add | - insert a new profile; |
| Delete | - delete a profile; |
| Edit | - modify profile options. |

- Click on **Add** to insert a new profile.
 ⇒ A dialog box appears.



- 👉 Enter a profile name.
- 👉 Click **Ok**.
- ⇒ The **Editing an account** dialog box appears.



Editing an account will have the following fields:

Profile name

Start transport

Start scheduler

Scheduler scheme at startup

Main startup form

The server operating mode

Verifying CRC files at startup

Verifying CRC files at loading them

Cannot change password

Allow simple passwords

Simple passwords

- name of the profile. The field is inactive;
- check the option to start transport at login;
- check the option to start scheduler at login;
- name of the startup scheduler scheme. Field **Start scheduler**, statement scheduler procedures (auto-procedures);
- name of the main form to launch (by default it's MainCBankForm);
- use a special memory manager; server mode will speed up system operation though requiring more of ram; it is only recommended to check the option if there is enough ram;
- reserved field;
- reserved field;
- if checked, the user will fail to change the password;
- if checked, simple passwords are allowed; Simple passwords are those with characters from less than 3 of 4 main groups: uppercase letters, lowercase letter, digits, special characters.
- list of illegal passwords.

Note: The **Simple passwords** parameter is applied irrespective of the fact whether **Allow simple passwords** is checked. Thus, even if you allow simple passwords, the user will fail to use a password from the list of **Simple passwords**.

Profile is disabled	if checked, a user will fail to start the system under this profile;
Maximum number of attempts	- maximum number of attempts to enter a password at login; with this number exceeded, the user that failed is blocked; Zero stands for unlimited attempts.
Minimum password length	- minimal password length;
Date of password expiry	- date of expiry of the password; after this date the user will be blocked;
Password expires in (days)	- number of days of password validity; Zero stands for unlimited password validity.
Time to store passwords history	- number of days to store passwords history. All passwords a user has entered are stored in a history of passwords; the passwords that the administrator has entered aren't stored in a history. Zero stands for unlimited time to store the history of passwords.

- Click on **Settings for the database** to set up database options.
- ⇒ The **Settings for the database** dialog box appears.

Settings for the database

Minimum number of sessions: 0

Maximum number of sessions: 1

Wait for a session, msec: 600000

Keep connection without requests, msec: 300000

Transaction (access) timeout, msec: 60000

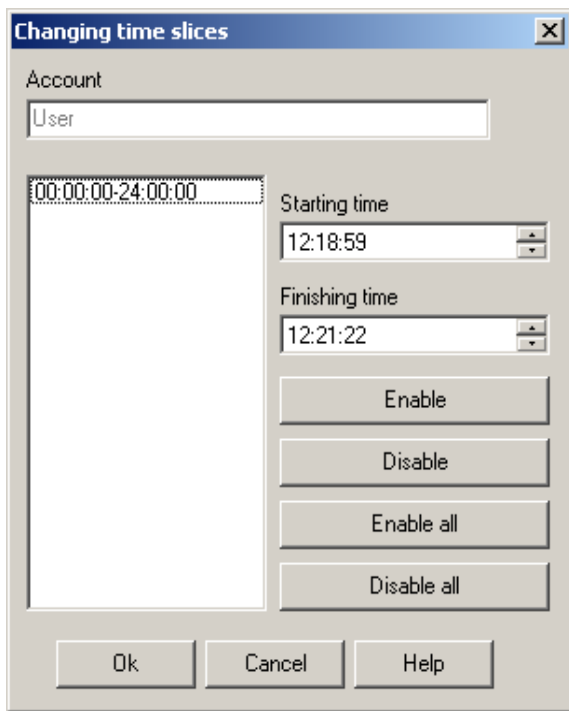
Table prefix:

Ok Cancel Help

Minimum number of sessions	- minimal number of database sessions that BS-Client will constantly keep opened; with the inactivity period, specified in Keep connection without requests, msec. , expired, BS-Client will ignore all the sessions exceeding the above number; the default value is zero; <u>Fill-in guidelines:</u> Access - 0 or 1; if you enter zero, after long inactivity the database file will be released and as such will be opened
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	<p>for editing/deleting; if you enter 1, the database file will be blocked for editing and deleting;</p> <p>MSSQL – 0, PERFORMANCE CRITICAL; sessions with MSSQL must always be zeroed;</p> <p>Oracle - 0, not critical, though recommended;</p> <p>if other applications queue for establishing a connection ahead of it, specify the 'Maximum number of sessions' value;</p> <p>Sybase network - 0, again you can specify the Maximum number of sessions value, should other applications queue for establishing a connection ahead of it;</p> <p>Sybase local – 0 or 1; specify 1 to avoid restarting each time after long inactivity;</p> <p>specify zero if Sybase starts as a service or the 'Shutdown database after last disconnect' alias option is unchecked;</p> <p>- highest possible number of sessions to the database;</p> <p>when the number of occupied sessions reaches the maximum and one of the subsystems requests an additional session, an error message appears and the subsystem will have to wait for a session to free;</p> <p>the default value is 5, it can be lowered for tellers;</p> <p>the default value will only do for relatively small banks using Sybase;</p> <p><u>Fill-in guidelines:</u></p> <p>Access – 1, PERFORMANCE CRITICAL;</p> <p>MSSQL – 255, CRITICAL; a smaller number is allowed, but no less than 20;</p> <p>Oracle - 10 (tentative value); can be made bigger or smaller; be careful, however, not to exceed the number of licenses;</p> <p>Sybase - 10 (tentative value); can be made bigger or smaller; be careful, however, not to exceed the number of licenses;</p>
Maximum number of sessions	
Wait for a session, msec.	<p>maximum time for a subsystem to wait for a database session to free; 300,000 (5 min) by default; it is not recommended to change the default value;</p>
Keep connection without requests, msec.	<p>minimal time for a connection to the database to hold without any requests;</p> <p>when a connection is unused for a specified period and the current number of sessions exceeds the minimal one (Minimum number of sessions), the connection is dropped;</p> <p>300,000 (5 min) by default; the default value will fit in almost any case;</p>
Transaction (access) timeout, msec.	<p>maximum time for a subsystem to wait for a free session to execute a transaction; if upon expiry there are no free sessions, the operations to be executed inside the transaction will be executed outside it;</p> <p>60,000 (1 min) by default; it is not recommended to change the default value;</p> <p>you can specify a longer period for customers with bulky workflow.</p>

- Click on **Edit** to specify periods when the profile is enabled and disabled.
- ⇒ The **Changing time slices** dialog box appears.



Changing time slices has the following fields:

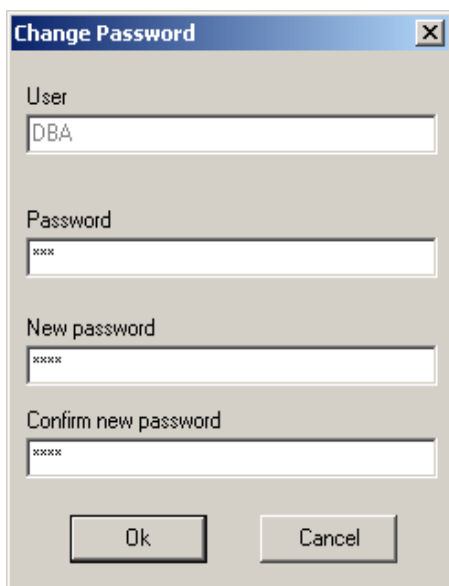
- | | |
|-----------------------|--|
| Account | - name of the profile. The field isn't subject to editing; |
| Starting time | - starting time of a period when the password is valid or invalid; |
| Finishing time | - final time of a period when the password is valid or invalid. |

Changing time slices has the following buttons:

- | | |
|--------------------|---|
| Enable all | click on it to enable the profile 24 hours a day; |
| Enable | use it to enable the profile within the period defined by Starting time and Finishing time ; |
| Disable | use it to disable the profile within the period defined by Starting time and Finishing time ; |
| Disable all | click on it to disable the profile 24 hours a day. |

Changing Password

- To change the logged in user's password, select **Tools → Service → System of Rights → Change Password**.
- ⇒ The **Change Password** window appears.



A dialog box titled "Change Password" with a close button (X) in the top right corner. It contains four text input fields: "User" (containing "DBA"), "Password" (containing "xxxx"), "New password" (containing "xxxxx"), and "Confirm new password" (containing "xxxxx"). At the bottom are "Ok" and "Cancel" buttons.

All its three fields are mandatory:

Password

New password

Confirm new password

the current password;

new password;

re-type the new password (to confirm).

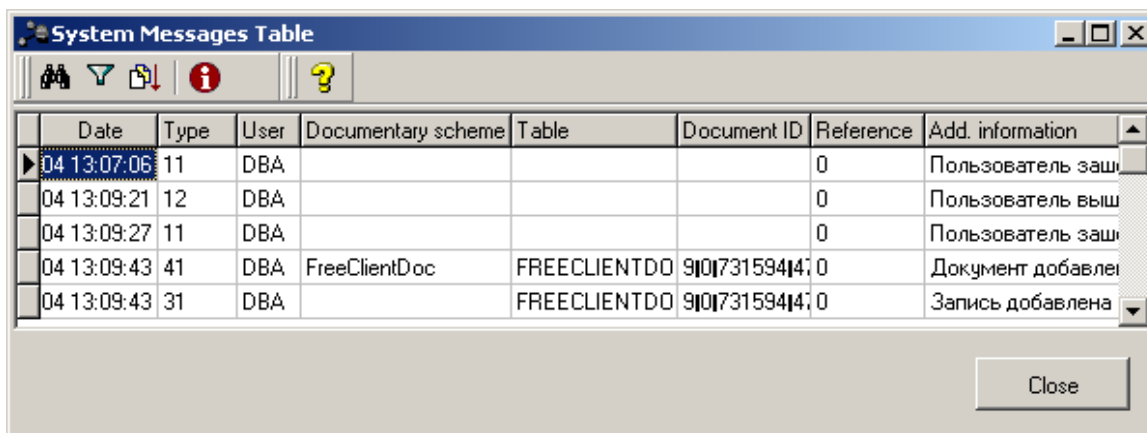
Audit

System Messages Log

The system has tools for journalizing and analyzing user actions so that to be able to detect unauthorized ones.

There is a **Table of System Messages** meant for logging user actions.

□ Select **Tools** → **Service** → **Table of System Messages**.



A window titled "System Messages Table" with a toolbar containing icons for filters, help, and other functions. Below the toolbar is a table with the following data:

Date	Type	User	Documentary scheme	Table	Document ID	Reference	Add. information
04 13:07:06	11	DBA				0	Пользователь заш...
04 13:09:21	12	DBA				0	Пользователь выш...
04 13:09:27	11	DBA				0	Пользователь заш...
04 13:09:43	41	DBA	FreeClientDoc	FREECLIENTDO	910173159414	0	Документ добавлен
04 13:09:43	31	DBA		FREECLIENTDO	910173159414	0	Запись добавлена

At the bottom right of the window is a "Close" button.

The journalizing procedure has protection against unauthorized shut-offs or modifications in journalizing parameters. It is security administrator only that is authorized to make such modifications.

The table of system messages has protection against unauthorized modifications in stored data.

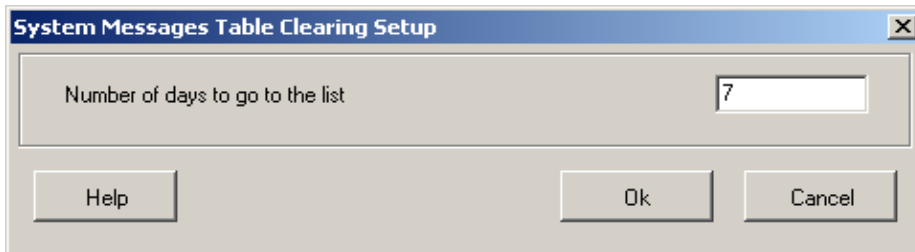
The following user actions go to the **System Messages Table**:

- all the changes in documentary statuses;
- all the changes in static data (including acceptance of the changes);
- all the changes in the set of system users;
- all the changes in rights of system users;

- log-ins and log-outs.

Deleting System Messages

- To clear the system messages table, select **Tools → Service → Deleting System Messages Options**
⇒ The **System Messages Table Clearing Setup** window appears.



- Specify the period (the number of days) for storing messages in the system messages table and click **Ok**.
⇒ Once a day an ad hoc auto-procedure will clear 'outdated' messages from the table of system messages.

Directories Setup

The main purpose of directories is to facilitate the process of populating dialogs, as it proves to be much safer and easier to export data from a directory into a field (if available) rather than to type it in. Furthermore, numerous fields (the so-called linked fields) are frequently populated as a group.

The system supports two types of indexes: **Internal Corporate**.

Internal Directories

These are the client part's directories and indexes. They represent your "property." You can choose to enlarge them with any data or leave them blank. Most of the **Internal** directories and indexes are available for an operator to edit and enlarge. The **Companies** and the **Personnel** directories are the only exceptions. You must have administrator rights to edit these directories.

Corporate Directories

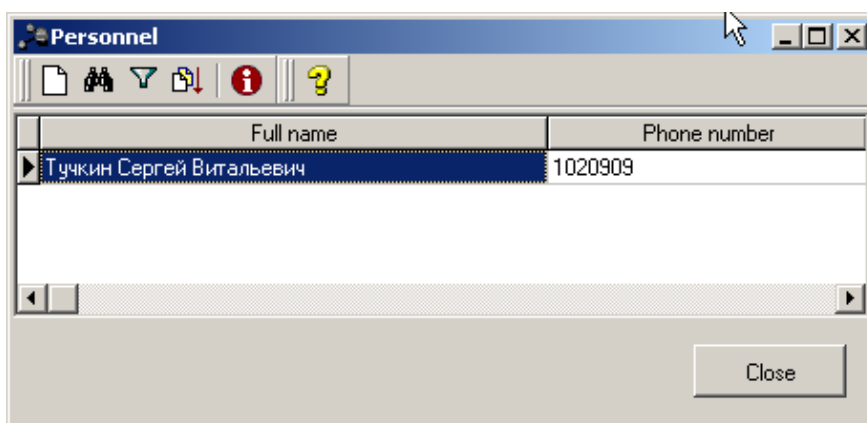
These are the bank part's directories and indexes. You are not authorized to edit them. It is the bank that corrects their data and provides for its accuracy. You can only use them in your work, viz. to view them and export their data into dialog fields, if necessary.

Tip: For details on how to update directories see Processing Directory Replications (under Audit).

Personnel Directory

The **Personnel** Directory can be modified and enlarged by a BS-Client RWS administrator only as the directory stores internal data on a BS-Client workplace.

- To input a new operator, select **Directories → Internal → Personnel**.
⇒ The **Personnel** dialog box appears.



- Press **Ins** to input a new employee.
- ⇒ The **Personnel** window appears.

- Enter data and click **Ok**.

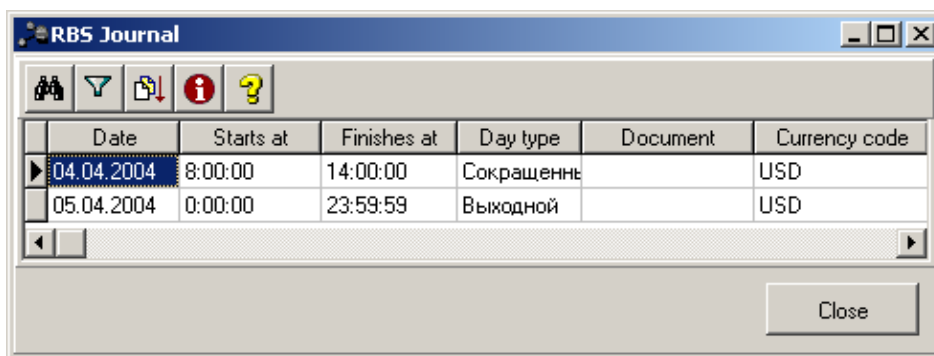
RBS Journal

RBS Journal will keep you informed as to time constraints for certain document types (separately specified for each currency type), which depend on a day of the week and/or a calendar day. The journal is the basis for closing a trading day and posting documents from clients that the bank part receives after the trading day is finished on the next trading day.

It is the Bank that creates and updates the journal. Your serving bank sends you directory updates as replications of the **CALENDAR** table. For details on replications see Processing Directory Replications .

In the client part it is accessible in the view mode only, without the right to alter its data.

- To view the RBS Journal, select **Directories → Internal → RBS Journal**.
- ⇒ The **RBS Journal** window appears with at least one row for each day of the year.

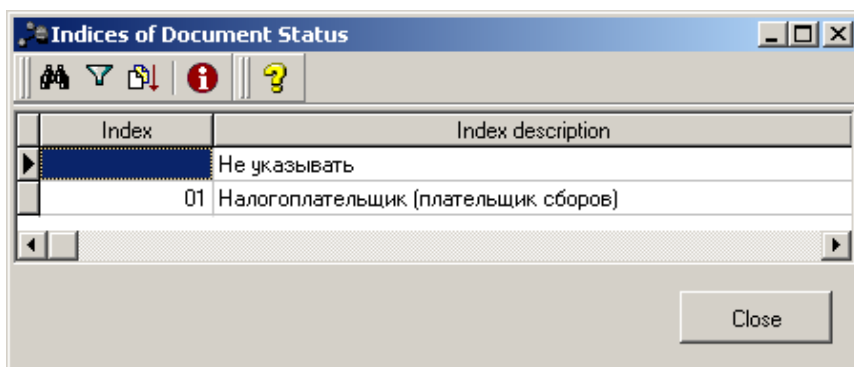


Each date description in RBS Journal is assigned a day type (workday, holiday, shortened working day, plus user-defined types). Each day type has a working period (starting and final time of a trading day).

Document Status Indices Directory

It is the Bank that creates and edits the **Indices of Document Status** directory. In the client part you can only view its data without changing it. The client part's directory is updated through replications.

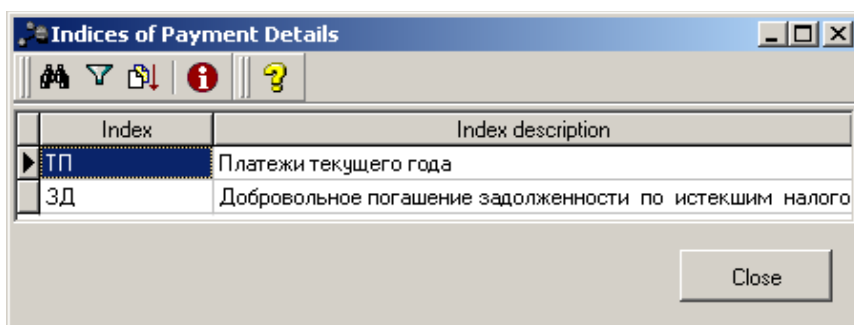
- To view the directory, select **Directories → Corporate → Indices of Document Status**.
- ⇒ The **Indices of Document Status** scroller appears.



Payment Details Indices Directory

It is the Bank that creates and edits the **Indices of Payment Details** directory. In the client part you can only view its data without changing it. The client part's directory is updated through replications.

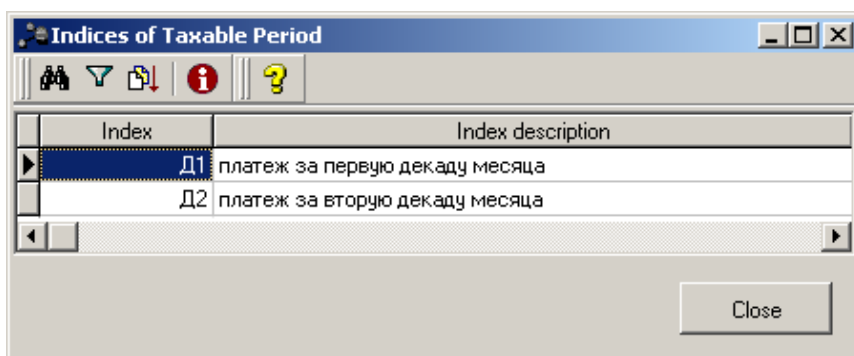
- To view the directory, select **Directories → Corporate → Indices of Payment Details**.
- ⇒ The **Indices of Payment Details** scroller appears. The corresponding dialog has the following fields:



Taxable Period Indices Directory

It is the Bank that creates and edits the **Indices of Taxable Period** directory. In the client part you can only view its data without changing it. The client part's directory is updated through replications.

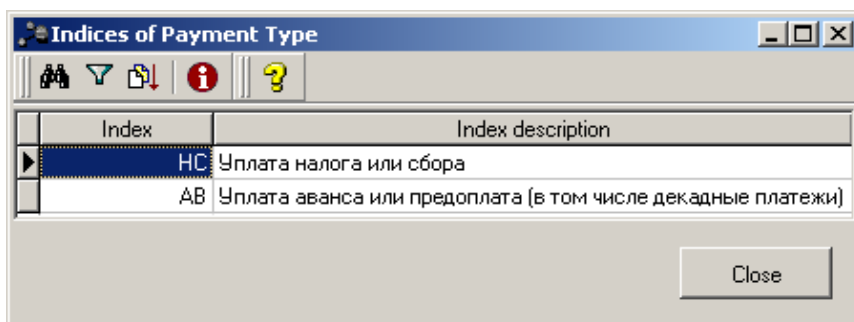
- To view the directory, select **Directories → Corporate → Indices of Payment Details**.
 - ⇒ The **Indices of Taxable Period** scroller appears.



Payment Type Indices Directory

It is the Bank that creates and edits the **Indices of Payment Type** directory. In the client part you can only view its data without changing it. The client part's directory is updated through replications.

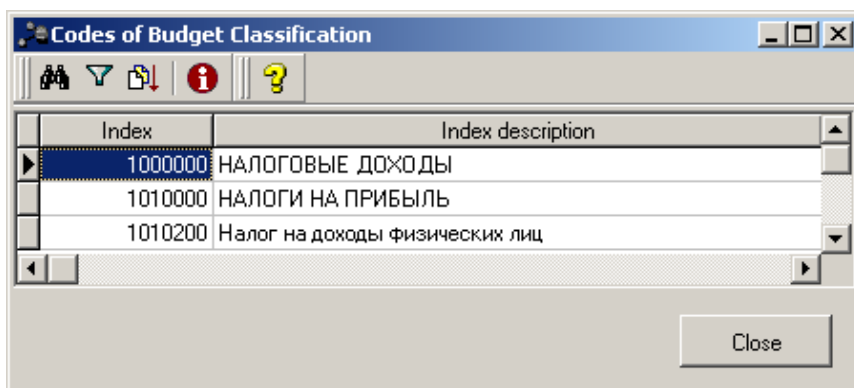
- To view the directory, select **Directories → Corporate → Indices of Payment Type**.
 - ⇒ The **Indices of Payment Type** scroller appears.



Budget Classification Codes Directory

It is the Bank that creates and edits the **Codes of Budget Classification** directory. In the client part you can only view its data without changing it. The client part's directory is updated through replications.

- To view the directory, select **Directories → Corporate → Codes of Budget Classification**.
 - ⇒ The **Codes of Budget Classification** scroller appears.

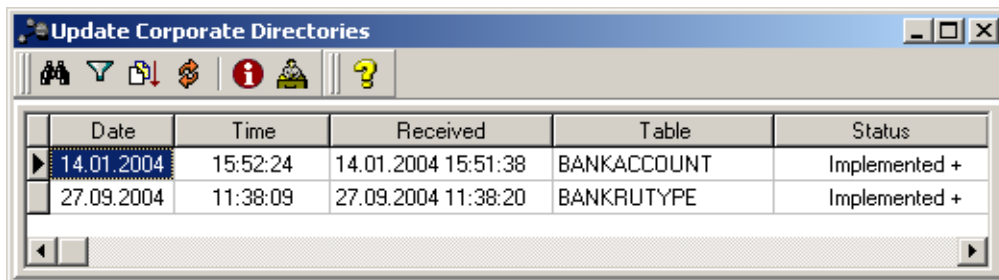


Processing Directory Replications

A user can only view corporate directories and extract values. All modifications and amendments of such directories are performed by the serving bank. The bank part sends updates of directories as replications.

The client part will receive replications from the bank together with statements and other incoming documents at transport subsystem startup. Replications are received and processed automatically.

- To view the list of incoming replications, select **Incoming → Replications**.
 - ⇒ The **Update Corporate Directories** window appears.



All the replications must be **Implemented +**. Should there be any replications with other statuses, it will indicate that there must have been a processing failure. BS-Client will proceed with processing at the next startup.

A user can process a replication manually without restarting the system:

- If you find an **Identified** document, pop up the menu and run **Verify signature**.
 - ⇒ With the process successfully complete, the replication will become **valid EDS**.
- If you find a **valid EDS** document, pop up the menu and run **Process documents**.
 - ⇒ The processed replication will become **Implemented**. The system will send an acknowledgement on replication processing to the bank and the document will become **Implemented +**.

Attention! If replications would not become **Implemented**, contact the BS-Client technical support team for your bank.

BS-Client and Accounting Systems Interoperation

BS-Client supports data exchange with the accounting systems (ASs) 1C, Parus, INFIN. Documents interchange with other ASs is also supported, provided that an AS supports export of documents in the text format, e.g., with BEST-4.

The error log for import of documents is stored in the table accessible at **AS Session → Import Results**. Each document to import passes verifications set up in the system. If a document passes them, it is imported and saved to a corresponding database as **New**. If a document fails, it becomes **Imported**.

All errors detected during import are displayed in the field **Bank's message** of a document.

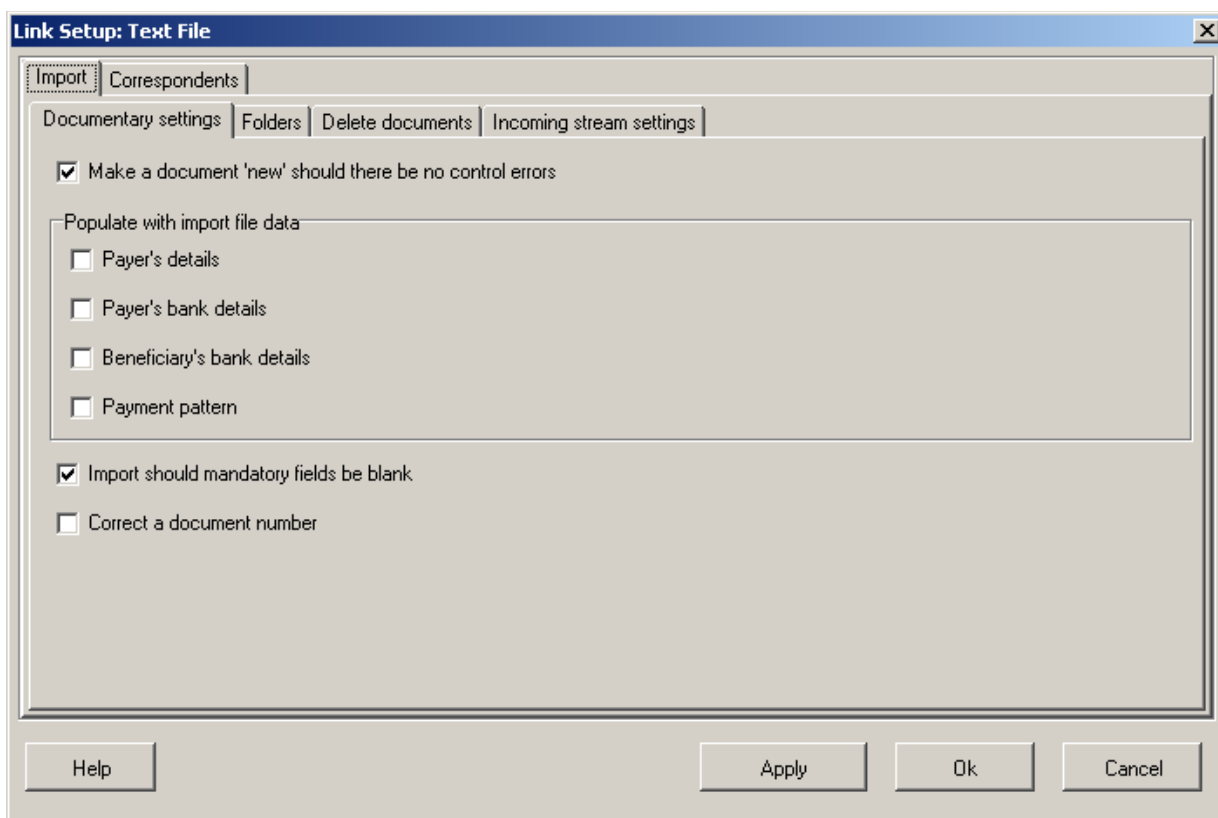
Note: For successful import it is essential that date and number formats of documents to import correspond to those specified in the Regional Settings of your operating system.

Exchanging Documents in Text Format

Attention! For the text link to work properly, you need XML OM for Win32 not later than v.2.0 installed on your workstation.

Text File Link Options

- To set up the Text File Link, select **AS Session → Link Setup: Text File**.
 - ⇒ The **Link Setup: Text File** window appears.



□ Go to the **Documentary settings** sub-tab on the **Import** tab to set up **Make a document 'new' should there be no control errors**

check the option to allow status change of imported documents;

- **the option is checked**

Should imported documents pass the format verification, but fail "required" input verifications, they are imported into BS-Client's database as **Imported**;

Should documents pass both the format verification and "required" or "optional" input verifications, they are imported into BS-Client's database as **New**.

- **the option is un-checked**

Should imported documents pass the formats verification, they are imported into BS-Client's database as **Imported** irrespective of which input verifications are set up, "optional" or "required," and whether the documents pass them or not;

Populate with import file data

Payer's name

if checked, a payer's name will be taken from the import file, if un-checked - from the system directory;

Payer's bank name

if checked, details of a payer's bank will be taken from the import file, if un-checked - from the system directory;

Beneficiary's bank name

if checked, details of a beneficiary's bank will be taken from the import file, if un-checked - from the system directory;

Payment pattern

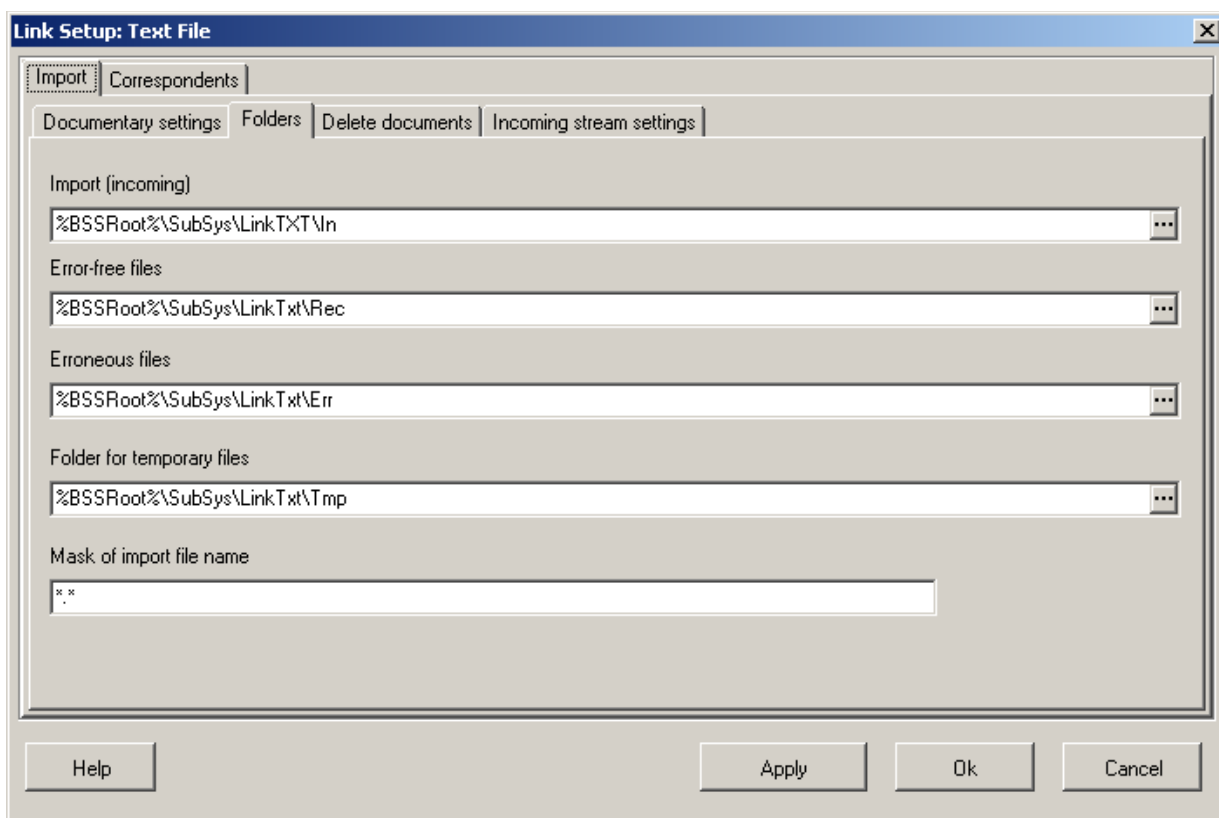
if checked, a payment pattern will be taken from the import file, if un-checked - from the system directory.

Import should mandatory fields be blank

if you check the option, the system will import documents even if the mandatory fields are blank.

Correct a document number

if checked, cut a document number to three digits so that the bank can send the document the RKZ without changing its number; if un-checked, no corrections take place.



- Go to the **Folders** sub-tab on the **Import** tab to set up
 - Import (incoming)** the folder storing the file to be imported. The default folder is %BSSRoot%\SUBSYS\LinkTXT\IN;
 - Error-free files** the folder to transfer the processed import file to; default folder: %BSSRoot%\SUBSYS\LinkTXT\REC;
 - Erroneous files** the folder for erroneous files (here, files with errors detected during import are transferred); default folder: %BSSRoot%\SUBSYS\LinkTXT\ERR;
 - Folder for temporary files** the folder for files being processed; default folder: %BSSRoot%\SUBSYS\LinkTXT\TMP;
 - Mask of import file name** the file to import can have a fixed name; e.g., import.txt.

- Go to the **Delete documents** sub-tab on the **Import** tab to set up
 - Enable document duplication control** check this option to enable/disable the procedure checking for documents' duplicates; if un-checked, the procedure is disabled; the other tab options are not set up;
 - Document type** title of target documents; with **Documents only** checked, the list only displays payment documents; you can set up this for a few or all document types.
 - List of fields to remove** check-list with fields of the documentary table for the **Document type** selected. It is used to compare fields and delete duplicating documents;
 - List of fields for rejection** check-list with fields of the documentary table for the **Document type** selected. It is used to compare fields and reject duplicating documents.

System settings that were not visualized in the dialog but that are applied during import

Purpose	Sub-section	Name	Type	Default value
End-of-document attribute		EndOfSection	Str	;END
Names of fields that cannot be listed among fields used to compare documents and delete duplicating ones. Also, fields of the type "BLOB Table" and "Long binary" cannot be used". (The setting use is RESTRICTED to a private library setup dialog, when you visually compile a list of fields used to compare documents and delete duplicating ones.)	ИМЯ_ТАБЛИЦЫ (table_name)	ExcludeDelete DupFields	Str	DateCreate;TimeCreate ;TableIdent;Status;Date TimeReceive;Service;S ignUID1;CryptoLibID 1;SignUID2;CryptoLib ID2;NoteFromBank;Vi ewFlags;ReceiverOffic ials;DocumentNumber Auto;Client;CustId
List of statuses used when comparing and deleting duplicating documents	ИМЯ_ТАБЛИЦЫ (table_name)	AllowedDelete DupStatuses	Str	1001,1011,32100,3210 1

With the procedure for duplications control enabled and the settings being correct, the system will delete imported documents with duplicating fields from the **list of fields to remove** and CustID. Also, document status must be one from the AllowedDeleteDupStatuses list. Should there be no such documents, the system will check if there are duplications among processed documents that are not subject to deleting. The check will run against fields from the **list of fields for rejection**, CustID, and statuses from the 14.Controls.PAYDOCRU.StatusesForCheckSaldo setting. Should any fitting documents be found, the imported document will be rejected and comments will be provided.

" data-bbox="140 185 907 548"/>

Note: Here, *Incoming stream* is a string, file, or a set of properly filtered files that are processed within one import session.

- Go to the **Incoming stream settings** sub-tab on the **Import** tab to set up
 - Coding** Select coding for data to be imported (DOS, Windows);
 - Token** System line token in headers;
by default: #;
 - Delimiter** First line of each document must have a format name specified:
#|FormatName or #N|FormatName,
where N is a document sequence number within the file; |
is the delimiter (# is the system line token in the header);
by default: |;
 - Correct symbols in incoming stream** Enable/disable the procedure for correcting symbols in incoming streams, following the rules set in the section ChangeIncomingSymbols.RulesOfChange
 - Rules for correcting symbols in incoming stream** №:N - № is replaced with N;
 - Check that symbols in incoming stream are correct** Enable the procedure for checking symbols after they are corrected in the incoming stream. It applies the rules set in the section ChangeIncomingSymbols.RulesOfChange
 - Line of correct symbols** list of allowed characters;
1234567890-=\~!@#\$%^&*()_+|./qwertyuiop[]asdfghjkl;"
zxcvbnm,QWERTYUIOP{}ASDFGHJKL:"ZXCVBNM<>?

Use one-string remarks that begin with //

Longest possible line

ЙцукенгшщзхъфывапролджэячсмитьбюёЙЦУКЕНГШЩ
ЗХЪФЫВАПРОЛДЖЭЯЧСМИТЬБЮЁ

With the option un-checked, you can use one-line remarks in your import file; each remark line must begin with //; longest possible line in incoming stream, with remarks deleted; if zero is specified, line length is not checked.

Link Setup: Text File

Import Correspondents

Import correspondents

%BSSRoot%\SUBSYS\TO_ABS\CORR

Fields displacement	Fields length
Name	Name
0	160
INN	INN
162	13
BIC	BIC
176	9
Cor. a/c	Cor. a/c
184	20
Account	Account
207	20

Help Apply Ok Cancel

- Import settings for correspondents directory are set on the **Correspondents** tab. It is not recommended to change the settings.

Import correspondents

the folder with the correspondents import file;
default folder: %BSSRoot%\SUBSYS\TO_ABS\CORR.

Import Formats

BS-Client supports import of documents from Accounting Systems (ASs). The accounting system must support export of documents in the text format (*.txt)

- To see the set import formats, select **AS Session** → **Document Import Formats**.

Document Import Formats

Format	Remarks
PayDocRu	Платежное поручение
PayDocRuAE	Платежное поручение (расширенный формат)

Close

Note: If there are no import formats in the window, contact the company maintaining your BS-Client v.3.

- Select a format in the window that opens and press **Enter**.

⇒ The **Document Import Format** window appears.

Document Import Format

Format name: PayDocRu Remark: Платежное поручение

Import format description

```
DocumentDate      :Date;
DocumentNumber    :String;
CurrCode          :String;
PayerAccount      :String;
ReceiverBIC       :String;
ReceiverAccount   :String;
```

Actions description

```
PAYDOCRU. %DATECREATE      = %Date;
PAYDOCRU. %TIMECREATE      = %Time;
PAYDOCRU. %TABLEIDENT      = 1;
PAYDOCRU. CLIENT           = %GETCLIENT;
// PAYDOCRU. %CLIENT       = SQL: select Client from ;
PAYDOCRU. STATUS           = 1032101;
PAYDOCRU. CUSTID           = %GETCUSTOMER;
// PAYDOCRU. CUSTID        = SQL: select CustId from ;
PAYDOCRU. SERVICE         = 1;
```

Ok Cancel

The window has three panes. There are **Format name** and **Remark** on the upper pane.

Import format description will display descriptions of fields to import and their types. Descriptions layout:

Field name: Field type.

Model list of fields for the format **PayDocRuXE**:

Field name	Field type	Maximum length	Composition
DocumentDate	Date	10	Creation date
DocumentNumber	String	15	Document number
CurrCode	String	3	Currency code
PayerAccount	String	25	Payer's a/c
ReceiverBIC	String	9	Beneficiary's BIC
ReceiverAccount	String	25	Beneficiary's a/c
Receiver	String	160	Beneficiary's name
ReceiverINN	String	14	Beneficiary's INN
Amount	Money	15	Amount
Ground	String	255	Details of payment
PaymentUrgent	String	2	Payment Queue
PayUntil	Date	10	Due date
OperType	String	2	Transaction type
SendType	String	15	Payment pattern
NDS	Money		VAT
Stat1256	String	2	Status index (101)
PayerKPP	String	9	Payer's KPP (102)
ReceiverKPP	String	9	Beneficiary's KPP (103)
CBCcode	String	20	Budget classification code (104)

OKATOCODE	String	11	OKATO code (105)
PayGrndParam	String	2	Payment details index (106)
TaxPeriodParam:			Taxable period index (107)
TaxPeriodParam1	String	2	TaxPeriodParam1 + '.' + TaxPeriodParam2 + '.' +
TaxPeriodParam2	String	2	TaxPeriodParam3
TaxPeriodParam3	String	4	
DocNumParam:			Document number index (108)
DocNumParam1	String	2	
DocNumParam2	String	15	
DocDateParam:			Document date index (109)
DocDateParam1	String	2	DocDateParam1 (dd), DocDateParam2 (mm),
DocDateParam2	String	2	DocDateParam3 (yyyy)
DocDateParam3	String	4	
PayTypeParam	String	2	Payment type index (110)

Actions description will describe how data is transferred from an import file into the system database. Actions description has the following layout:

Table Name. Field Name = Value;

TableName name of the table where the system inserts a record;
Field name of the field to populate; If it begins with %, the field is mandatory (NotNull);
Value the value to go to the field.
Value can be a macro, constant, field name, or parameter. There can be symbol % or ^^ before a value:
% Macro;
^^ Attribute. Attribute is an internal variable of an import format.

Value can be a variable from the import file. In this case its name is after =. **SQL:** means that an SQL query value will go to the field. If Value is an expression of the type %CONCAT(N1,N2), it means: write value N1, line feed, write value N2. An expression of the type %COLLATE(N1,N2) means that values N1 and N2 are written space-delimited. The following macros are used as Value:

%Data displays the current date;
%Time displays the current time;
%GETCLIENT number of the current client;
%GETCUSTOMER Number of the legal person (used in the bank part for Internet-Client's import format);
%GETSchemeID writes 'New' to the status field.

Attention! Each format description line must end with a semicolon ";"

- To create and new import format, open the index of formats (**Document Import Formats**) and press **Ins**.
⇒ The **Document Import Format** window appears with blank input fields.
- If you want to introduce a new documents import scheme, populate all the fields in the **Document Import Format** dialog. Specify which data to import and how to insert it into the system database (i.e., tables, fields, field types, and other system information).

Import File Layout

When installed, the system has pre-defined import formats: **PayDocRu** (Payment Order), **PayDocRuAE** (Payment Order - advanced format), and **PayDocRuXE** (Payment Order with regard to CBR's Instruction No.1256-Y (rus) of 3 March 2003).

Also, you can create new import formats.

For each document you should specify:

first line format name: #|FormatName or #N|FormatName, where N is the document's sequence number in the file, then the fields delimiter (# is the message line signature in the header);

last line ;end.

Attention! Lines between the first and the last ones must include values in the order described in the field **Import format description** of the dialog **Document Import Format**. Otherwise, when importing into BS-Client, errors will occur and the document will fail import or will be imported with corrupted data.

An import file may include data of any number of any documents that have their import formats described.

- You can delete unused formats. To delete a format, select it and press **Delete**.

Attention! You cannot delete the import format **PayDocRu**!

- By default, model text files **PayDocRuAE** and **PayDocRu** are stored in **%BSSRoot%\SubSys\Import\Rec**. To import them successfully, replace accounts with those registered in the system.

Importing Data into Nested Tables

The current system version supports data import into embedded tables in the text format. Use the following procedure:

1. Go to the import format description to declare nested table variables as **<nested_table_name.field_name>**, where **nested_table_name** will be the name of the field with the nested table, **field_name** – an arbitrary literal that can differ from actual field names in the nested table. Declarations for one nested table must go one after another.
2. Descriptions of actions may contain the order of populating of fields in the nested table. Here, names of the nested table and its fields must coincide with actual field names.
3. To identify the nested table section in an incoming stream, the following system lines are used:

;NestedTable	Declares the beginning of the nested table section. After this the incoming stream transfers the first field of the first record in the nested table.
;EndNestedTableRow	End of nested table record. After this the incoming stream transfers the first field of the next record in the nested table.
;EndNestedTable	End of nested table section. After this the incoming stream transfers the field of the main document.

There can be any number of nested table records. Should there be no data to import into a nested table, specify an empty nested table section.

The example below shows a model format of variables list and a model list of actions. It is not obligatory to specify types of variables in import format descriptions as it is of informative nature only. The system does not process variable types. Values range check runs while populating record fields.

Model:

Import format description	
	DocumentDate :Date; DocumentNumber :String; GroundReceiptsBlob.DocType; GroundReceiptsBlob.DocNumber; GroundReceiptsBlob.DocDate; GroundReceiptsBlob.Amount; ExpenGroundBlob.DocumentType; ExpenGroundBlob.DocumentNumber; ExpenGroundBlob.DocumentDate; ExpenGroundBlob.Amount; CurrCode :String; Amount :Float;
Description of actions	
	MANDATORYCURRSELL. %DOCUMENTDATE = DocumentDate; MANDATORYCURRSELL. %DOCUMENTNUMBER = DocumentNumber; MANDATORYCURRSELL. GROUNDRECEIPTSBLOB.DOCUMENTTYPE = GroundReceiptsBlob.DocType; MANDATORYCURRSELL. GROUNDRECEIPTSBLOB.DOCUMENTNUMBER = GroundReceiptsBlob.DocNumber; MANDATORYCURRSELL. GROUNDRECEIPTSBLOB.DOCUMENTDATE = GroundReceiptsBlob.DocDate; MANDATORYCURRSELL. GROUNDRECEIPTSBLOB.AMOUNT = GroundReceiptsBlob.Amount; MANDATORYCURRSELL. EXPENCEGROUNDBLOB.DOCUMENTTYPE = ExpenGroundBlob.DocumentType; MANDATORYCURRSELL. EXPENCEGROUNDBLOB.DOCUMENTNUMBER = ExpenGroundBlob.DocumentNumber; MANDATORYCURRSELL. EXPENCEGROUNDBLOB.DOCUMENTDATE = ExpenGroundBlob.DocumentDate; MANDATORYCURRSELL. EXPENCEGROUNDBLOB.AMOUNT = ExpenGroundBlob.Amount; MANDATORYCURRSELL. CURRCODE = CurrCode; MANDATORYCURRSELL. AMOUNTREST = Amount; MANDATORYCURRSELL. IncomingDetails = %CONCAT(Amount , SQL: select ISOCode from Currencies where (Code='CurrCode'), (SQL: select BankRu.Name from BankRu,Account where (Account.Account='40100810200050000550') and (Account.BIC=BankRu.BIC)));

Incoming file models	
1	<pre> #1 MandatoryCurrSell 29.02.2004 215 ;NestedTable Type1 1 01.01.2001 1.01 ;EndNestedTableRow Type2 2 02.01.2001 2.02 ;EndNestedTableRow Type3 3 03.01.2001 3.03 ;EndNestedTable ;NestedTable Type4 4 04.01.2001 4.04 ;EndNestedTable 840 10000.3 ;end </pre>
2	<pre> #1 MandatoryCurrSell 29.02.2004 215 ;NestedTable Type1 1 01.01.2001 1.01 ;EndNestedTableRow Type2 2 02.01.2001 2.02 ;EndNestedTableRow Type3 3 03.01.2001 3.03 ;EndNestedTable ;NestedTable ;EndNestedTable 840 10000.3 ;end </pre>

Remarks:

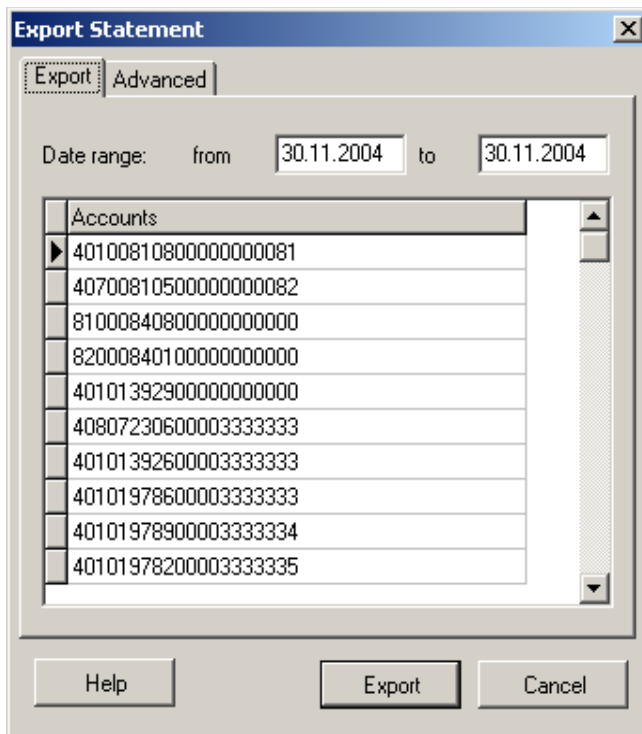
1. In the second example no data will go into the nested table **EXPENCEGROUNDBLOB**.
2. When populating nested table fields, the system will take values of variables from the current line in the nested table being imported as well as from the main record variables. Values of variables in the other lines and values of fields from the other nested tables cannot be taken here.

Statements Export Setup

You can import statements received from the bank into your accounting system in a way similar to import of payment documents from an AS. BS-Client will export data into a text file of the pre-defined format. After that you will have to set up your AS to export the data from the text file.

Depending on your settings, statements can be exported into one or more files.

- To export statements in the text format, select **AS Session → Export Statements to AS**.
⇒ The **Export Statement** dialog box appears.



The window has two tabs **Export** and **Advanced**.

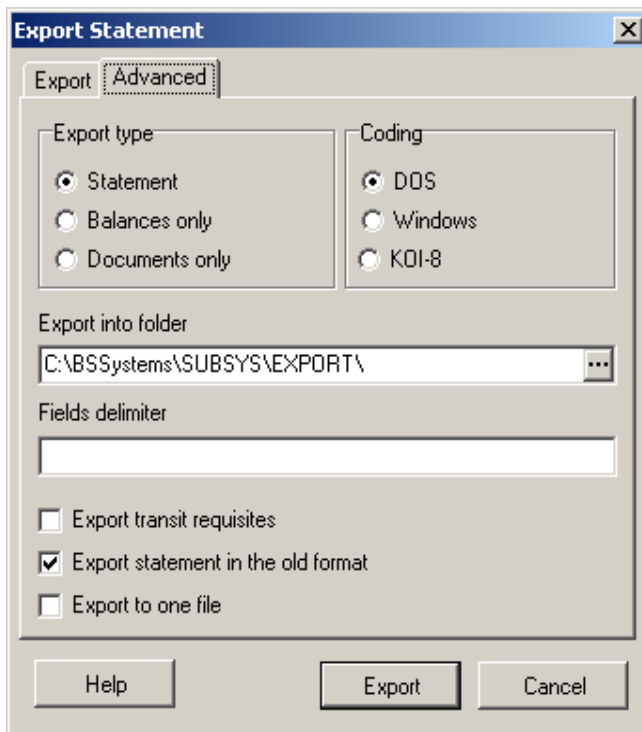
Go to **Export** to set up:

Date range

by default, the system exports today's statements of all the accounts;

Accounts

The system will export statements of all or selected accounts.



Go to **Advanced** to set up:

Export type

Select a **coding**

Export into folder

select a format of the export file,
for data to be exported (DOS, Windows, KOI-8);
Select the folder to export data to (the default folder is
SUBSYS\ EXPORT in the root directory);

Fields delimiter	specify a delimiter for statement fields; the default value is ' ';
Export transit requisites	when checked, transit requisites of statements are exported (p/o fields): digits 1343 – 1713 in the line of the document section DOCUMENTS ; Statement Export File Format see below;
Export statement in the old format	when checked, statements are exported without regard for CBR's instruction No.1256-Y (Russian spelling) of 3 March 2003.
Export statements into one file	when checked, the system exports statements into one file; when un-checked – into separate files.

Statement Export File Format

The file consists of two sections: balances and documents. The balances section begins with **RESTS**, the documents section - with **DOCUMENTS**. All the data is transferred in its fields of certain lengths; fields are delimited by a space.

Tip: You can specify any other delimiter; by default one space is used.

Statements can be exported in the three modes:

- balances only,
- documents only,
- balances + documents.

The balances section (RESTS) contains line of the following formats:

N_e	Field	Position in line	Length	Export modes	Remarks
1	Currency code [account statements][account statements <CurrCode>	1	5	R,A	
2	Account number <Account>	7	36	R,A	
3	Statement date <StatementDate>	44	10	R,A	It is exported in the currently used format of date.
4	Open book balance <OpeningBalance>	55	20	R,A	
5	Debit totals <DebitTurnover>	76	20	R	
6	Credit totals <CreditTurnOver>	97	20	R	
7	Close book balance <ClosingBalance>	118	20	R	
8	Planned balance	139	20	R	Reserved; always 0,00
9	Planned balance <ClosingAvailableBalance>	160	20	A	

Tip: Export mode symbols: R - balances only, A - balances + documents.

Following CBR's instruction No.1256-Y (Russian spelling) of 3 March 2003 and the RF Ministry of taxation's order No.БГ-3-10/98/197/22Н (Russian spelling), formats of some documents in **DOCUMENTS** were modified. Each line in the section will correspond to one document to be exported into the AS. All the fields must begin from the left limit of their line portions and have trailing spaces to match their lengths.

Tip: You can specify any other delimiter; by default one space is used.

The documents section (DOCUMENTS) contains lines of the following formats:

No.	Field	Code 2-II (rus)	Position in line	Length	Remarks
1	Document type		1	1	Always zero
2	Statement account(Account)		3	36	
3	Statement date (StatementDate)		40	10	In the current format of date
4	Document creation date (DocumentDate)		51	10	In the current format of date
5	Currency code (CurrCode)		62	5	
6	Transaction type (OperType)		68	2	
7	Document number (DocumentNumber)		71	16	
8	Payer's a/c (PayerAccount)		88	36	
9	Payer's name (Payer)		125	160	
10	Payer's INN (PayerINN)		286	13	
11	Payer's bank BIC (PayerBIC)		300	12	
12	Cor. a/c of the payer's bank (PayerCorrAccount)		313	36	
13	Payer's bank name (PayerBankName)		350	80	
14	Beneficiary's a/c (ReceiverAccount)		431	36	
15	Beneficiary's name (Receiver)		468	160	
16	Beneficiary's INN (ReceiverINN)		629	13	
17	Beneficiary's bank BIC (ReceiverBIC)		643	12	
18	Cor. a/c of beneficiary's bank (ReceiverCorrAccount)		656	36	
19	Beneficiary's bank name (ReceiverBankName)		693	80	
20	Amount in roubles (Amount)		774	20	
21	Due date (PayUntil)		795	10	In the currently used format of date
22	Payment queue (PaymentUrgent)		806	3	
23	Details of payment (Ground)		810	254	
24	Reserved		1065	1	Always 3
25	Reserved		1067	254	Always blank
26	Reserved		1322	20	Always blank
P/o fields (exported if UnloadOrders = 1)					
27	Payer's a/c (OrderPayerAccount)		1343	25	Blank if UnloadOrders=0
28	Payer's name (OrderPayer)		1368	160	Blank if UnloadOrders=0
29	Beneficiary's a/c (OrderReceiverAccount)		1539	25	Blank if UnloadOrders=0
30	Beneficiary's name (OrderReceiver)		1554	160	Blank if UnloadOrders=0
Fields added following Instruction No.1256-Y (rus) (exported if FmtBef1256 = 0)					
31	Payer's KPP (PayerKPP; NoteFromBank, tag 102)	102	1714	9	
32	Beneficiary's KPP (ReceiverKPP;	103	1724	9	

No.	Field	Code 2-II (rus)	Position in line	Length	Remarks
	NoteFromBank, tag 103)				
33	Status index (Stat1256; NoteFromBank, tag 101)	101	1734	2	
34	Budget classification code (CBCcode; NoteFromBank, tag 104)	104	1737	20	
35	OKATO code (OKATOcode; NoteFromBank, tag 105)	105	1758	11	
36	Payment details index (PayGrndParam; NoteFromBank, tag 106)	106	1770	2	
37	Taxable period index (TaxPeriodParam1+ «.» + TaxPeriodParam2 + «.» + TaxPeriodParam3; NoteFromBank, tag 107)	107	1773	10	
38	Document number index (DocNumParam1+ DocNumParam2; NoteFromBank, tag 108)	108	1783	15	
39	Document date index (DocDateParam1+«.»+DocDateParam2+«.»+DocDateParam3; NoteFromBank, tag 109)	109	1800	10	
40	Payment type index (PayTypeParam; NoteFromBank, tag 110)	110	1811	2	
41	Date of accepting the document for implementation (AcceptDocDate; NoteFromBank, tag 62)	62	1814	10	
42	Date of debiting payer's a/c (ValueDate)	71	1825	10	
Fields added for Instruction No.1256-Y (rus)					
43	Cash register symbol (CashSymbol)		1836	20	
44	Entry amount in functional currency (AmountNat)		1857	20	
45	Trailing space		1878	1	

Tip: Field name are included for links with the release 015.
Tag names stored in **Debet(Credit)Documents.NoteFromBank** are included for links with releases 015.

The planned balance field can be used to transfer any additional parameter (an amount you are allowed to withdraw, account balance with an allowance for unconfirmed amounts, planned turnovers, etc.). In the client part you can view a planned balance in a statement and in the statements scroller.

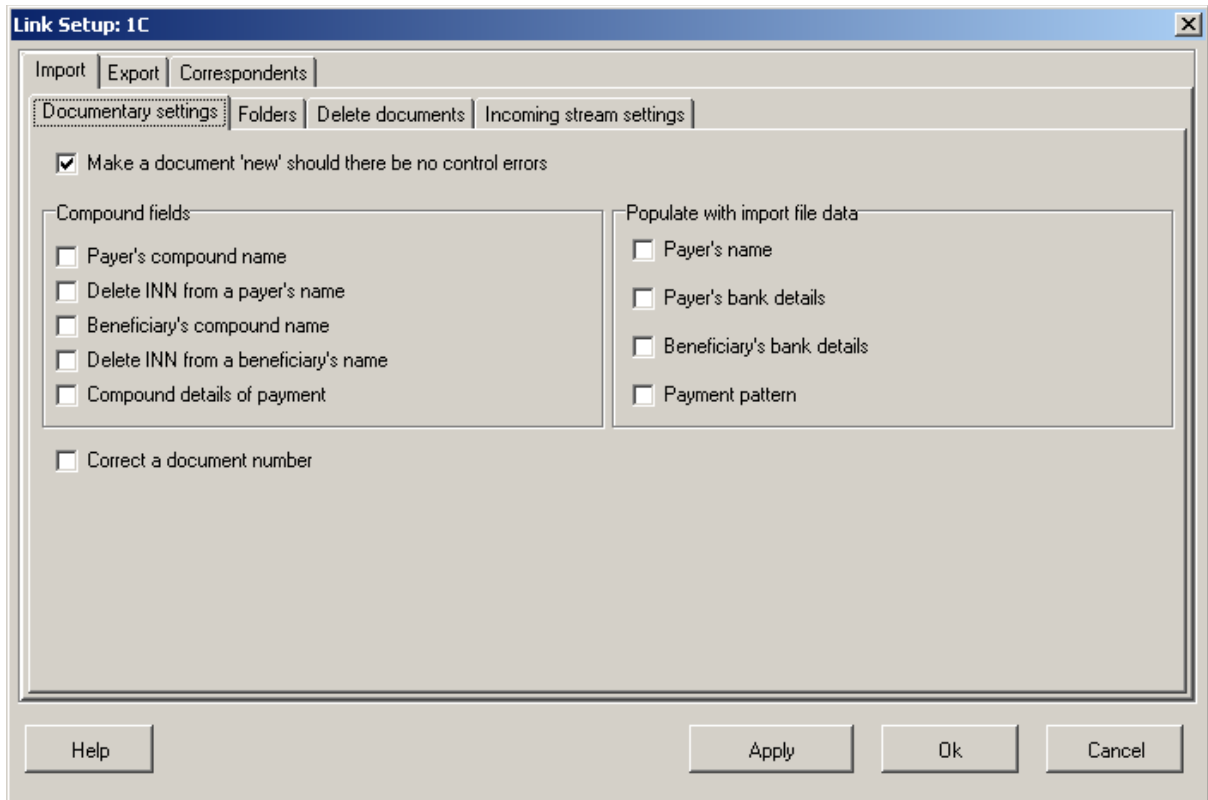
Note: Specify a 4-digit year in all dates.

Interoperation with 1C

1C Link Options

- Select **AS Session** → **Link Setup: 1C**.

⇒ The **Link Setup: 1C** window appears. There are three tabs: **Import**, **Export** and **Correspondents**.



□ Go to the **Documentary settings** sub-tab on the **Import** tab to set up
Make a document 'new' should there be no control errors

check the option so that imported files' statuses can be changed;

- the option is checked

Should imported documents pass the format verification, but fail 'required' input verifications, they are imported into BS-Client's database as **Imported**;

Should documents pass both the format verification and 'required' or 'optional' input verifications, they are imported into BS-Client's database as **New**.

- the option is un-checked

Should imported documents pass the formats verification, they are imported into BS-Client's database as **imported** irrespective of which input verifications are enabled, 'optional' or 'required,' and whether the documents pass them or not;

Compound fields

Payer's compound name

with the option checked, a payer's name is full to involve the payer's legal status, a/c, bank, and bank's city of location.;

if it's un-checked, only a correspondent's name will appear in the field.

Delete INN from a payer's name

if the option is checked, the system checks for the payer's INN and deletes it, if any;

Beneficiary's compound name

with the option checked, a beneficiary's name is full to involve the legal status, settlement a/c, bank, and bank's city of location;

if it's un-checked, only a correspondent's name will appear in the field;

Delete INN from a beneficiary's name	if the option is checked, the system checks for the beneficiary's INN and deletes it, if any;
Compound details of payment	If it's checked, payment details will contain a VAT narrative ;
<u>Populate with import file data</u>	
Payer's name	if checked, a payer's name will be taken from the import file, if un-checked - from the system directory;
Payer's bank name	if checked, details of a payer's bank will be taken from the import file, if un-checked - from the system directory;
Beneficiary's bank name	if checked, details of a beneficiary's bank will be taken from the import file, if un-checked - from the system directory;
Payment pattern	if checked, a payment pattern will be taken from the import file, if un-checked - from the system directory;
Correct a document number	if checked, the system cuts a document number to three digits so that the bank can send the document the RKZ without changing its number; if un-checked, no corrections take place.

Link Setup: 1C

Import | Export | Correspondents

Documentary settings | **Folders** | Delete documents | Incoming stream settings

Import (incoming)
 %BSSRoot%\SubSys\1C\In ...

Error-free files
 %BSSRoot%\SubSys\1C\Rec ...

Erroneous files
 %BSSRoot%\SubSys\1C\Err ...

Folder for temporary files
 %BSSRoot%\SubSys\1C\Tmp ...

Mask of import file name
 1c_to_kl.txt

Help Apply Ok Cancel

□ Go to the Folders sub-tab on the Import tab to set up	
Import (incoming)	the folder storing the file to be imported. default folder: %BSSRoot%\ SubSys\1C\ In ;
Error-free files	the folder to transfer the processed import file to; default folder: %BSSRoot%\ SubSys\1C\Rec;
Erroneous files	the folder for erroneous files (here, files with errors detected during import are transferred); default folder: %BSSRoot%\ SubSys\1C\ Err;
Folder for temporary files	the folder for files being processed; default folder: %BSSRoot%\ SUBSYS\1C\ TMP;
Mask of import file name	The file to import must be 1C_to_KL.txt .

Go to the **Delete documents** sub-tab on the **Import** tab to set up **Enable document duplication control**

Document type

List of fields to remove

List of fields for rejection

check this option to enable/disable the procedure checking for documents' duplicates; if un-checked, the procedure is disabled; the other tab options are not set up;
title of target documents; here we consider a Payment Order;
check-list with PAYDOCRU fields. It is used to compare fields and delete duplicates;
check-list with PAYDOCRU fields. It is used to compare fields and reject duplicates.

System settings that were not visualized in the dialog but that are applied during import

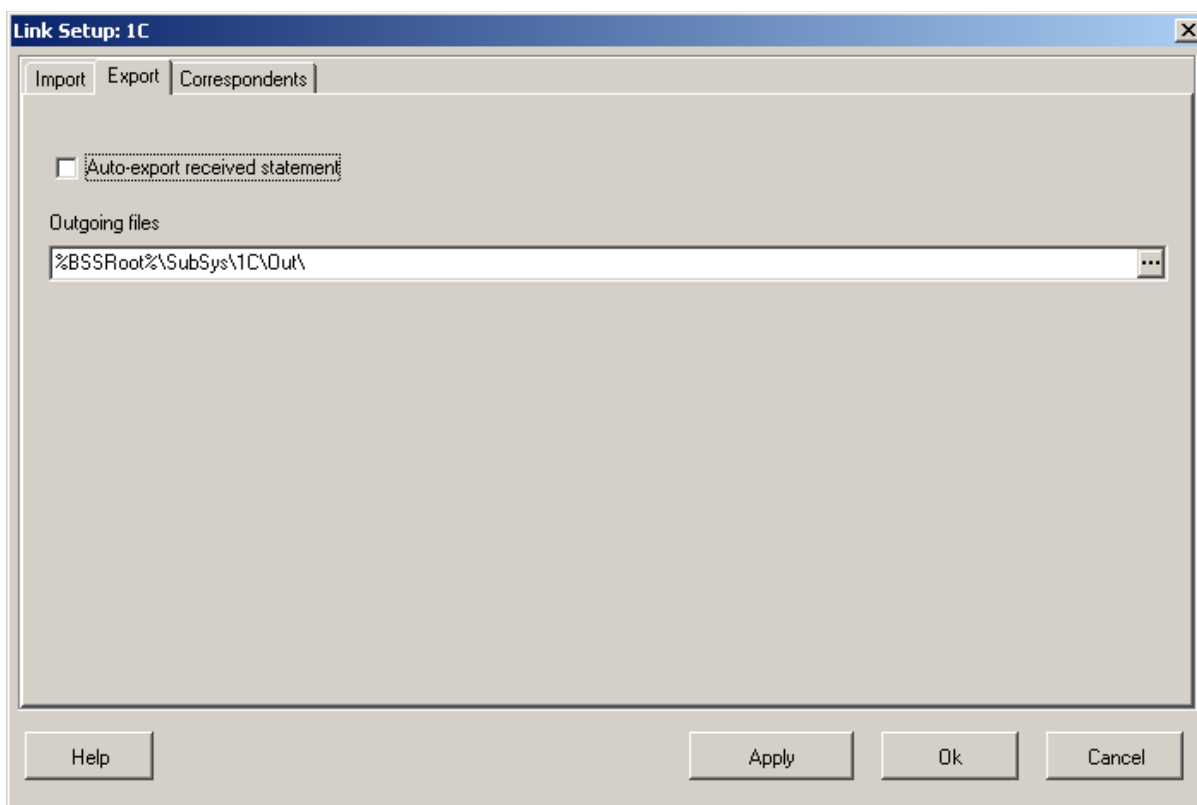
Purpose	Sub-section	Name	Type	Default value
End-of-document attribute		EndOfSection	Str	КонецДокумента (end of document)
Names of fields that cannot be listed among fields used to compare documents and delete duplicating ones. Also, fields of the type "BLOB Table" and "Long binary" cannot be used". (The setting use is RESTRICTED to a private library setup dialog when visually compiling a list of fields used to compare documents and delete duplicating ones.)	ИМЯ_ТАБЛИЦЫ (table_name)	ExcludeDelete DupFields	Str	DateCreate;TimeCreate;TableIdent;Status;DateTimeReceive;Service;SignUID1;CryptoLibID1;SignUID2;CryptoLibID2;NoteFromBank;ViewFlags;ReceiverOfficials;DocumentNumberAuto;Client;CustId
List of statuses used when comparing and deleting duplicating documents	ИМЯ_ТАБЛИЦЫ (table_name)	AllowedDelete DupStatuses	Str	1001,1011,32100,32101

With the procedure for duplication control enabled and the settings in PAYDOCRU being correct, the system will delete imported documents with duplicating fields from the **list of fields to remove** and CustID. Also, document status must be one from the AllowedDeleteDupStatuses list. Should there be no such documents, the system will check if there are duplications among processed documents that are not subject to deleting. The check will run against fields from the **list of fields for rejection**, CustID, and statuses from the 14.Controls.PAYDOCRU.StatusesForCheckSaldo setting. Should any fitting documents be found, the imported document will be rejected and comments will be provided.

" data-bbox="140 181 895 538"/>

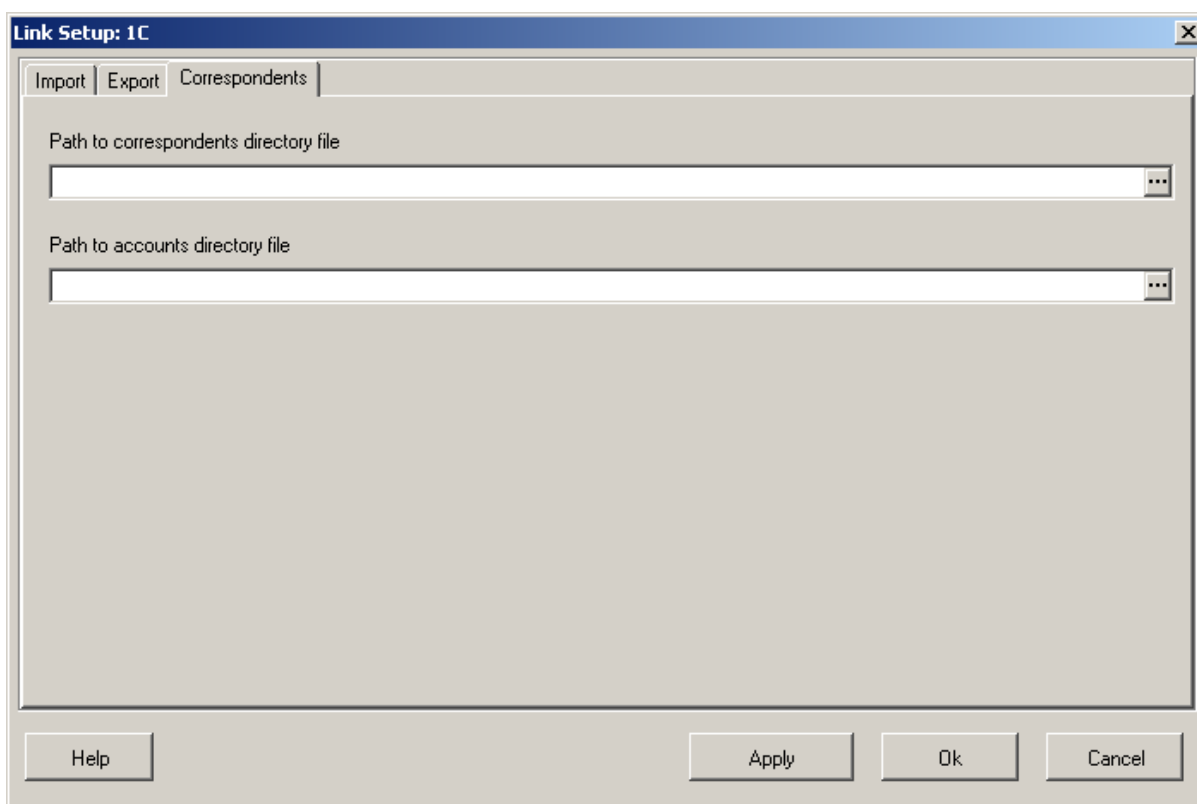
Note: Here, *Incoming stream* is a string, file, or a set of properly filtered files that are processed within one import session.

- Go to the **Incoming stream settings** sub-tab on the **Import** tab to set up
 - Correct symbols in incoming stream** Enable/disable the procedure for correcting symbols in incoming streams, following the rules set in the section `ChangeIncomingSymbols.RulesOfChange`
 - Rules for correcting symbols in incoming stream** №:N -№ is replaced with N;
 - Check that symbols in incoming stream are correct** Enable the procedure for checking symbols after they are corrected in the incoming stream. It applies the rules set in the section `ChangeIncomingSymbols.RulesOfChange` list of allowed characters;
1234567890-=\`~!@#%&^*()_+|./qwertyuiop[]asdfghjkl;"zxcvbnm,QWERTYUIOP{}ASDFGHJKL:"ZXCVBNM<>?ЙцукенгшщзхъфывапролджячсмитьбюёЙЦУКЕНГШЩЗХЪФЫВАПРОЛДЖЯЧСМИТЬБЮЁ
 - Line of correct symbols** With the option un-checked, you can use one-line remarks in your import file; each remark line must begin with //; Longest possible line in incoming stream, with remarks deleted; if zero is specified, line length is not checked.
 - Use one-string remarks that begin with '/'**
 - Longest possible line**



□ Go to **Export** to set up **Auto-export received statement**

if the option is checked, the system will export a statement received from the bank into the corresponding folder; by default, statements are exported into %BSSRoot%\SubSys\1C\ AutoOut\.



□ Go to **Correspondents** to specify the full path to the folders with the settlement accounts directory and the correspondents directory.

Note: Their files must be:

For 1C v. 7.5

Sc46.dbf

file with the correspondents directory;

Sc1183.dbf

file with the checking accounts directory.

For 1C v. 7.7

Sc133.dbf

file with the correspondents directory;

Sc174.dbf

file with the checking accounts directory.

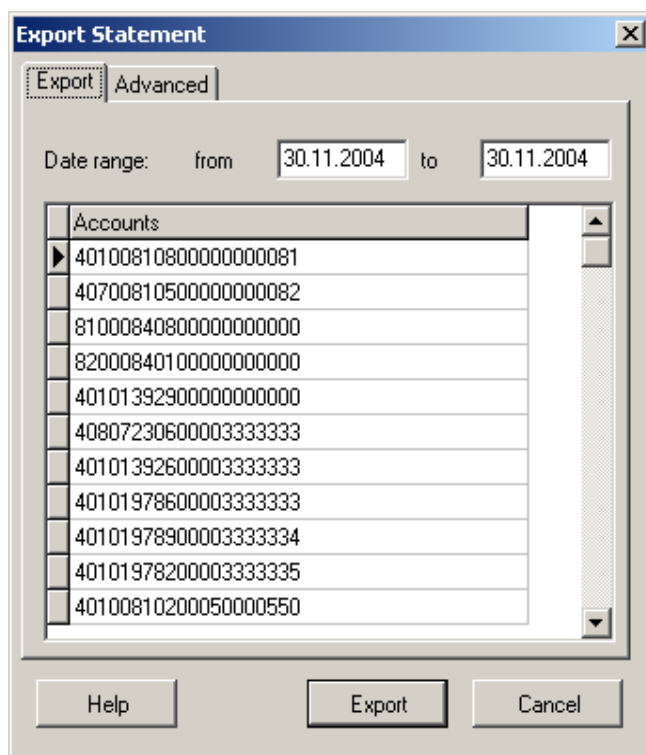
The path to the folder: **(1C installation folder)\1SBDB**.

Caution: When you import correspondents from 1C for the new chart of accounts, it is essential that the 1C correspondents' accounts directory SC174.DBF contain the banks directory files: SC72.dbf and SC72.cdx. Otherwise, import will be incorrect.

Only with the above options set up can you proceed to importing. For more information, see **Operator's Manual** (*bsc_oper_eng.doc*).

Statements Export Setup

- To export statements in 1C format, select **AS Session → Export Statements to 1C**.
- ⇒ The **Export Statement** dialog box appears.



This window has two panes: **Export** and **Advanced**.

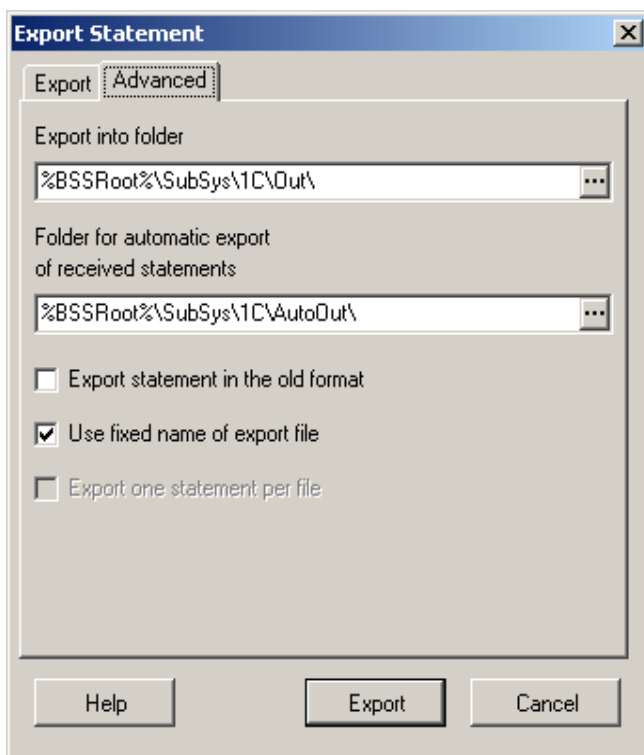
Go to **Export** to set up:

Date range

by default, the system exports today's statements of all the accounts;

Accounts

The system will export statements of all or selected accounts.



Go to **Advanced** to set up:
Export into folder

specify a folder to export data into;;
 default folder: %BSSRoot%\SubSys\1C\Out\;

**Folder for automatic export
 of received statements**

when received from the bank, statements are automatically
 exported into the folder should you set the system
 properly;

Export statement in the old format

default folder: %BSSRoot%\SubSys\1C\AutoOut\;

Use fixed name of export file

When checked, statements are exported without regard for
 CBR's instruction No.1256-Y (rus) of 3 March 2003;

Export one statement per file

If it's checked, the statements export file is **KL_to_1C.txt**;
 statements will be exported into one file;

if it's un-checked, statements are exported into one file.

if it's checked, statements are exported into separate files.

1C to BS-Client Data Transfer

Data is transmitted from 1C into BS-Client in the two stages:

1. At the first stage a 1C user prepares data (payment documents) and uses the 1C data exchange module to create a text file.
2. At the second stage BS-Client reads and processes the file. The processing result is sent to the bank part through telecommunication channels.

When the 1C user starts the export module, s/he must indicate the following in the export setup dialog:

- Types of documents to export. The list of types is governed by 1C's and BS-Client's functionalities.
- The user can select settlement accounts to export payment documents for, as s/he can have several settlement accounts and is free not export all of them (to reduce the data size to transmit at re-export, to transfer documents per different accounts to different banks, etc.).
- The export period. The system will export all the payment documents of the selected types per specified accounts within this period. The export period must be specified so that all the documents entered (edited) since the last export be exported. If the period covers some documents exported earlier, this is not an error.
- The export will result in a text file created. The file will store:
 - Housekeeping information: file format data, creation date/time, etc.

- The export period.
- The list of accounts the documents were exported for.
- The list of exported documents.
- Information about payment documents.

A BS-Client user will start importing from the text file created by 1C, using the following procedure. In this case:

- If BS-Client doesn't support a given type of documents, the import procedure will notify of the fact.
- If an imported document already exists in BS-Client with the same data, it isn't processed.
- If an imported document already exists in BS-Client but with differing data, it is considered corrected; if a document (according to the BS-Client logic) is editable (not signed, not sent to the bank, etc.), it replaces its duplicate in the database.
- If there is no such a document in BS-Client, it is considered new; if a document (according to the BS-Client logic) can be sent to the bank (not expired, etc.), it is inserted into the database.
- In the other cases (e.g., a document is present in BS-Client but with differing data, whereas the one registered with BS-Client was already posted), documents are considered as unable to be processed and the import procedure notifies the user of the occurrences.
- Within the export period, all the documents present in BS-Client (when importing) but missing from the exchange file (and thus not present in 1C) of the selected types of the specified accounts are considered deleted from 1C. In this case:
 - If a document (according to the BS-Client logic) can be deleted (not yet signed, not sent to the bank, etc.), it is deleted in the database.
 - Otherwise, if a document cannot be deleted, the import procedure notifies the user of the occurrence.

BS-Client data is thus synchronized by 1C data.

Use BS-Client to prepare documents for sending to the bank and to receive information from the bank (processing results, account statements, etc.).

BS-Client to 1C Data Transfer

Data is transmitted from BS-Client into 1C in the two stages.

1. At the first stage a user starts data receipt from the bank part to create a text file.
2. At the second stage an ad hoc data exchange module for 1C will read and process the text file.

A BS-Client user starts exporting (statements of settlement accounts) into a file of the agreed format, using the following procedure:

- The user can select settlement accounts to export statements for, as s/he can have several settlement accounts and is free not export all of them (to reduce the data size to transmit at re-export, to transfer documents per different accounts to different banks, etc.)
- The user specifies the export period. The system will export all transactions per specified accounts within this period. The export period must be specified so that all the data edited since the last export be exported. If the period covers some transactions exported earlier, this is not an error.
- The export will result in a text file created. The file will store:
 - System information: file format data, creation date/time, etc.
 - The list of accounts the statements were exported for.
 - The export period.
 - Balances and turnovers of the accounts.
 - Contents of fields per each document, the dates of posting through a/c.

A 1C user will start importing from the text file, using the following procedure:

- If an imported document already exists in 1C with the same data, it isn't processed.
 - If an imported document already exists in 1C but with differing data, it is considered corrected; the import procedure will notify the user of the fact and will offer to edit the existing document.
 - If an imported document does not have a duplicate in 1C, it is considered new and is inserted into the database.
 - Within the export period, all the statements that are present in 1C (when importing) but missing from the exchange file (and thus not present in BS-Client) of the specified accounts are considered deleted from BS-Client and thus will be deleted from 1C database as well.
- 1C data is thus synchronized by BS-Client data.

Data Communication Agreements

- Go to the export and import setups to specify the file names. The default names are as follows:
 - for export – 1c_to_1l.txt.
 - for import – 1l_to_1c.txt.
 - The files are in the text format.
 - Go to the export setup to specify the coding, DOS or Windows.
 - The first file line will contain a special character string - an internal attribute of the 1C - BS-Client data exchange file.
 - It is followed by lines with the housekeeping information.
 - Those are followed by lines with document selection criteria (the period, accounts, document types).
 - The latter (when transferring from BS-Client into 1C) are followed by lines with balances and totals. The order of sections with balances is arbitrary.
 - Each section will contain lines with a/c data. The order of sections is arbitrary.
 - These are followed by sections with information about documents. The order of sections is arbitrary.
 - Each section will include lines with document data. The order of lines within a section is arbitrary.
 - Each section starts and ends with a pre-defined line.
 - Each line (in a section or a housekeeping line) consists of two fields (parts): <ИдентификаторРеквизита='ЗначениеРеквизита'> (Russian for 'ID of attribute'='value of attribute'). The first field, 'ИдентификаторРеквизита' (Russian for 'ID of attribute'), defines the attribute contained in the line. The second field, 'ЗначениеРеквизита' (Russian for 'value of attribute') is the value of the attribute. '=' is the fields delimiter. The present standard defines a set of attribute IDs to use.
 - IDs cannot contain spaces or other delimiters. There should be no spaces before an attribute, before and after = (until the first significant character).
 - Attributes (and, hence, lines) can be mandatory and optional.
- For the structure of exchange files see Data Communication File Structure.

Data Communication File Structure

Below is the list of available system lines, section lines, their ids, their mandatory/optional presence in data exchange process.

Document attribute, system attribute of file	Mandatory		Attribute identifier (in Russian spelling)	Type, max. length	Remarks
	1C -> BS-Client	BS-Client -> 1C			
File header					

Internal attribute of the file			1CClientBankExchange		
General					
Version number	Y	Y	ВерсияФормата	string	1.01
Coding	Y	Y	Кодировка	string	Available: DOS Windows
Sending program	Y	N	Отправитель	string	
Receiving program	N	Y	Получатель	string	
Creation date	N	N	ДатаСоздания	dd.mm.yy yy	
Creation time	N	N	ВремяСоздания	hh:mm:ss	
Selection criteria for data to be exchanged					
Starting date of the range	Y	Y	ДатаНачала	dd.mm.yy yy	This date range is applied to all existing documents
Final date of the range	Y	Y	ДатаКонца	dd.mm.yy yy	
Checking a/c of the organization (several lines are possible)	Y	Y	РасчСчет	20	The a/c is synchronized within the period specified
Document type (several lines are possible)	N	-	Документ	string	Available: Payment Order Letter of Credit (L/C order) Payment Request Collection Order - other
Checking a/c balances to transfer			СекцияРасчСчет		
Attribute opening sections					
Starting date of the range	-	Y	ДатаНачала	dd.mm.yy yy	This date range is applied to all existing documents
Final date of the range	-	N	ДатаКонца	dd.mm.yy yy	
Checking a/c of the organization	-	Y	РасчСчет	20	
Open book balance	-	Y	НачальныйОстаток	roubles[kopecks]	These values are used
Totals of incoming payments	-	N	ВсегоПоступило	roubles[kopecks]	to reconcile with bookkeeping data
Totals of outgoing payments	-	N	ВсегоСписано	roubles[kopecks]	and to verify received
Close book balance	-	N	КонечныйОстаток	roubles[kopecks]	documents of the statement
Attribute finishing sections			КонецРасчСчет		
Payment document section					
Payment document header					
Attribute opening sections, contains the document type			СекцияДокумент=<Вид документа>		Available: Payment Order Letter of credit (L/C order) Payment Request Collection Order - other
Document number	Y	Y	Номер	string	
Document date	Y	Y	Дата	dd.mm.yy yy	
Amount of payment	Y	Y	Сумма	roubles[kopecks]	

Notice of receipt for payment document					
Receipt creation date	-	N	КвитанцияДата	dd.mm.yy yy	Receipts are only sent
Receipt creation time	-	N	КвитанцияВремя	hh:mm:ss	from Client to 1C
Receipt composition	-	N	КвитанцияСодержание	string	
Payer's requisites					
Payer's checking a/c	Y	Y	ПлательщикСчет	20	Payer's checking account with the bank, whether it finances direct settlements or not
Date of debiting the checking a/c	-	Y	ДатаСписано	dd.mm.yy yy	Specified if the document is known to be posted through the payer's checking a/c
Payer	Y	N	Плательщик	string	Payer's name (and name of the bank for non-direct settlements)
Payer's INN	Y	Y	ПлательщикИНН	12	Specify the Payer's INN
Payer's KPP	N	N	ПлательщикКПП	9	Specify the Payer's KPP or zero
For non-direct settlements:					
Payer's name, page 1	Y	N	Плательщик1	string	The payer's name
Payer's name, page 2	N	N	Плательщик2	string	Payer's checking a/c
Payer's name, page 3	N	N	Плательщик3	string	Payer's bank
Payer's name, page 4	N	N	Плательщик4	string	Locality of payer's bank
Payer's checking a/c	Y	N	ПлательщикРасчСчет	20	Payer's cor. a/c
Payer's bank	Y	N	ПлательщикБанк1	string	Financial settlements center for the payer's bank
Locality of payer's bank	Y	N	ПлательщикБанк2	string	Locality of the financial settlements center for the payer's bank
Payer's bank BIC	Y	N	ПлательщикБИК	9	BIC of the financial settlements center for the payer's bank
Payer's cor. a/c	Y	N	ПлательщикКорсчет	20	Cor. a/c of the financial settlements center for the payer's bank
Beneficiary's (contractor's) bank requisites					
Beneficiary's checking a/c	Y	Y	ПолучательСчет	20	The beneficiary's checking a/c with the bank, whether it has direct settlements or not
Date of crediting the checking a/c	-	Y	ДатаПоступило	dd.mm.yy yy	Specified if the document is known to be posted through the beneficiary's checking a/c

Beneficiary	Y	N	Получатель	string	Beneficiary's name (and name of the bank for non-direct settlement)
Beneficiary's INN	Y	Y	ПолучательИНН	12	Specify the beneficiary's INN
Beneficiary's KPP	N	N	ПолучательКПП	9	Specify the beneficiary's KPP or zero
For non-direct settlements:					
Beneficiary's name	Y	N	Получатель1	string	The beneficiary's name
Beneficiary's name, page 2	N	N	Получатель2	string	The beneficiary's settlement a/c
Beneficiary's name, page 3	N	N	Получатель3	string	Beneficiary's bank
Beneficiary's name, page 4	N	N	Получатель4	string	Locality of beneficiary's bank
Beneficiary's checking a/c	Y	N	ПолучательРасчСчет	20	Cor. a/c of beneficiary's bank
Beneficiary's bank	Y	N	ПолучательБанк1	string	Financial settlements center for the beneficiary's bank
Locality of beneficiary's bank	Y	N	ПолучательБанк2	string	Locality of the financial settlements center for the beneficiary's bank
Beneficiary's bank BIC	Y	N	ПолучательБИК	9	BIC of the financial settlements center for the beneficiary's bank
Cor. a/c of beneficiary's bank	Y	N	ПолучательКорсчет	20	Cor. a/c of the financial settlements center for the beneficiary's bank
Payment requisites					
Payment pattern	Y	N	ВидПлатежа	string	Available: почтой (via post) телеграфом (via cable) электронно (via e-means)
Transaction type	Y	N	ВидОплаты	2	
Status of person to execute payment document	N	N	СтатусСоставителя	2	Available: 01,02,03,04,05,06,07, 08
Index of budget classification code	N	N	ПоказательКБК	7	Code index according to RF budgets revenues classification
OKATO	N	N	ОКАТО	11	An OKATO code (OKATO - Russian classification of objects of administrative division) or zero
Index of tax payment details	N	N	ПоказательОснования	2	Available: ТП, ЗД, ТР, РС, ОТ, РТ, ВУ, ПР, АП, АР, zero
Taxable period	N	N	ПоказательПериода	10	

index					
Index of tax document number	N	N	ПоказательНомера	String	
Index of tax document date	N	N	ПоказательДаты	dd.mm.yy yy	
Index of tax payment type	N	N	ПоказательТипа	2	Available: НС, АВ, ПЕ, ПЦ, СА, АШ, ИШ, zero
Due date (of L/C)	N	N	СрокПлатежа	dd.mm.yy yy	In a letter of credit: L/C validity period
Payment queue	N	N	Очередность	2	Not used
Details of payment	N	N	НазначениеПлатежа	string	Details of payment as one row
Details of payment, page 1	N	N	НазначениеПлатежа1	string	Details of payment split into lines
Details of payment, page 2	N	N	НазначениеПлатежа2	string	by the user if
Details of payment, page 3	N	N	НазначениеПлатежа3	string	the sender program allows to populate the field as a multi-line box
Details of payment, page 4	N	N	НазначениеПлатежа4	string	text
Details of payment, page 5	N	N	НазначениеПлатежа5	string	
Details of payment, page 6	N	N	НазначениеПлатежа6	string	
Additional attributes for certain types of documents					
Acceptance period, the number of workdays	N	N	СрокАкцепта	number	
L/C type	N	N	ВидАккредитива	string	
Term of payment, page 1	N	N	УсловиеОплаты1	string	
Term of payment, page 2	N	N	УсловиеОплаты2	string	
Term of payment, page 3	N	N	УсловиеОплаты3	string	
Payment upon presentation	N	N	ПлатежПоПредст	string	
Additional terms	N	N	ДополнУсловия	string	
Contractor's a/c	N	N	НомерСчетаПоставщик а	string	Safe custody account (40901)
Date of sending documents	N	N	ДатаОтсылкиДок	dd.mm.yy yy	
Attribute finishing sections			КонецДокумента		
Attribute finishing files			КонецФайла		

The 'ПлатательщикСчет' ('Payer's a/c') and 'ПолучательСчет' ('Beneficiary's a/c') attributes always contain a payer's and beneficiary's settlement accounts with the banks maintaining them for both direct and non-direct settlements.

- A list of exported documents is only transmitted from 1C into BS-Client. 1C is not expected to support all types of outgoing documents as well as BS-Client is not expected to support all types of outgoing documents. All documents can be transmitted in another direction: BS-Client is assumed to conduct all the operations with a settlement a/c whereas 1Cs is assumed to need them all.

- Sections with balances are only transmitted from BS-Client to 1C. The export procedure will reconcile transmitted data with 1C's inventory data. Any balance calculation periods are acceptable; each settlement a/c can have several sections transmitted (e.g., for each day of your export period).
- In the direction from BS-Client to 1C you can insert a notice of receipt, i.e., additional information (arbitrary line) about status - signed, sent, refused, etc.
- In the direction from BS-Client to 1C a document must contain its posting date through the settlement a/c - the date of debiting (for outgoing payments) or the date of crediting (for incoming payments). Both dates are specified for internal transfers between settlement accounts; BS-Client will have just one document exported into 1C for both transactions.
- Documents are synchronized within periods, i.e., the system exports all the documents of certain types with certain settlement a/c over a certain period. You will have to delete extra ones at re-import.
- Documents are identified by their settlement a/c (the source), document type, date, and number. A settlement a/c isn't assumed to cover several documents of the same type, date, and number. This is mandatory for documents transmitted from 1C to BS-Client.

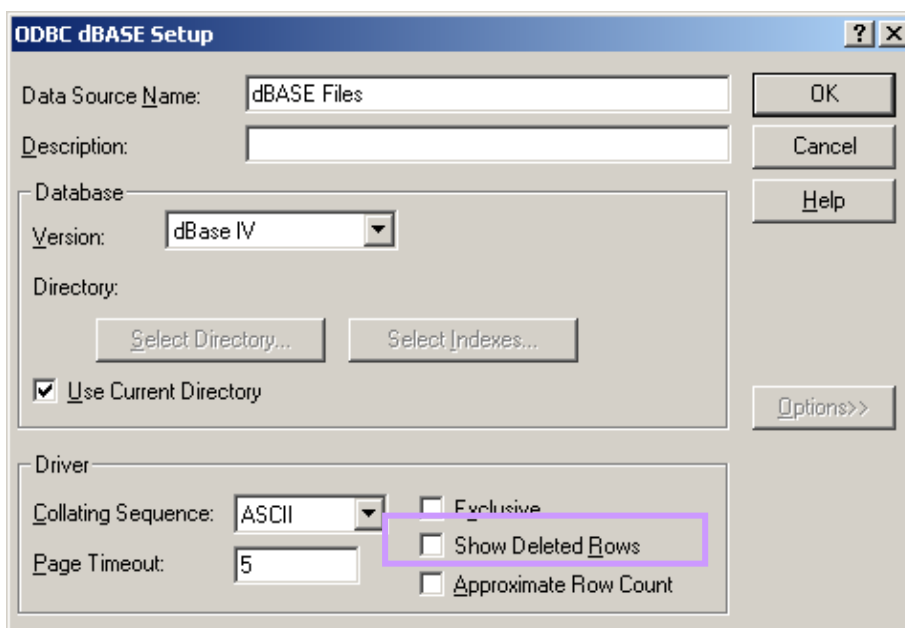
Interoperation with Parus

BS-Client can exchange data with all Parus 7xx. Link with Parus covers: import of rouble payment documents, export of statements, export of the correspondents directory. Data is exchanged through *.dbf files as intermediaries.

The correspondents directory file is referred to through the alias to be pre-created in ODBC.

Driver	Microsoft dBase Driver (*.dbf);
Select directory	'path to the correspondents directory file;'
Version	dBase IV.

When setting up the alias for the correspondents directory file, un-check **Show Deleted Row**.



Parus Link Options

- Select **AS Session** → **Link Setup: Parus**.
 - ⇒ The **Link Setup: Parus** window appears. There are three tabs: **Import**, **Export** and **Correspondents**.

□ Go to the **Documentary settings** sub-tab on the **Import** tab to set up
Make a document 'new' should there be no control errors

check the option so that imported files' statuses can be changed;

- the option is checked

Should imported documents pass the format verification, but fail 'required' input verifications, they are imported into BS-Client's database as **Imported**;

Should documents pass both the format verification and 'required' or 'optional' input verifications, they are imported into BS-Client's database as **New**.

- the option is un-checked

Should imported documents pass the formats verification, they are imported into BS-Client's database as **imported** irrespective of which input verifications are enabled, 'optional' or 'required,' and whether the documents pass them or not;

Populate with import file data

Options payer's bank

if checked, a payer's details will be taken from the import file, if un-checked, from the system directory;

Payer's bank name

if checked, details of a payer's bank will be taken from the import file, if un-checked - from the system directory;

Beneficiary's bank name

if checked, details of a beneficiary's bank will be taken from the import file, if un-checked - from the system directory;

Payment pattern

if checked, a payment pattern will be taken from the import file, if un-checked - from the system directory.

Default transaction type

the default value is 01;

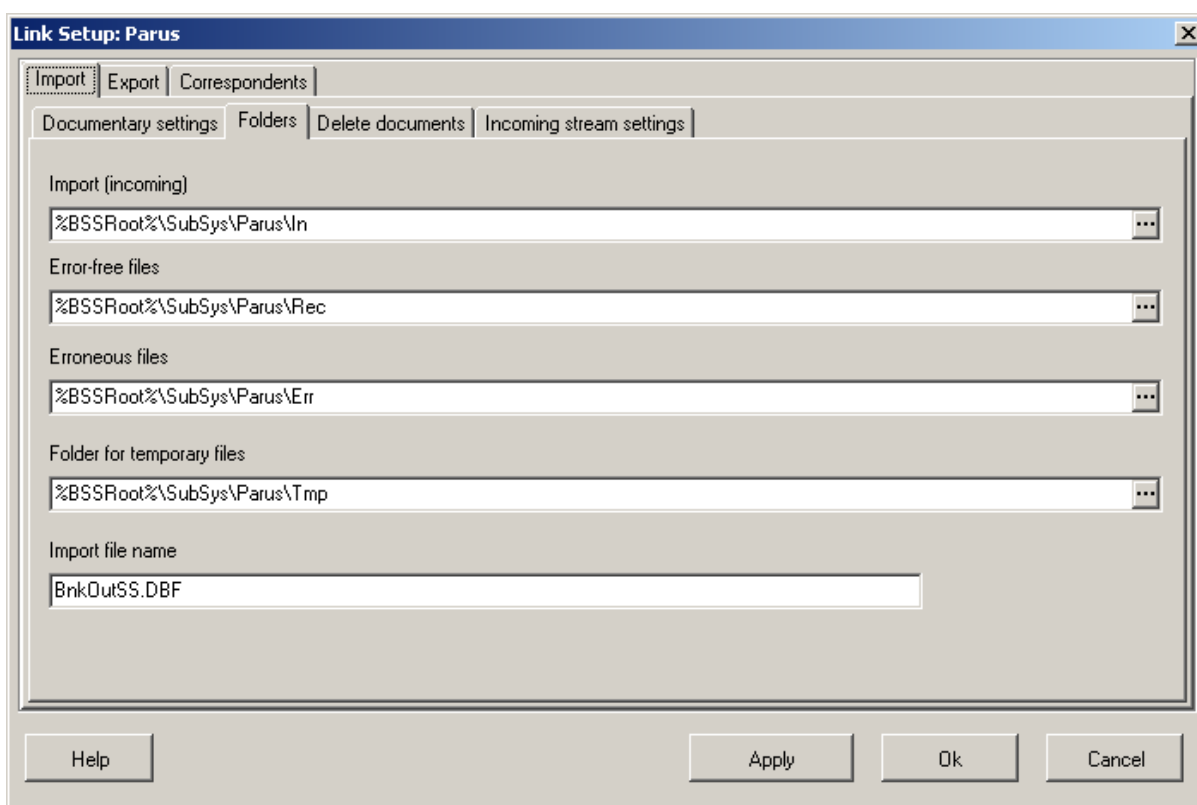
Populate locality type and name for banks

check the option to enable population of locality type and name from the banks directory, for both the payer's and beneficiary's banks;

Correct a document number

if checked, the system cuts a document number to three digits so that the bank can send the document the RKZ

without changing its number; if un-checked, no corrections take place.



- Go to the **Folders** sub-tab on the **Import** tab to set up
- | | |
|-----------------------------------|---|
| Import (incoming) | the folder storing the file to be imported; default folder: %BSSRoot%\ SubSys\ Parus\ In; |
| Error-free files | the folder to transfer the processed import file to; default folder: %BSSRoot%\ SubSys\ Parus\ Rec; |
| Erroneous files | the folder for erroneous files (here, files with errors detected during import are transferred); default folder: %BSSRoot%\ SubSys\ Parus\ Err; |
| Folder for temporary files | the folder for files being processed; default folder: %BSSRoot%\ SUBSYS\ Parus\ Tmp; |
| Import file name | the file to import must have a fixed name set for import files; default name: BnkOutSS.dbf. |

- Go to the **Delete documents** sub-tab on the **Import** tab to set up

Enable document duplication control

Document type

List of fields to remove

List of fields for rejection

check this option to enable/disable the procedure checking for documents' duplicates; if un-checked, the procedure is disabled; the other tab options are not set up;

title of target documents; here we consider a Payment Order;

check-list with fields of the documentary table PAYDOCRU. It is used to compare fields and delete duplicates;

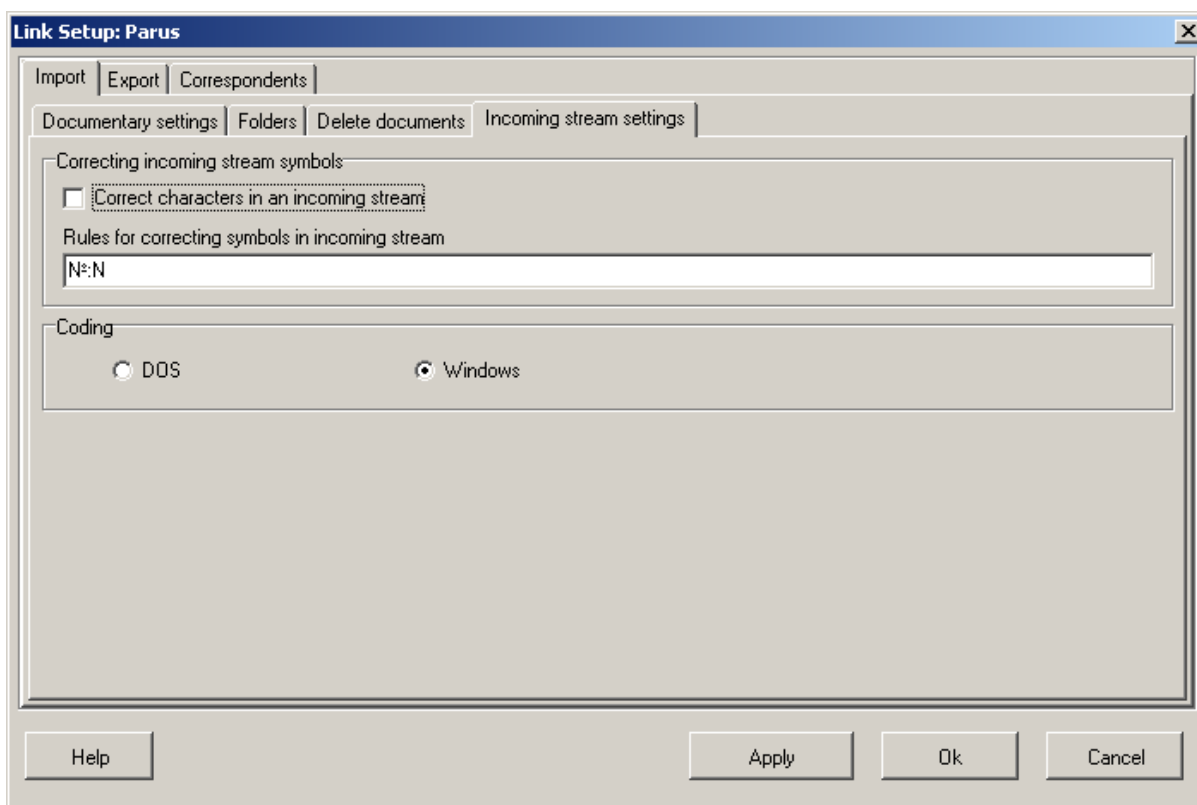
check-list with fields of the documentary table PAYDOCRU. It is used to compare fields and reject duplicates .

System settings that were not visualized in the dialog but that are applied during import

Purpose	Sub-section	Name	Type	Default value
Names of fields that cannot be listed among fields used to compare documents and delete duplicating ones. Also, fields of the type "BLOB Table" and "Long binary" cannot be used". (The setting use is RESTRICTED to a private library setup dialog when visually compiling a list of fields used to compare documents and delete duplicating ones.)	ИМЯ_ТАБЛИЦЫ (table_name)	ExcludeDeleteDupFields	Str	DateCreate;TimeCreate;TableIdent;Status;DateTimeReceive;Service;SignUID1;CryptoLibID1;SignUID2;CryptoLibID2;NoteFromBank;ViewFlags;ReceiverOfficials;DocumentNumberAuto;Client;CustId
List of statuses used when comparing and deleting duplicating documents	ИМЯ_ТАБЛИЦЫ (table_name)	AllowedDeleteDupStatuses	Str	1001,1011,32100,32101

With the procedure for duplication control enabled and the settings in PAYDOCRU being correct, the system will delete imported documents with duplicating fields from the **list of fields to remove** and CustID. Also, document status must be one from the AllowedDeleteDupStatuses list. Should there be no such documents, the system will check if there are duplications among processed documents that are not subject to deleting. The check will run against fields from the **list of fields for rejection**, CustID, and

statuses from the 14.Controls.PAYDOCRU.StatusesForCheckSaldo setting. Should any fitting documents be found, the imported document will be rejected and comments will be provided.



Note: Here, *Incoming stream* is a string, file, or a set of properly filtered files that are processed within one import session.

- Go to the **Incoming stream settings** sub-tab on the **Import** tab to set up
- Correct symbols in incoming stream** Enable/disable the procedure for correcting symbols in incoming streams, following the rules set in the section `ChangeIncomingSymbols.RulesOfChange`
- Rules for correcting symbols in incoming stream** №:N: № is replaced with N;
- Coding** Select coding for data to be imported (DOS, Windows)

Link Setup: Parus

Import Export Correspondents

Export (outgoing)

%BSSRoot%\SubSys\Parus\Out

Files with templates

To export statements

%BSSRoot%\SubSys\Parus\Template\BnkInSS.dbf

File names

of statements export files

BnkInSS.dbf

Help Apply Ok Cancel

Go to **Export** to set up
Export (outgoing)

To export statements

(File names) of statements export files

the folder storing the file to be exported; default folder:
%BSSRoot%\ SubSys\ Parus\ Out\ ;
name of and path to the template of the exported
statements file; by default, %BSSRoot%\ SubSys\ Parus\
Template\ BnkInSS.dbf;
this is the name of the export file for statements. The
default name is BnkInSS.dbf.

Link Setup: Parus

Import Export Correspondents

Files with templates

To export correspondents

%BSSRoot%\SubSys\Parus\Template\OrgInSS.dbf

Default values

Alias of correspondents directory

File names

of correspondents import file

OrOutBSS.dbf

of correspondents export files

OrgInSS.dbf

Help Apply Ok Cancel

□ Go to **Correspondents** to set up
To export correspondents

**Alias of correspondents directory
of correspondents import file**

of correspondents export file

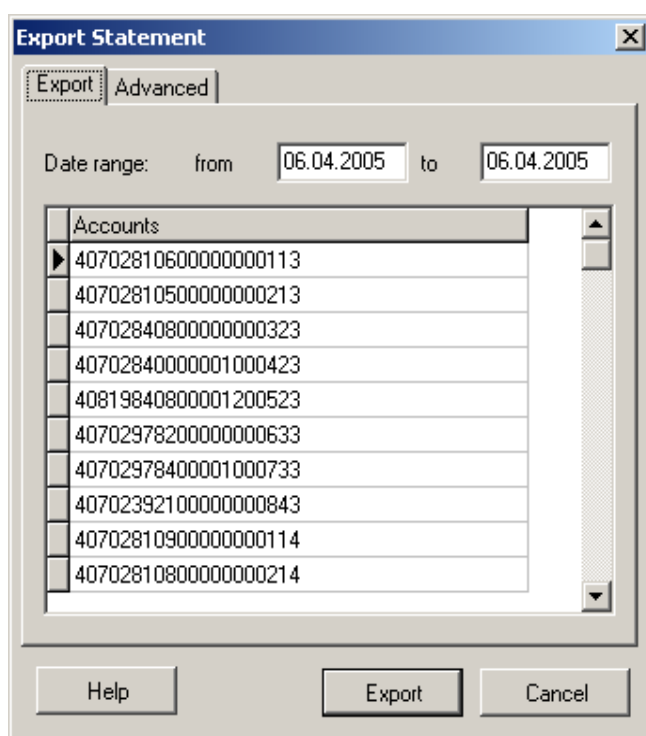
name of and path to the template of the exported
correspondents file; by default, %BSSRoot%\ SubSys\
Parus\ Template\ OrgInSS.dbf;
ODBC alias of the correspondents directory;

name of the import file for the correspondents directory;
The default name is OrOutBSS.dbf;

name of the export file for the correspondents directory;
The default name is OrgInSS.dbf.

Statements Export Setup

- To export statements in the Parus format, select **AS Session → Export Statements to Parus**.
⇒ The **Export Statement** dialog box appears.



The window has two tabs: **Export** and **Advanced**.

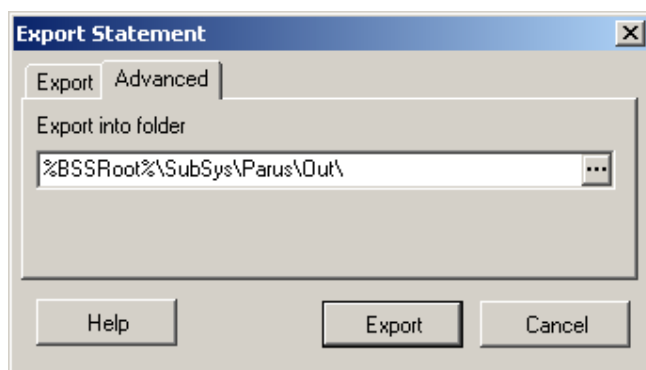
Go to **Export** to set up:

Date range

by default, the system exports today's statements of all the
accounts;

Accounts

The system will export statements of all or selected
accounts.



Go to **Advanced** to set up:

Export into folder

specify a folder to export data into; default folder: SubSys\Parus\Out in the main system directory;

Rouble Payment Documents Import

The system imports documents from a DBF file with a standard name. Name of and path to the file are specified by the attributes (**BnkOutSS.dbf** and **%BSSRoot%\SubSys\Parus\In**, correspondingly). Should there be no import file in the specified folder, a system notification appears.

For each document to import, the system verifies that the table of payment documents PayDocRu doesn't contain any other payment documents with the same DocumentNumber, DocumentDate, and PayerAccount. Should it find such a document, it checks the status. If the status allows to replace the document (e.g., new or imported), the user will be asked whether to replace the existing document with the new one or skip it. Statuses that allow replacement are specified in the attribute **LinkBS.Parus.ReplaceStatusList**.

The system verifies a document before inserting it. Should **Change status** be checked and imported documents pass the format verification, but fail "required" input verifications, they are imported into BS-Client's database as **Imported**. Should **Change status** be checked and documents pass both the format verification and "required" or "optional" input verifications, they are imported into BS-Client's database as **new**. Should **Change status** be un-checked and imported documents pass the formats verification, they are imported into BS-Client's database as **Imported** irrespective of which input verifications are set up, "optional" or "required," and whether the documents pass them or not.

All import information is stored in the DocImport table. Should there occur any import or verification errors, they go to the DocImport table as well (a table row number corresponds to a DBF file record number). With the import complete, an import results notification appears (the number of imported records and erroneous documents, etc.).

Should the import complete error-free, the import file goes to the processed files folder (the attribute **%BSSRoot%\SubSys\Parus\Rec**). Should it contain at least one erroneous document, the whole file goes to the erroneous files folder (the attribute **%BSSRoot%\SubSys\Parus\Err**).

Exporting Statements

Statements are exported into a DBF file. For export file fields description see File for Exporting Documents to Parus: BankInSS. For export to be proper, the template file is used, i.e., a DBF file with a pre-defined structure and blank fields. Path to and name of such a file are specified in the attribute **%BSSRoot%\SubSys\Parus\Template\BankInSS.dbf**. Before starting to export statements, the system copies the template file to the export folder (the attribute **%BSSRoot%\SubSys\Parus\Out**) and exports statements into it.

For export of statements, the existing accounts and specified date ranges are checked and, if required, the export folder.

With the export complete, an export results notification appears: the number of exported statements, documents, and records.

All error messages go to the log file. Export result messages are also stored in this log file.

Correspondents Import

The system imports the correspondents directory from a DFB file. For the import file format see File for Importing Correspondents from Parus: OrgOutSS. Name of and path to the import file are stored in **%BSSRoot%\SubSys\Parus\Template\OrgOutSS.dbf**. If you only specified a name (and no path), the path will be taken from **%BSSRoot%\SubSys\Parus\In**.

Data is imported into the directories Corresp and CorrAccount.

With the import complete, the file goes to the processed or erroneous files folder depending on the result (the folders are specified in **%BSSRoot%\SubSys\Parus\Rec** and **%BSSRoot%\SubSys\Parus\Err**, accordingly). Also, an import result notification appears (the number of imported records, clients, and accounts). The same data is saved to the log file.

Note: The correspondents directory file is called by the alias to be pre-created in ODBC. Refer to [Interoperation with Parus](#) for alias settings. Until you properly set up a correspondents directory alias, no data import can take place.

Correspondents Export

The correspondents directory Corresp and the correspondents' accounts directory CorrAccount are exported into a DBF. For the file format details see File for Exporting Correspondents to Parus: OrgInSS. The system exports data using the template file stored in the setup %BSSRoot%\SubSys\Parus\Templates\OrgInSS.dbf (name and path). Copy the template file to the export folder (%BSSRoot%\SubSys\Parus\Out) and export all the correspondents and their accounts into it. The file name is stored in the setup (OrgInSS.dbf).

With the export complete, a notification appears with the number of exported records, correspondents, and accounts. The same data is saved to the log file.

Tip: The correspondents directory file is called by the alias to be pre-created in ODBC. Refer to [Interoperation with Parus](#) for alias settings.

Parus - BS-Client v.3 Documents Correlation

In its standard suite BS-Client imports the following documents from Parus:

- Rouble Payment Order;
- Correspondents Directory.

BS-Client exports the following documents into Parus:

- Account Statement;
- Correspondents Directory.

File for Exporting Documents to Parus: BankInSS

No	Field name	Length	Composition	Remark/RBS field
1*	TYP_DOC	N(1,0)	Record type	0 – document, 1– statement
2*	NUM_DOC	C(12)	Document number	
3*	DATE_DOC	Date	Document date	
4-	ORG_FR	C(15)	Short code of Correspondent From	
5	ORG_FN	C(255)	Name of Correspondent From	Payment From
6	ORG_FC	C(3)	Country code of Correspondent From.	ISO code (643 for Russia)
7*	ORG_FS	C(25)	Account of Correspondent From	For a statement - account of the statement
8	ORG_FI	C(14)	INN of Correspondent From	
9*/	ORG_FB	C(9)	BIC of Correspondent From	
10	ORG_FKS	C(25)	Cor. a/c of Correspondent From	
11	ORG_FBN	C(80)	Bank name of Correspondent From	
12	ORG_FBSN	C(25)	Locality name of Correspondent From	
13	OR_FBSNT	C(5)	Short name of the locality of Correspondent From	
14-	ORG_TR	C(15)	Short code of Correspondent To	
15	ORG_TN	C(255)	Name of Correspondent To	Payment To
16	ORG_TC	C(3)	Country code of Correspondent To.	
17*/	ORG_TS	C(25)	Account of Correspondent To	
18	ORG_TI	C(14)	INN of Correspondent To	
19*/	ORG_TB	C(9)	BIC of Correspondent To	
20	ORG_TKS	C(25)	Cor. a/c of Correspondent To	

21	ORG_TBN	C(40)	Bank name of Correspondent To	
22	ORG_TBSN	C(25)	Locality name of Correspondent To	
23	OR_TBSNT	C(5)	Short name of the locality of Correspondent To	
24	NOTE	C(255)	Details of payment	
25*/	CURR	C(3)	Currency (code)	ISO code (810 for RUR)
26*/	SUMMA_DOC	N(18,2)	Document amount	For document
27-	ST_NDS	N(8,4)	VAT rate	For document
28-	SUMMA_NDS	N(18,2)	VAT amount	For document
29-	DATE_PAY	Date	Due date	
30	APP_PAY	N(1,0)	Payment pattern	0 – via post, 1 – via cable, 2 – via e-means, 3 – blank
31*	STATM_ID	N(10,0)	Statement ID	For a statement - a unique statement number. For a document - number of the statement it corresponds to. It is this field that "associates" documents with statements.
31/*	TURN_DB	N(18,2)	Debit totals	For statement
32/*	TURN_KR	N(18,2)	Credit totals	For statement
33/*	REST_IN	N(18,2)	Open book balance	For statement
34/*	REST_OUT	N(18,2)	Close book balance	For statement
44	PayerKPP	C(9)	Payer's KPP (102)	PayerKPP
45	ReceiverKPP	C(9)	Beneficiary's KPP (103)	ReceiverKPP
46	Stat1256	C(2)	Status index (101)	Stat1256
47	CBCcode	C(19)	Budget classification code (104)	CBCcode
48	OKATOcode	C(11)	OKATO code (105)	OKATOcode
49	PayGrndParam	C(2)	Payment details index (106)	PayGrndParam
50	TaxPeriodParam1	C(2)	Taxable period index (107), digits 1-2	(107) = TaxPeriodParam1 + '.' + TaxPeriodParam2 + '.' + TaxPeriodParam3
51	TaxPeriodParam2	C(2)	Taxable period index (107), digits 4-5	
52	TaxPeriodParam3	C(4)	Taxable period index (107), digits 7-10	
53	DocNumParam	C(15)	Document number index (108)	Divide into fields DocNumParam1 (the 2 leading digits), DocNumParam2 (the other digits)
54	DocDateParam	Date	Document date index (109)	Divide into fields DocDateParam1 (dd), DocDateParam2 (mm), DocDateParam3 (yyyy)
55	PayTypeParam	C(2)	Payment type index (110)	PayTypeParam

File for Importing Documents from Parus: BankOutSS

No	Field name	Length	Composition	Remark/RBS field
1*	TYP_DOC	N(1,0)	Document type	0 – Payment Order
2*	NUM_DOC	C(12)	Document number	
3*	DATE_DOC	Date	Document date	
4-	NUM_BASE	C(12)	Grounding document number	
5-	DATE_BASE	Date	Grounding document date	
6-	ORG_FR	C(15)	Short code of Correspondent From	
7	ORG_FN	C(255)	Name of Correspondent From	Payment From
8-	ORG_FOKP	C(25)	OKPO code of Correspondent From	
9-	ORG_FOKF	C(2)	OKFS code (All-Russian legal forms classification code) of Correspondent From	
10-	ORG_FOKN	C(25)	OKONH code (Standard industrial classification code) of Correspondent From	
11-	ORG_FBM	C(15)	Short bank code of Correspondent From	
12	ORG_FBN	C(255)	Bank name of Correspondent From	
13*/	ORG_FBB	C(20)	Bank BIC of Correspondent From	
14-	ORG_FBOK	C(25)	OKPO code of bank of Correspondent From	
15-	ORG_FBKP	C(2)	OKFS code of bank of Correspondent From	
16-	ORG_FBKN	C(25)	OKONH code of bank of Correspondent From	
17*	ORG_FS	C(25)	Account of Correspondent From	
18*/-	ORG_FI	C(14)	INN of Correspondent From	
19-	ORG_FB	C(9)	BIC of Correspondent From	
20-	ORG_FKS	C(25)	Cor. a/c of Correspondent From	
21-	ORG_TR	C(15)	Short code of Correspondent To	
22*	ORG_TN	C(255)	Name of Correspondent To	Payment From
23-	ORG_TOKP		OKPO code of Correspondent From	
24-	ORG_TOKF		OKFS code of Correspondent To	
25-	ORG_TOKN		OKONH code of Correspondent To	
26-	ORG_TBM	C(15)	Short code of bank of Correspondent To	
27	ORG_TBN	C(255)	Bank name of Correspondent To	
28*/	ORG_TBB	C(20)	Bank BIC of Correspondent To	
29-	ORG_TBOK		OKPO code of bank of Correspondent To	
30-	ORG_TBKP		OKFS code of bank of	

			Correspondent To	
31-	ORG_TBKN		OKONH code of bank of Correspondent To	
32*	ORG_TS	C(25)	Account of Correspondent To	
33*/-	ORG_TI	C(14)	INN of Correspondent To	
34-	ORG_TB	C(9)	BIC of Correspondent To	
35-	ORG_TKS	C(25)	Cor. a/c of Correspondent To	
36*	NOTE	C(255)	Details of payment	
37*	CURR	C(3)	Currency (code)	ISO code (810 for RUR)
38*	SUMMA_DOC	N(18,2)	Document amount	
39	ST_NDS	N(8,4)	VAT rate	
40	SUMMA_NDS	N(18,2)	VAT amount	
41-	DATE_PAY	Date	Due date	
42/-	APP_PAY	N(1,0)	Payment pattern	0 – via post, 1 – via cable, 2 – via e-means, 3 – blank
43*/-	TURN_PAY	N(2,0)	Payment queue	
44	PayerKPP	C(9)	Payer's KPP (102)	PayerKPP
45	ReceiverKPP	C(9)	Beneficiary's KPP (103)	ReceiverKPP
46	Stat1256	C(2)	Status index (101)	Stat1256
47	CBCcode	C(19)	Budget classification code (104)	CBCcode
48	OKATOcode	C(11)	OKATO code (105)	OKATOcode
49	PayGrndParam	C(2)	Payment details index (106)	PayGrndParam
50	TaxPeriodParam1	C(2)	Taxable period index (107), digits 1-2	(107) = TaxPeriodParam1 + '.' + TaxPeriodParam2 + '.' + TaxPeriodParam3
51	TaxPeriodParam2	C(2)	Taxable period index (107), digits 4-5	
52	TaxPeriodParam3	C(4)	Taxable period index (107), digits 7-10	
53	DocNumParam	C(15)	Document number index (108)	Divide into fields DocNumParam1 (the 2 leading digits), DocNumParam2 (the other digits)
54	DocDateParam	Date	Document date index (109)	Divide into fields DocDateParam1 (dd), DocDateParam2 (mm), DocDateParam3 (yyyy)
55	PayTypeParam	C(2)	Payment type index (110)	PayTypeParam

File for Exporting Correspondents to Parus: OrgInSS

No	Field name	Length	Composition	Remark/RBS field
1*	TYP_INF	N(1,0)	Correspondent information token	0 – common, 1 – bank requisites, 2 – addresses, 3 – contacts. Type 0 defines a correspondent, information of types 1, 2, 3 is composed from the field ORG_ID. One ORG_ID value can correspond to several records of types 1,2,3 and one of type 0 (a correspondent can have several addresses, banks, etc.).
2*	ORG_ID	N(10,0)	Company ID	Populate for type 0,1,2,3
3*///	ORG_NAME	C(255)	Full company name	Populate for type 0
4	ORG_BYN	N(1,0)	Bank token	0 – bank, 1 – not bank. Populate for type 0
5	ORG_RYN	N(1,0)	Resident token	0 – resident, 1 – non-resident. Populate for type 0
6	ORG_BIK	C(20)	BIC	Populate for type 0
7	ORG_INN	C(12)	INN	Populate for type 0
8	ORG_OKP	C(25)	OKPO	Populate for type 0
9-	ORG_OKF	C(2)	OKFS	Populate for type 0
10-	ORG_OKN	C(25)	OKONH	Populate for type 0
11/*//	ORG_ACC	C(20)	Checking account	Populate for type 1
12/*//	ORG_CURR	C(3)	Currency	Populate for type 1
13/*//	ORG_KACC	C(20)	Cor. a/c	Populate for type 1
14	ORG_BMN	C(80)	Short name of company's bank	Populate for type 1
15	ORG_BNAM	C(255)	Full name of company's bank	Populate for type 1
16/*//	ORG_BBIK	C(20)	Company's bank BIC	Populate for type 1
17	ORG_CNM	C(15)	Country mnemo-code	Populate for type 2
18	?	C(255)	Country name	
19	ORG_CNAM	C(3)	Country OKSM code	Populate for type 2
20	ORG_MNR	C(15)	Domain mnemo-code	Populate for type 2
21	ORG_NAMR	C(255)	Domain name	Populate for type 2
22-	ORG_RCOG	C(2)	Domain SOGNI code	Populate for type 2
23-	ORG_ROK	C(11)	Domain OKAR code	Populate for type 2
24-	ORG_RNAM	C(40)	Region name	Populate for type 2
25-	ORG_RTN	C(15)	Region type name	Populate for type 2
26	ORG_NP	C(40)	Locality name	Populate for type 2
27	ORG_NPT	C(15)	Locality type name	Populate for type 2
28	ORG_ADDR	C(255)	Address	Populate for type 2
29	ORG_IND	C(6) {10}	Zip/Post code	Populate for type 2
38	ORG_ADRT	N(1,0)	Address type	0 – not defined, 1 – actual, 2 – legal, 3 – for transfers. Populate for type 2

39	ORG_KNAM	C(80)	Contact person's name	Populate for type 3
40	ORG_TEL	C(20) {40}	tel.	Populate for type 3
41	ORG_FAKS	C(20)	fax	Populate for type 3
42	ORG_EMAL	C(80)	E-mail	Populate for type 3
43	ORG_KPP	C(9)	Beneficiary's KPP (103)	ReceiverKPP, Populate for type 1
44	OKATOcode	C(11)	OKATO code (105)	OKATOcode, Populate for type 1
45	Stat1256	C(2)	Status index (101)	Stat1256.

File for Importing Correspondents from Parus: OrgOutSS

No	Field name	Length	Composition	Remarks
1*	TYP_INF	N(1,0)	Correspondent information token	0 – common, 1 – bank requisites, 2 - addresses, 3 – contacts. Type 0 defines a correspondent, information of types 1, 2, 3 is composed from the field ORG_ID. One ORG_ID value can correspond to several records of types 1,2,3 and one of type 0 (a correspondent can have several addresses, banks, etc.).
2*	ORG_ID	N(10,0)	Company ID	Populate for type 0,1,2,3
3*///	ORG_NAME	C(255)	Full company name	Populate for type 0
4	ORG_BYN	N(1,0)	Bank token	0 – bank, 1 – not bank. Populate for type 0
5	ORG_RYN	N(1,0)	Resident token	0 – resident, 1 – non-resident. Populate for type 0
6	ORG_BIK	C(20)	BIC	Populate for type 0
7	ORG_INN	C(20) {14}	INN	Populate for type 0
8	ORG_OKP	C(25) {20}	OKPO	Populate for type 0
9-	ORG_OKF	C(2)	OKFS	Populate for type 0
10-	ORG_OKN	C(25)	OKONH	Populate for type 0
11*	ORG_ACC	C(20)	Settlement account	Populate for type 1
12*	ORC_CURR	C(3)	Currency	Populate for type 1
13	ORG_KACC	C(20)	Cor. account	Populate for type 1
14	ORG_BMN	C(15)	Short name of company's bank	Populate for type 1
15	ORG_BNAM	C(255)	Full name of company's bank	Populate for type 1
16*	ORG_BBIK	C(20)	Company's bank BIC	Populate for type 1
17	ORG_CNM	C(15)	Country mnemo-code	Populate for type 2
18	?	C(255)	Country name	
19	ORG_CNAM	C(3)	Country OKSM code	Populate for type 2
20	ORG_MNR	C(15)	Domain mnemo-code	Populate for type 2
21	ORG_NAMR	C(255)	Domain name	Populate for type 2
22-	ORG_RCOG	C(2)	Domain SOGNI code	Populate for type 2
23-	ORG_ROK	C(11)	Domain OKAR code	Populate for type 2
24-	ORG_RNAM	C(40)	Region name	Populate for type 2

25-	ORG_RTN	C(15)	Region type name	Populate for type 2
26-	ORG_SIT	C(40)	City name	Populate for type 2
27-	ORG_SITT	C(15)	City type name	Populate for type 2
28	ORG_NP	C(40)	Locality name	Populate for type 2
29	ORG_NPT	C(15)	Locality type name	Populate for type 2
30	ORG_STRN	C(40)	Street name	Populate for type 30
31	ORG_STRT	C(15)	Street type name	Populate for type 2
32	ORG_IND	C(6)	Zip/Post code	Populate for type 2
33	ORG_HOUS	C(15)	Apartment house	Populate for type 2
34	ORG_KORP	C(15)	Bulk	Populate for type 2
35	ORG_BILD	C(15)	Building	Populate for type 2
36	ORG_FLAT	C(15)	Apartment	Populate for type 2
37	ORG_OFIS	C(15)	Office	Populate for type 2
38	ORG_ADRT	N(1,0)	Address type	0 – not defined, 1 – actual, 2 – legal, 3 – for transfers. Populate for type 2
39///*	ORG_KNAM	C(80) {40}	Contact person's name	Populate for type 3
40///*	ORG_TEL	C(20)	tel.	Populate for type 3
41	ORG_FAKS	C(20)	fax	Populate for type 3
42	ORG_EMAL	C(80) {20}	E-mail	Populate for type 3
43	ORG_KPP	C(9)	Beneficiary's KPP (103)	ReceiverKPP, Populate for type 1
44	OKATOcode	C(11)	OKATO code (105)	OKATOcode, Populate for type 1
45	Stat1256	C(2)	Status index (101)	Stat1256.

Tips:

*

The field is mandatory for all documents of the given format;

*/

The field is mandatory for the first of the two documentary types for the given format (this holds for other similar token);

-

At present the field must stay blank (and not processed), it is left in the format in case it may be required in the future;

{...}

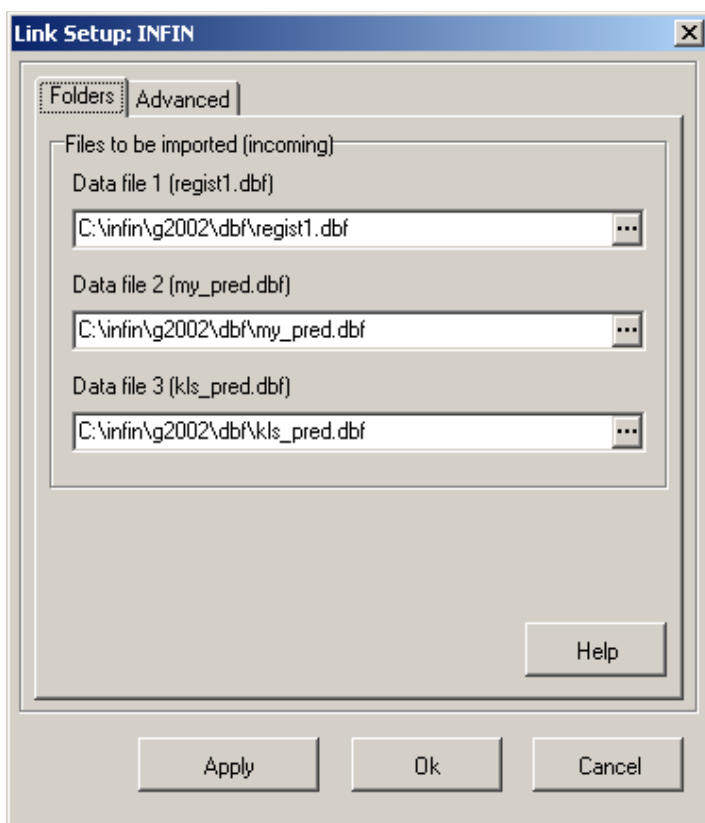
Some data may be lost as the size of the field in BSS is more (for export) or less (for import) than that of the file field. Size in BSS is given in parenthesis.

Interoperation with INFIN

INFIN Link Options

- Select **AS Session** → **Link Setup: INFIN**.

⇒ The **Link Setup: INFIN** window appears. The dialog box has two tabs: **Folders** and **Advanced**.



☐ Go to **Folders** to set up

Data file 1 (...)

name of and path to the first data file to be imported;

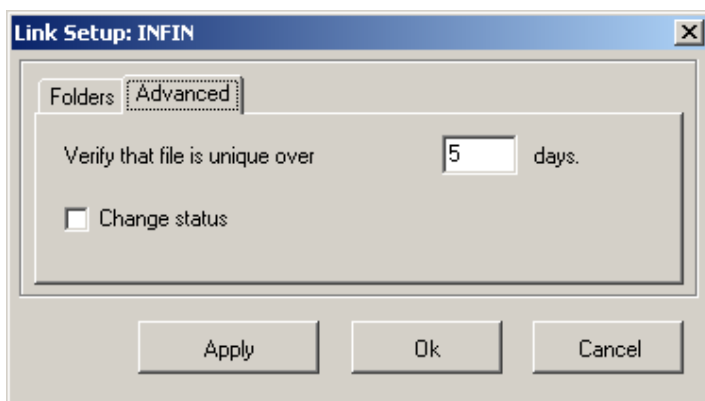
Data file 2 (...)

name of and path to the second data file to be imported;

Data file 3 (...)

name of and path to the third data file to be imported.

By default, the **INFIN\g2002\dbf** subfolder of the root directory is used.



☐ Go to **Advanced** to set up

Verify that file is unique over ... days

When importing documents, their uniqueness is verified (by date, number, amount, payer's a/c and BIC). Also, the system checks that no document is older than the date specified in the setup;

Change status

check the option so that imported files' statuses can be changed;

- the option is checked

Should imported documents pass the format verification, but fail "required" input verifications, they are imported into BS-Client's database as **Imported**;

Should documents pass both the format verification and "required" or "optional" input verifications, they are imported into BS-Client's database as **New**.

- the option is un-checked

Should imported documents pass the formats verification, they are imported into BS-Client's database as **Imported** irrespective of which input verifications are set up, "optional" or "required," and whether the documents pass them or not.

Tip: **Change status** is a "through" parameter. It will be applied to all documents imported from all the Accounting Systems interoperating with BS-Client. You can set it when customizing any other link, e.g., with 1C or Parus.

INFIN - BS-Client v.3 Documents Correlation

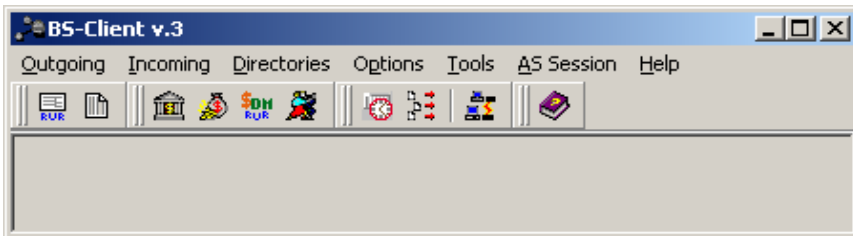
RBS field	INFIN field	Default value
PayerAccount	Ch	«»
PayerBIC	Mfo	«»
ReceiverBIC	Mfo_1	«»
DocumentNumber	Num	«»
DocumentDate	Date	«»
Payer	Naim_all	«»
PayerINN	INN	«»
PayerCorrAccount	Korr	«»
PayerBankName	BANK	«»
Receiver	Naim_all_1	«»
ReceiverINN	INN_1	«»
ReceiverAccount	Ch_1	«»
ReceiverBankName	BANK_1	«»
ReceiverCorrAccount	Korr_1	«»
CurrCode	Blank	
Amount	Sum	«»
Ground	Str1+Str2+Str3+Str4	«»
OperType	No such field	01
PayUntil	Blank	
PaymentUrgent	Ocher	«»
SendType	VID_PLAT	«»
Beneficiary's KPP (103) ReceiverKPP	Blank	
Tax fields		
Status index (101) Stat1256	No such field	01
Budget classification code (104) CBCcode	KBK	«»
OKATO code (105) OKATOcode	OKTO	«»
Payment details index (106) PayGrndParam	SOPL	«»
Taxable period index (107) = TaxPeriodParam1 + '.' + TaxPeriodParam2 + '.' + TaxPeriodParam3	PSOPL	«»
Document number index (108) = DocNumParam1 + DocNumParam2	NUMDOC	«»
Document date index (109) DocDateParam1 (dd), DocDateParam2 (mm), DocDateParam3 (yyyy)	DATEDOC	«»
Payment type index (110) PayTypeParam	STPL	«»

- CurrCode is populated along with other required fields, its value is taken from the corresponding a/c number.
- If a value of VID_PLAT (SendType) is not one of the allowed ones (0,1,2,3), it is left blank

Operating the System

Main BS-Client Window

- Start BS-Client (run cbank.exe).
- ⇒ The main BS-Client window opens.



The form has a standard Windows interface with pop-up menus, toolbars, and tool tips that appear should you point to a toolbar button.

Outgoing

menu contains documents created by a served company. The standard suite contains Payment Orders, Payment Requests, Collection Orders, Orders for Currency Transfer, Orders for Currency Sale, Orders for Currency Purchase, Orders for Mandatory Currency Sale, Conversion Applications, RUR Receipts Certificates, Foreign Currency Transaction Certificates, and Free Documents (letters to the bank). BS-Client can move remote and fully processed by the bank documents to the archives. Use the **Outgoing** menu to refer to archival scrollers of outgoing documents.

Incoming

access bank statements and free bank documents, view the directory replication journal, and process jobs for remote system update/upgrade. Use the menu to refer to archival scrollers of incoming documents.

Directories

access corporate (common with the bank) and internal (your own) directories.

Settings and Tools



administer the system. No operator can use commands therein.

AS Session

exchange data with the 1C, Parus, and INFIN Accounting Systems. You can also exchange data with other ASS supporting text format export.

Icon toolbar **buttons**

open the most frequently used scrollers.

E.g., if you click , a scroller of Payment Orders appears. Click  to open a scroller of Rouble Statements. The directories of Russian Banks, Currencies, Exchange rates, and Correspondents are opened similarly.

Should you point to a toolbar button, its tool tip appears.

Tip: For more information on the toolbar buttons of the main BS-Client window see [Appendices. Main BS-Client Icon Toolbars](#).


Operations with Scroller Lists

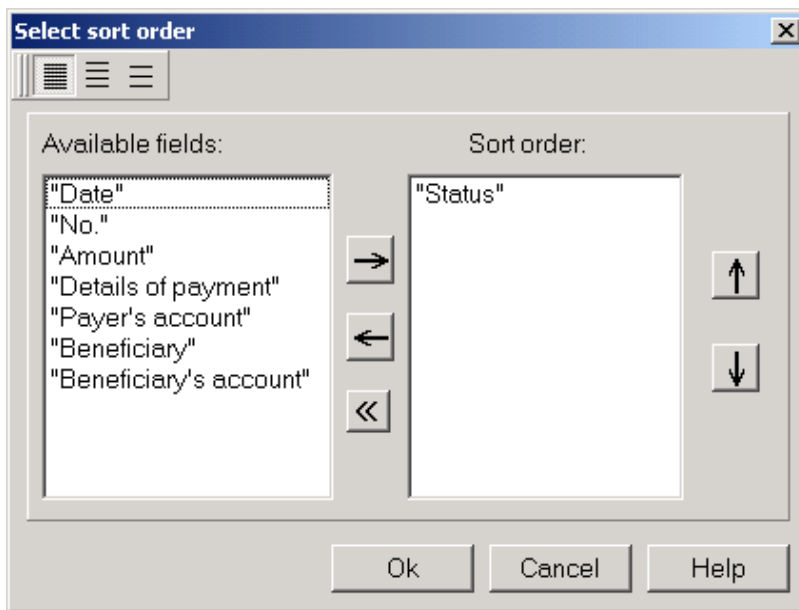
A scroller list is a pane with a table where each row is a document or entry summary. Use your arrow keys or a scrollbar to move through its rows.

Sorting

- To sort a list, click on the name of the column you want to sort documents over. BS-Client supports a 4-nesting level sort. Thus, if you specify sort by number and then by date, the system will sort by date, whereas documents with the same date will be sorted by number.






Note: Please note that some databases (e.g., Sybase ASA) might slow down noticeably when sorting over non-indexed fields.

- Open **Select sort order** by  to specify a "subtler" sort procedure. Otherwise, point to a column name, open the pop-up menu, and run **Sort**.




The upper toolbar contains 3 buttons. Use them to enlarge the list of Available fields with:

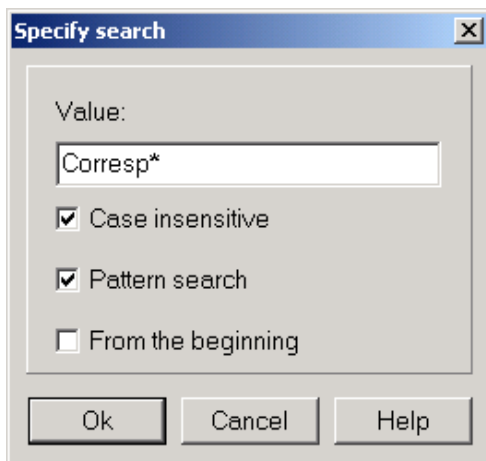
- (or **F5** F. - key) names of all the fields (including the system ones),
- (or **F6** F. - key) names of all the user fields (both visible as column names and invisible),
- (or **F7** F. - key) the list's fields (column names).

- Select key items in the **Available fields** list and click .
 - ⇒ The selected items will move to the **Sort order** list. Sort will run in accordance with this list. For instance, the list contains the **Status, Date, Number**.
 - ⇒ The list will have the following structure: status sort runs first, documents with the same status are sorted by date, documents with the same status and date are sorted by number.
- Let us interchange **Status** and **Date** in **Sort order** (the list will be as follows: **Date, Status, Number**).
 - ⇒ Date sort runs first, documents of the same date are sorted by status, and documents with the same status are sorted by number in the ascending order.
- To move items within the **Sort order** list, use , .
 - ⇒ A selected item moves one position up or down, respectively.
- Use  and  to remove items from the **Sort order** list (cancel sort over these items).
 - ⇒ All the items or an item will be removed from the sort order list, respectively.
- Click **Ok** to return to your scroller.

Note: The last item of the sort order is stored in the operating system's registry for the most scrollers (HKEY_CURRENT_USER\ Software\ BSSystems\).

Searching

- To find a document in a list, select a key field (in any list row. Click on **Search** or . Otherwise, point to a column name, open the pop-up menu, and run **Search...**



Search can run until

- Full coincidence,
- Partial coincidence.

☐ Check **Pattern search** (if un-checked, partial coincidence for the given field is disabled).

To run a pattern search, the following symbols are available:

- * arbitrary data,
- * at the end of your mask any data after the typed one,
- any first character..

Examples of masks:

- *2 a field value will be found with “2” in the trailing position,
- _1 a field value will be found with “1” in the 2nd leading position,
- _1_2 a field value will be found with “1” in the 2nd leading position and “2” in the 4th leading position,
- *3_5 a field value will be found with “5” in the trailing position and “3” in the next nearest position,
- *234* a field value will be found with “234” within.

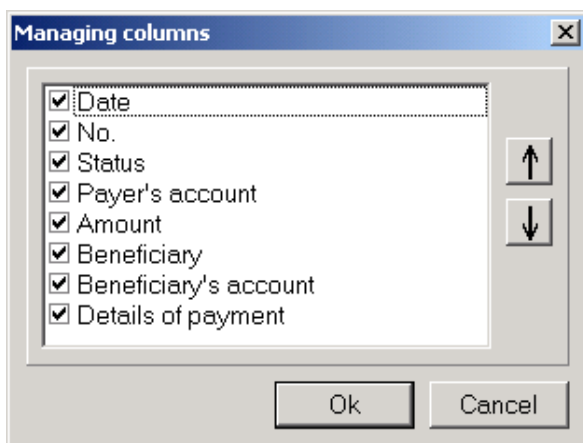
☐ Enter a key value into the search field and click **Ok**.



⇒ The first document found to contain this data will be highlighted in the list.

☐ Use **F3** to find the next document containing the value.

Arranging Columns


- ☐ Open a scroller.
- ☐ Point to a name of a column and click with the right mouse button.
 - ⇒ The pop-up menu appears.
- ☐ Click on **Manage columns.....**
 - ⇒ The **Managing columns** window appears.

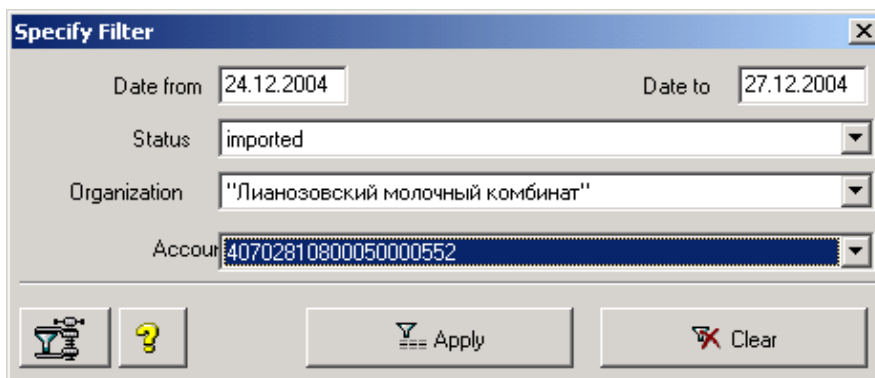


- Check the items you want to be present in the scroller.
- Use  and  to sort the items in the required order.
- Click **Ok**.
 - ⇒ The list settings are complete.

Tip: These settings will be applied to this list only.

Filtering


- You can filter incoming documents by options specified in the **Specify Filter** dialog box. Click  to open it. Or you can point to a column name, invoke the pop-up menu, and run **Add filter....**

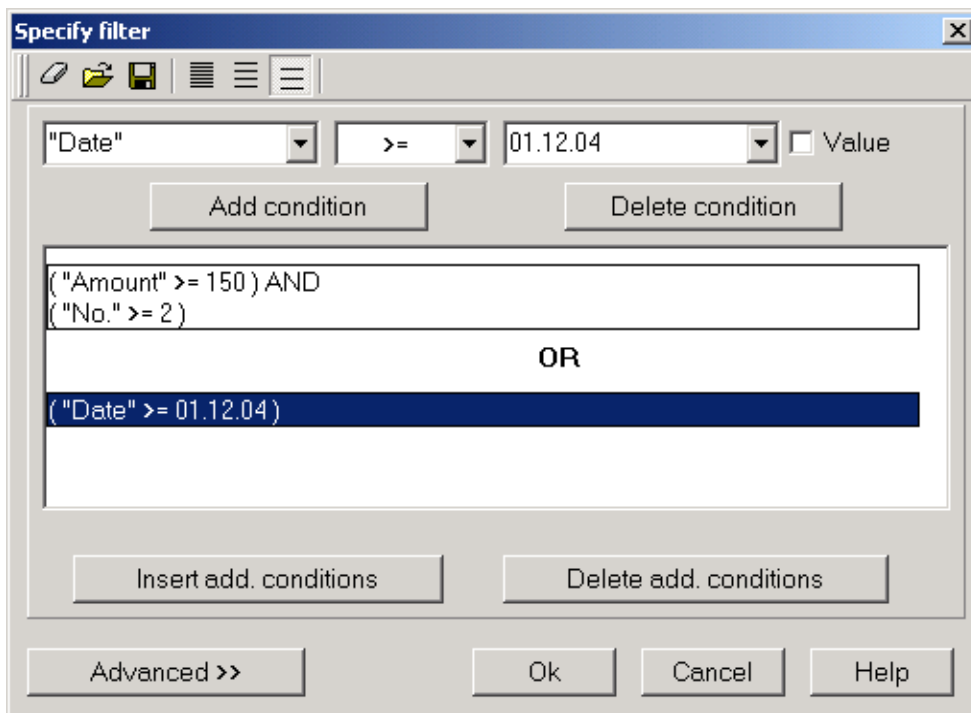


- You can set up the following options in the appeared window specify filter:




Date from (to)	starting (final) date of period to cover documents created;
Status	status of documents;
Organization	organization name;
Account	organization's account.








- Click on **Apply** to apply the settings.
- Click on **Clear** to clear all the filters.
- To fully clear the filter, clear dates in both fields **Date from (to)** and click on **Apply**.

- To apply a more complex filter, click  .
- You can specify filter over several fields or several values of the same field in the **Specify filter** dialog box.










The first window row consists of three drop-down lists: a filtering field; a condition; a value or field to compare the filtering field with.


Buttons on the upper toolbar make the following field names move to the list of filtering fields: names of all the fields (including the system ones) , names of all the user fields (both visible as column names and invisible)  or the field names from the list only (column names) .

-  Create a filtering condition by consecutively selecting values on the drop-down lists.
⇒ As you select, the main window displays your selections.
-  Click on **Add condition** to add a condition to the existing one by 'AND.'
-  Click on **Insert add. conditions** if you need to combine expressions by 'OR.'
-  Click on **Delete condition** to remove a selected expression.
-  Click on **Delete add. condition** to remove a selected group combined by 'OR.'
-  Click on **Advanced >>** to enter complex logical filter expressions.
-  When **Value** is checked, the field next to it is considered a constant rather than the contents of the field of the same name.

Note: Most lists have the last applied filter saved in the registry (HKEY_CURRENT_USER\Software\BSSystems\); it is displayed in the filter dialog when opened.

Selecting Group of Documents

-  Select a document in a list.
-  Press **Ctrl+Ins**.
⇒ Presently the document is highlighted with the cursor having moved one row down.
-  Point to the next document to select and press **Ctrl+Ins**. You can select any number of documents this way.
⇒ If you select an option on the pop-up menu, the corresponding command will be executed for all the documents selected.
-  To select all the rows, press **Ctrl+”+”** or click .
-  To de-select, press **Ctrl+”-“** or click ; to invert selection, press **Ctrl+“*”**.

□ To obtain information about highlighted documents (their quantity and total amount), click  .

Processing Documents

Main Menu

Outgoing

Use the menu to refer to documents created by a bank customer registered as system user. The standard suite will include:

- Payment Orders,
- Payment Requests,
- Collection Orders,
- Orders for Currency Transfer,
- Orders for Currency Purchase,
- Orders for Currency Sale,
- Orders for Mandatory Currency Sale,
- Conversion Applications,
- RUR Receipts Certificates,
- Foreign Currency Transaction Certificates,
- Free Documents to Bank,
- Account Statement Requests,
- Requests for Document Cancellation, and
- Documentary Archives.

Incoming

Use the menu to refer to statements and free bank messages, to view the directory replications journal, and to process remote update/upgrade jobs. Besides, the menu is used to refer to archival scrollers of incoming documents.

Main Documentary Operations

All documents have a standard list window displaying payment documents of a type. When you select a document in its list, the lower pane displays its details. Press **Enter** to view all its fields. In the appeared window you can view the whole document as well as print it out.

The main operations that you can apply to documents in a list are available as icon toolbar buttons or as commands on a pop-up menu, activated by clicking with the right mouse button.

Pop-up Menu

To pop up such a menu, click with the right mouse button on a list row. A pop-up menu will contain available commands and the submenu '**Options for administrator.**'

The pop-up menu for outgoing documents will be as follows:

Sign
Sign by user
Remove signature
Remove signature by user
For sending
Send to Bank
Delay sending
Resend
Print document(s)
Print list
Request cancellation
Delete Ctrl+D
Verify signature
Verify imported document

Sign

will sign a **New** document by your electronic digital signature (EDS). The document becomes **Signed**.

Sign by user

will sign a **New** document by an EDS of another system abonent You will be able to select an abonent on the appeared list, then you will have to specify his login and password. Upon running this command, the status changes into **signed**.

Remove signature

will run for a **Signed** document should you need to modify it. The document becomes **New**.

Remove signature by user

will run for a **Signed** document should you need to modify it. The command enables you to remove the signature of another system abonent that signed the document. You will be able to select an abonent on the appeared list, then you will have to specify his login and password. Upon running this command, the document becomes **new**.

For sending

will send a **Signed** document (several documents) to the bank by default.

Attention!

"Internet-Client" users now have a new system option allowing unsigned or partly signed documents be sent to the bank. Having started "Internet-Client," you can complete the signing process and send documents for processing.

Note:

If you do not have the appropriate scheduler procedure enabled, this command will make a **Signed** document **Waiting to send**. If this is the case, run **Send to Bank** to send a **waiting to send** document (several documents) to the bank, and the status will change into **sent**.

Delay sending

will change the **For sending** status one level back. If the document to be delivered was fully signed, **Delay sending** will change its status into **signed**; In case it was unsigned or partly signed, **Delay sending** will change its status into **new** or **signed I, II**, respectively.

Resend

will resend **Sent** and **Sending** documents (such a status can appear due to mail delivery session failure, etc.).

Print

will print all the selected documents in sequence.

Note:

This command is applicable to documents with all statuses.

Print list

will print complete or summary data of the selected group of document.

Request cancellation

will create a request for cancellation of a selected document.

Delete

will mark documents as deleted.

Verify signature

will run for all documents except for **New** and **Imported**. The document signature is verified with respect to the registered client's signature.

Tip:

All pop-up menu commands except for **Sign**, **Remove signature** can be applied to a group of selected documents.

Enable request

is a command for the administrator. It is only applied to key regeneration requests. Before running it to enable a new request, find the reason why the previous key regeneration request was disabled. You must consult the bank part administrator.

The pop-up menu for incoming documents will contain:

Verify signature

run it to verify the signature of a document and its restrictions (to run the command, access to the keys is required);

Process documents

run it to process documents; for example, to update requisites;

Reprocess documents

should there be an abnormal or emergency situation while processing documents, run this command to process them again;

Print

run it to print the selected document(s) (by default);

Print list

run it to compile, print, or save to file a list of all or selected documents;

Information on highlighted documents

run it to calculate the number of selected documents;

Export to AS

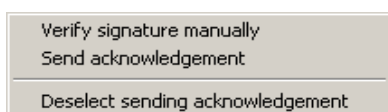
run it to export selected rouble statements in text format to enable their further use in the Accounting System. As a result, the export folder (by default, SUBSYS\EXPORT in the main system directory) will have a text file with exported statements created;

Export to 1C

run it to export selected rouble statements to the 1C AS.

Administrator's Actions with Incoming Documents

When processing incoming documents, an emergency can occur. The administrator operations are meant to solve such problems. These are debugging procedures.



Verify signature manually

run it to verify the signature of a document. Note that the system verified the signature after it had received the document;

Send acknowledgement

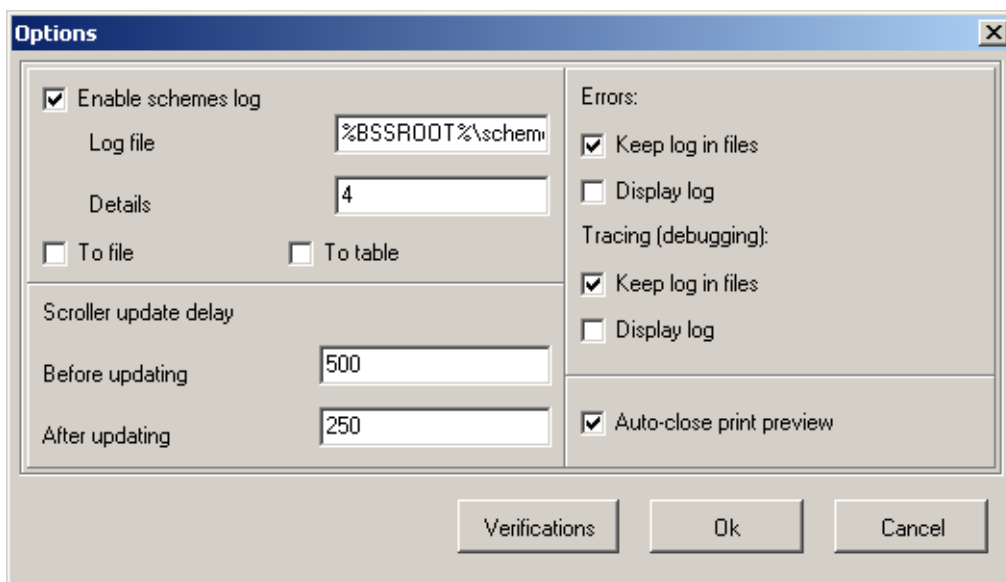
run it to send an acknowledgement of the current document state to the bank, if the system had not done it (e.g., if the document's status was changed manually);

Deselect sending acknowledgement

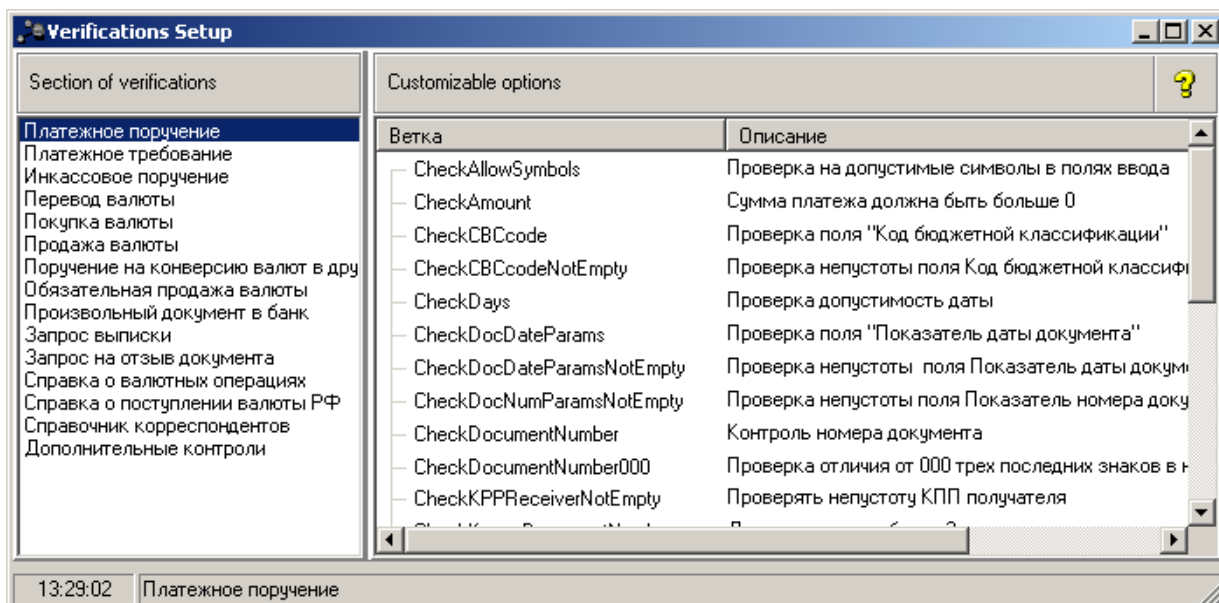
run it for status rollback. Thus you can re-send your acknowledgement.

Documentary Controls Setup

- To set up documentary verifications, select **Options→ Adv. Settings**.
- ⇒ The **Options** window appears.



- Click on **Verifications**.
- ⇒ The **Verifications Setup** window appears.



- Choose a documentary type on the left pane. Now choose a verification to set up on the right pane and double-click on its name with the left mouse button or press **Enter**.
- ⇒ The **Verifications Setup** dialog box appears.

There are two editable fields: **Description** and **Value**.

You can assign one of the following three **values** to each verification:

Required

validation is required; if a document does not meet such a condition, the system can neither save it nor assign a 'successful' status;

Optional

validation is optional; if a document does not meet such a condition, a warning message appears. However, the document changes its status into the next successful one, as defined by its documentary scheme, even if modified or if its package was modified;

Disabled

validation is disabled; if a document does not meet such a condition, it is saved without a warning message.

□ Edit data and click **Ok**.

Tip: For detailed setup descriptions of each documentary type see '**Technical Control: settings, parameters, features. Bank Part Administrator's Manual**' (Controls.doc, supplied in the Russian suite). Detailed descriptions are available as comments to some setups.

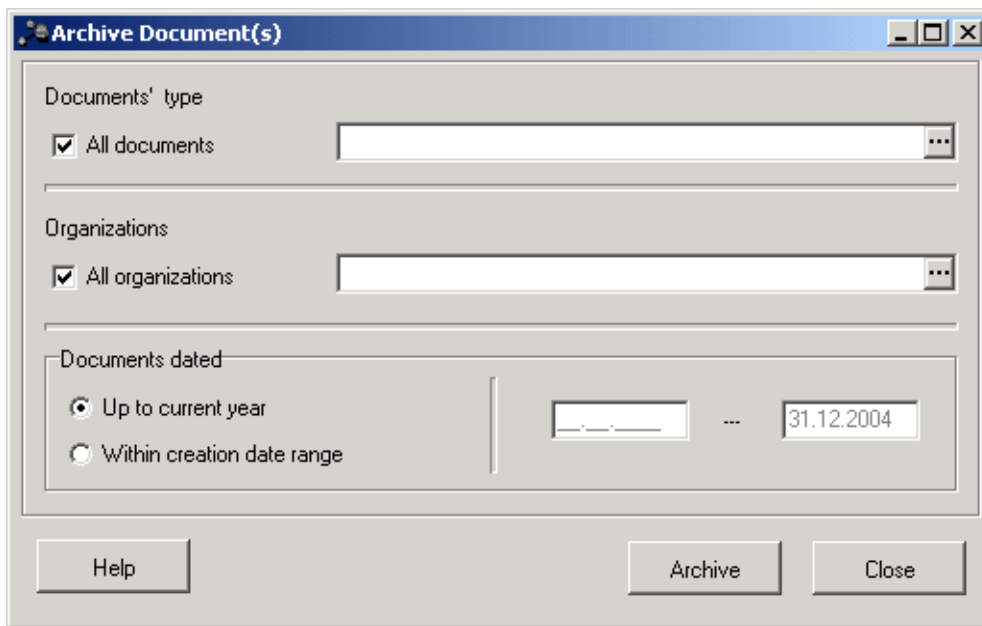
Archiving


BS-Client can move deleted and fully processed documents to archives (for the list of statuses subject to archiving see the Appendix to **Operator's Manual, bsc_oper_eng.doc**).

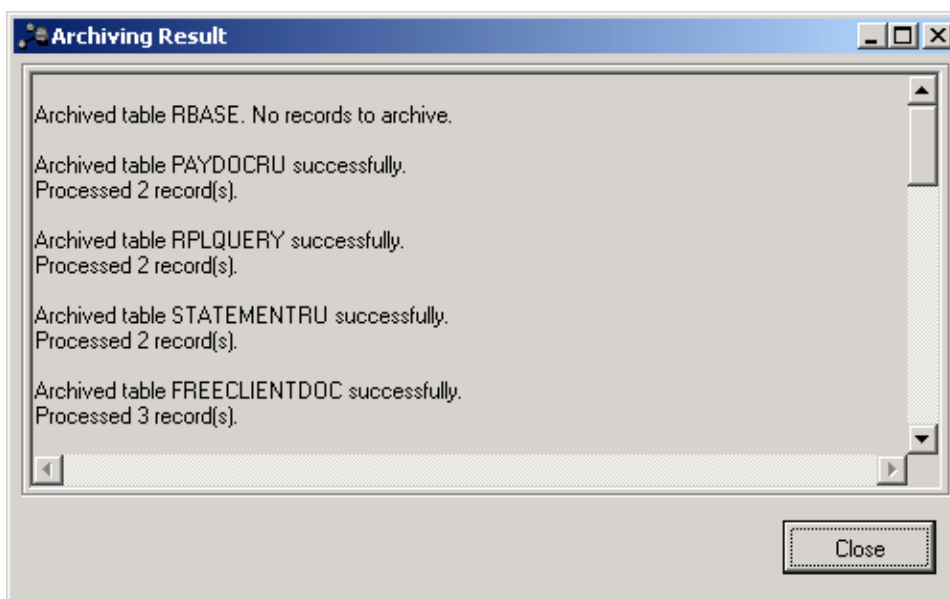
Archiving of documents proceeds as follows: the system moves remote and fully processed documents from their original scrollers into corresponding archival scrollers. This feature noticeably simplifies handling of a large pool of documents.

If you need to cancel the archiving process, please note that it will only be terminated for the documents not yet processed by the archiving procedure. Thus, you cannot stop archiving of a particular document.

□ To move documents to archives, select **Tools→Adv. Document Archiving** and open the **Archive Document(s)** window.



- When you need to move all the documents with appropriate statuses to archives, do not deselect the **All documents** option, which is selected by default. Otherwise, deselect it, click  to open **Documentary Schemes Options**, and specify the type of documents to be affected.
- Similarly, the **All organizations** option should be selected or deselected according to the archiving conditions. If the option is deselected, extract the company's name from the **Organizations** directory.
- There are two options in the **Documents dated** group: **Up to current year** and **Within creation date range**. The **Up to current year option** is selected by default. If you check **Within creation date range**, specify the date range in the fields provided.
- Make sure that all mandatory fields are populated and check-boxes checked correctly. Click on **Archive** to start the process.
 - ⇒ After the archiving operation is complete, the **Archiving Result** window appears with archiving results for each type of documents.



- ⇒ Upon successful archiving, documents move to corresponding archival scrollers.
- See *Operator's Manual, bsc_oper_eng.doc*, for more information about archives (in **Documentary Archives**).

Statuses Subject To Default Archiving

Outgoing

**Implemented
Associated**

**Canceled
Unauthorized EDS
Invalid EDS**

**Unaccepted
Error in requisites
Not accepted by ABS**

**Refused by ABS
Deleted**

the document was implemented within the ABS;
the document was associated per source statement (implemented by the bank's correspondent);
implementation was canceled per the originator's request;
one cannot sign this document by this EDS;
at least one of EDS validations returned an error: unauthorized EDS I, invalid EDS I, unauthorized EDS II, invalid EDS II;
the document failed system validation during its export;
errors were detected while validating requisites;
the document was sent to the ABS which again refused to accept it;
the ABS refused to implement the document, and the document was deleted.

Incoming


**Invalid EDS
Implemented
Non-implemented
Completed**

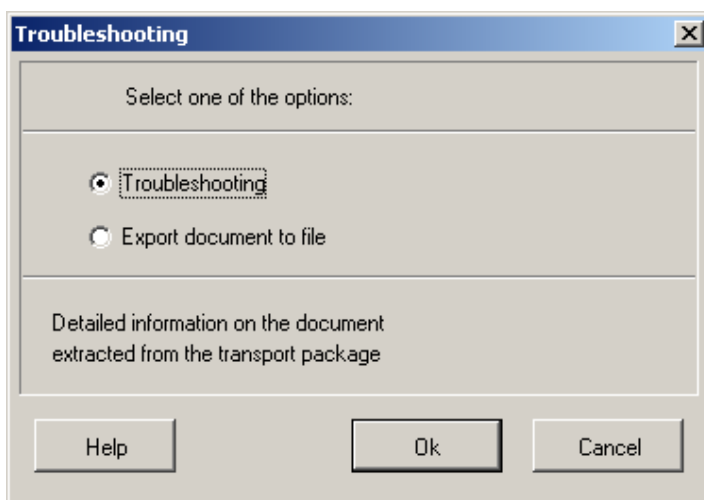
at least one of EDS validations returned an error;
the document was fully processed,
the document was not processed,
document processing is complete.

Troubleshooting

It may happen necessary to compare the client part's version of a document sent to the bank with that in the bank part. For this purpose BS-Client has the ad hoc Troubleshooting function.

Use this function to learn receipt dates and times for transport packages containing a the document considered. You can export the document or its source package to a file to verify its signing by your cryptographic facilities; learn about document fields, such as amount, date, number; learn about signatures on sent documents and signatures names.

- Find a document.
- Select the document and click .
- ⇒ The **Troubleshooting** window appears:



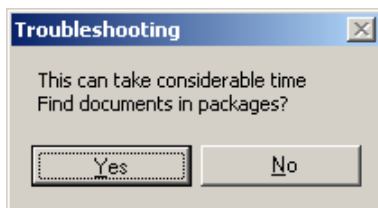
Troubleshooting

Export document to file

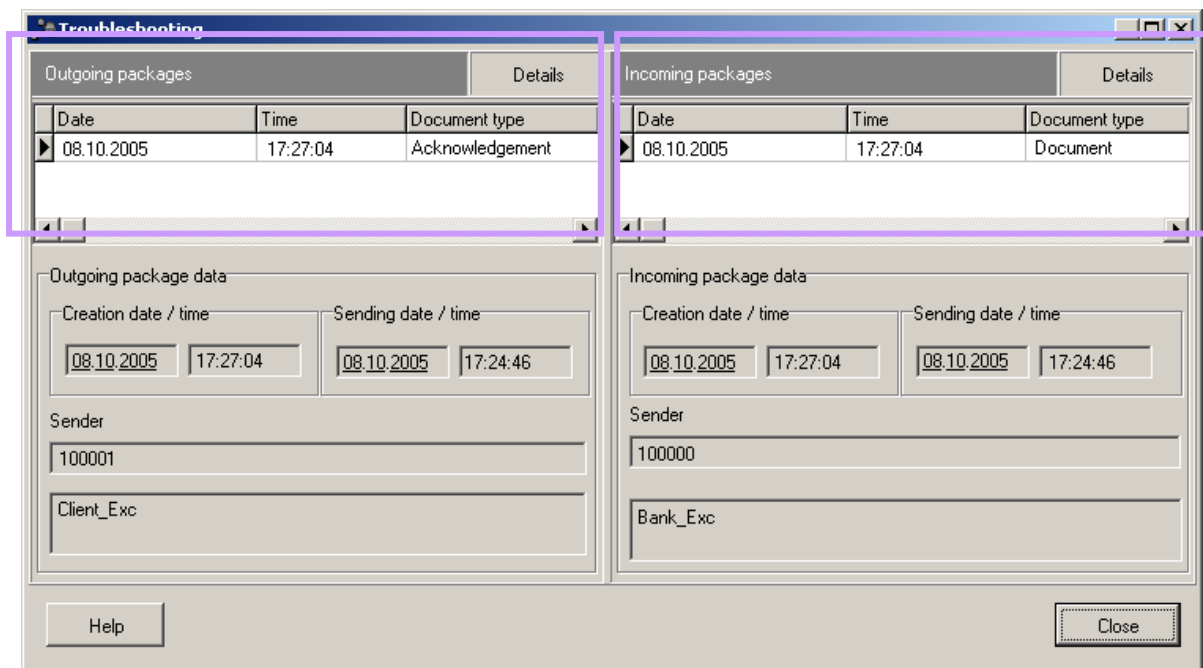
check it to learn more about the document; information will be obtained from the source package;
check it to export the document to a file to validate its signing by the standard facilities (using signcheck.exe).

Troubleshooting

- Check the **Troubleshooting** option and click **Ok**.
 - ⇒ Presently a message appears to warn that the search may take a considerable time.



- Click on **Yes**.
 - ⇒ The **Troubleshooting** window appears.

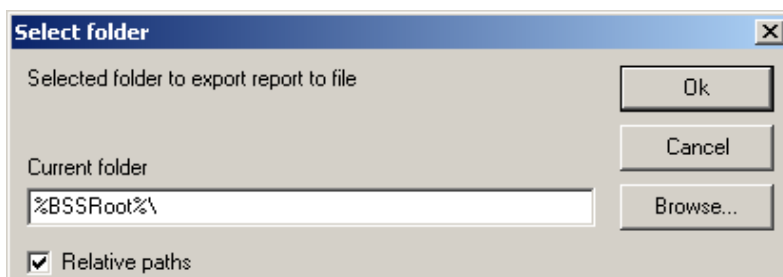


The upper part contains two scrollers:
Outgoing packages

Incoming packages

list contains receipt/send dates and times for outgoing packages;
list contains receipt/send dates and times for incoming packages.

- To export an outgoing or incoming package to file, point to the list of corresponding documents, pop up the menu, and run **Export to file**.
 - ⇒ The **Select folder** window appears.



- Specify the folder where the system should create the file with exported documents package and click **Ok**.
 - ⇒ The system notification appears on documents being exported to file.
- Click **Ok**.
- For more details on an incoming package, double click on its row in the **Incoming packages** list or click on **Details**.
 - ⇒ The **Additional Information** window appears.

Additional Information

Information about package

Sender	Creation date	Creation time	Sending date / time
100000	08.10.2005 731131		08.10.2005 628200000

Bank_Exc

Signature verification result

Signature No.1
Signature identifier: B19142AE2D9E05E5

Document's fields values		Information on signatures			
Field name	Field value	Available	Valid	Correct	CryptoLibrary
Client	Client1	YES	YES	YES	Excellence/4.0

Ok Cancel

Sender	field displays the license number of the sending client;
Creation date	field displays the package creation date;
Creation time	field displays the package creation time;
Signature verification result	field displays the signature number, identifier, and name; if the package contains an acknowledgement, the filed will display a, appropriate system information message; as acknowledgements are not subject to signing, the system cannot verify its signature;
Document's fields values	field displays information on document (acknowledgement) fields;
Information on signatures	field displays information on document signatures; should it be an acknowledgement, the Information on signatures section will be blank as acknowledgements are not subject to signing.

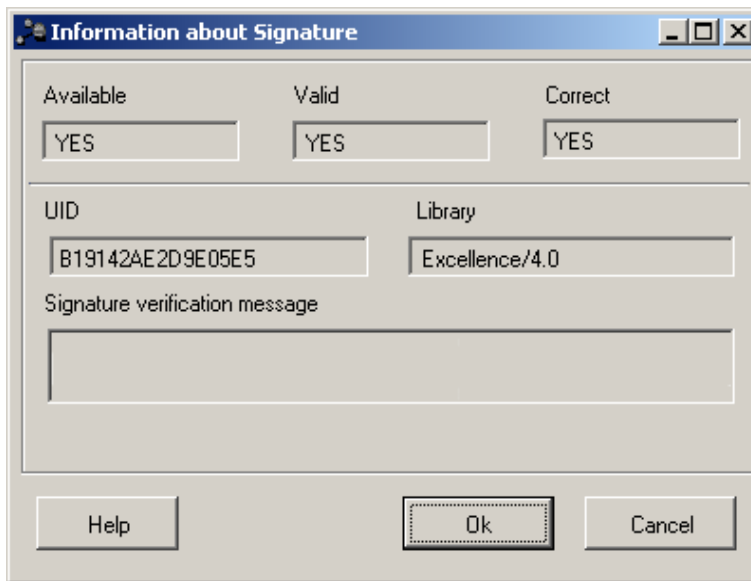
The icon toolbar of the **Additional Information** window contains three buttons:



- save data to a text file;
- export a document to validate its signing; the procedure started by this button is similar to the one described in ["Export document to file" Option](#).
- export a package to validate its signatures.

- You can view signature information in more detail. Select a record in the **Information on signatures** section and press **Enter** or double-click on it.

⇒ The **Information about Signature** window appears.

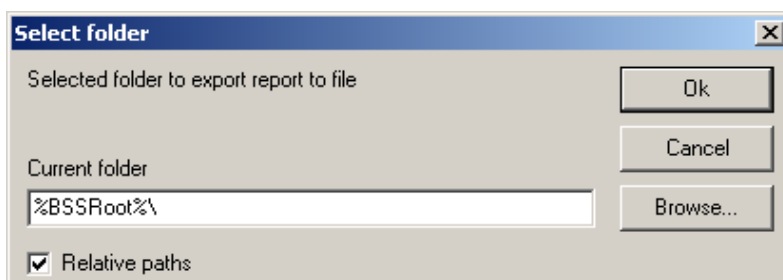


Available	shows if there is a signature on the document, possible values: YES or NO;
Valid	shows if the signature is valid, possible values: YES or NO;
Correct	shows if the signature passed the verifications, possible values: YES or NO;
UID	identifier of the signature;
Library	name of the crypto-library;
Signature verification message	system message with signature errors detected during validation.

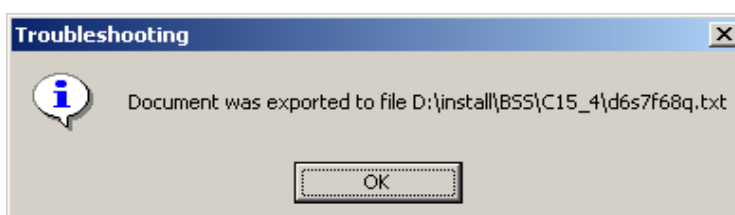
- Also, system date and time when the document was sent and received are available in the **Document System Fields** window on the **System Fields** tab. For details of how to do this, see View Document's System Information.

“Export document to file” Option

- Select the **Export document to file** option and click **Ok**.
 - ⇒ The **Select folder** window appears.



- Specify the folder to export the document to and click **Ok**.
 - ⇒ The folder will have a uniquely named TXT file created.
 - ⇒ A document export notification message appears.



- Remember the file name and click **Ok**. Any text editor will do to open the file.
 - ⇒ View its **DATA** section to make sure that you exported the very document that was required.
 - ⇒ The **SIGN1** and **SIGN2** sections will contain the exported text of the signatures.

When the document is exported to a text file, convert the file into MIME. The self-contained **signchck.exe** module will convert it. Bank's Soft Systems will provide its source modules if required by the bank. You can use a different workstation to convert.

- Run **signchck.exe** with the text file name as a parameter (see the previous action).
 - ⇒ The module will create a file of the same name with the ***.1** extension. Presently the new file is unreadable and has the texts of the signatures at the end.

The signatures in the MIME-formatted file (***.1**) will be validated. Different modules verify the signatures depending on the cryptographic facilities you used to sign the document.

1. Verifying by excel_s.exe

If the client used Excellence 4.0 to sign the document, you would need the bank's Excellence keys to verify the signatures in ***.1** (see the previous action). (For these crypto-facilities you will need both the bank's private key and the public keys directory.)

- Run **cryptose.exe** (from the excellence set) to create a user with the bank's name, specify its paths to the bank's private and public keys. Go to the "**Установки**" (Options) tab to un-check the "**контроль целостности системы**" (system integrity control) option and check the "**вывод на консоль**" (save to console) option. Select the language in the "**язык**" (language) drop-down list and the coding on the "**кодировка**" (coding) drop-down list.
- Run **excel_s.exe -v <*.1 file name>** to verify the signature.

- ⇒ The system will display the signature's owner, date and time of signing.


2. Verifying by CrProtst.exe

If the client used Crypto-Pro 1.1, the ad hoc module **CrProtst.exe**, written by Bank's Soft Systems (and available upon request), is used to verify the signatures in your ***.1** (see the previous action).

To verify the signatures, you will need Crypto-Pro 1.1 build 85 or later, installed on your workstation as the default cryptographic provider.

- To start verifying, run **CrProtst.exe <*.1 file name>**.
 - ⇒ Certificates' authenticity is not verified.
 - ⇒ The certificate that CryptSignMessage Ms Crypto Api 2.0 incorporated into the signature is used for signature validation.

View Document's System Information

- Open a scroller of documents, find a document, and open it in the view mode.
- Click  .
 - ⇒ The **Document System Fields** window appears. **Document System Fields** window tabs: **System fields**, **Information from bank**, and **History**.

Document System Fields

System fields | Information from bank | History

Sender: 3 | Московская гильдия риэлторов

Organization: 5 | ЗАО "МИЭЛЬ-Недвижимость"

Receiver: 1 | Газпромбанк

Document type: 0 |

Entry type: | Status: signed I (awaiting II)

EDS 1: Type: 15 | Crypto-C | UID: IK1_crypto_C

EDS 2: Type: | | UID: |

Date and time: when the document was created: 15.09.2004 | 18:25:01

when receiver received the document: | |

Help | Close

System fields is the default tab; it contains the following data:

Sender	the client's system number;
Organization	the organization's system number;
Receiver	the receiver's system number;
Document type	the unique identifier of the table;
Entry type	the identifier of the accounting operation used to process the document;
Status	the document status;
Type of EDS I	the type of EDS I;
UID of EDS I	the UID of EDS I;
Type of EDS II	the type of EDS II;
UID of EDS II	the UID of EDS II;
Date and time	
when the document was created	the document's creation date and time;
when receiver received the document	the last date and time of the document receipt.

Go to **Information from bank** to view:

Sender's authorized person
Receiver's authorized person
Reference
Saved reference
Flag
Accepted
Withdrawal date
Bank's message

the authorized person of the document sender;
the authorized person of the document receiver;
the document reference;
the saved reference of the document;
the flag of the view and print modes;
date of accepting the document for implementation;
date of debiting the document amount to the payer's account;
the message of the receiving party.

Date	Initial status	Final status	User's name
15.09.2004:18:25	new	signed I (awaiting II)	DBA

Go to **History** to view the history of statuses.

Date
Initial status
Final status
User's name

the date when the initial status was assigned;
statuses valid before some action was applied to the document to change its status;
statuses valid after some action was applied to the document to change its status;
the name of the user that run the procedure to change the status.

Remote Update/Upgrade Jobs

A job to update/upgrade your BS-Client remotely is a set of files. When installed, it updates/upgrade the system software on your workstation. These jobs are provided by either the Development Company or the bank.

Before starting to update/upgrade, a system information message appears. We advise that you agree with the update/upgrade proposed or address your bank's official.

Note: Should you refuse to update/upgrade the system, you can find it impossible to contact your bank. Furthermore, the system will suggest updating/upgrading each time you start your computer until the update/upgrade takes place.

The journal of updates/upgrades is available from **Incoming→ Remote Update/Upgrade Jobs**.

If the bank part prepares an update/upgrade exceeding the maximum allowed size, it is split into sections. The client part only starts to update/upgrade after it receives all the sections of the bank part's update/upgrade.

Client part life-cycle for documents with updates

1. One-section update:

Identified - Valid EDS - Accepted - Accepted + - Exported - Exported + - Implemented - Implemented + - Completed

Identified - Valid EDS - Accepted - Accepted + - Delayed - Delayed + - Exported - Exported + - Implemented - Implemented + - Completed

Should the update fail, the cycle will be Exported - Exported + - Non-implemented - Non-implemented+

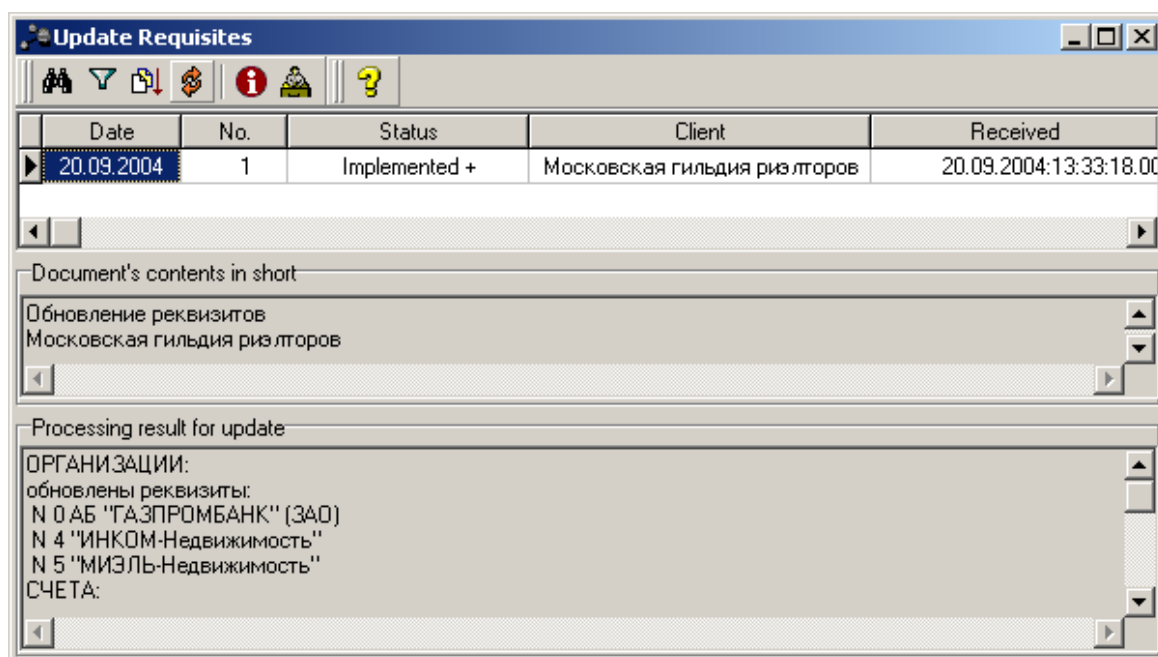
2. Multi-section update:

For each section statuses will be the same as for one-section update.

Updating Requisites

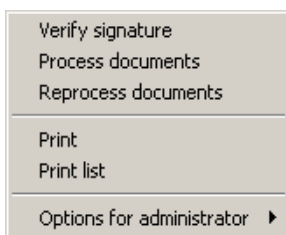
Should the bank update data of a company within your workstation, viz. the company's requisites, accounts, EDSs, etc., the bank will send you all the modifications. BS-Client uses **Update Requisites** for the purpose.

- To view received updates, select **Incoming→ Update Requisites**.
- ⇒ The **Update Requisites** window appears with the list of updates.



Tip: Requisites are updated automatically, should the proper auto-procedures be set up and running.

- Your BS-Client will display documents with updates as **Identified**. To update manually, run **Process documents** from the pop-up menu.



⇒ With requisites successfully updated, the document becomes **Implemented**.

Client part life-cycle for documents with updates of requisites:

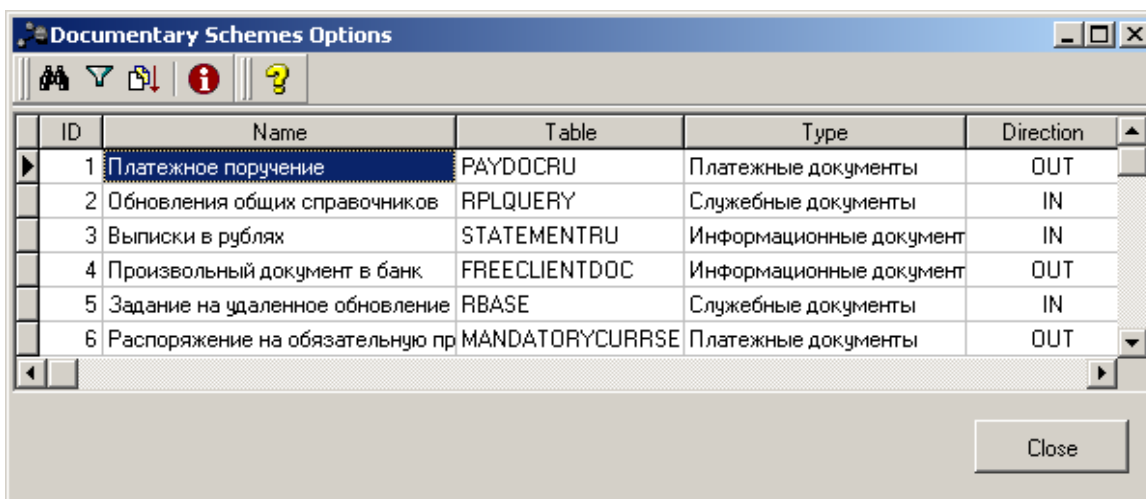
Identified - Implemented - Implemented +

Document Print Setup

To customize printing options for documents, you need to specify a print format and printer to print out documents.

Documents Print Format Setup

- To set up the print format for documents, select **Tools → Service → Documentary Options**.
- ⇒ The **Documentary Schemes Options** window appears.



- To set up a documentary scheme, select a type of documents and press **Enter** or double-click on the row.
- ⇒ The **Documentary Scheme Options** dialog box appears.

Documentary Scheme Options

ID Table Direction

Type Digits in number

Description

Printing options

Form

Section

BLL

Printing type

☒ Print to RTF ☐ Print to text

Calculating totals

"Amount" field

"Currency" field

Auto-archiving criterion

Add. info Ok Cancel

ID	documentary scheme ID;
Table	name of the main documentary table;
Type	name of the scheme type, selected from the list of documentary schemes registered with the RBS;
Direction	direction of the document: IN incoming OUT outgoing
Digits in number	THROUGH – being approved of; number of digits in the document number; BS-Client assumes a 5-digit document number (by default). in some RF regions, e.g., in Moscow, external payments (payer's bank BIC doesn't equal beneficiary's bank BIC) require document numbers up to 3 digits; otherwise, when a document is processed within CBR's payment system, its number may be cut to three digits.
Description	remarks on the print form, viz., document name in Russian and English;
Form	name of the template file with the print form for documents of the type, the file is stored in SUBSYS\PRINT\RTF; print form must correspond to the print type selected: to print in RTF – a RTF file (*.rtf), to print in TXT – a TXT file (*.txt);
Section	name of the print form section for documents of the selected type; the field is active for RTF;
BLL	name of the .bll to govern selection of print forms for documents of the given type;

Printing type

"Amount" field

"Currency" field

Auto-archiving criterion

you can print documents as RTF or TXT; if you are using a dot-matrix printer, select TXT; when you change selection, specify relevant print forms;

name of the field to calculate amount of documents;

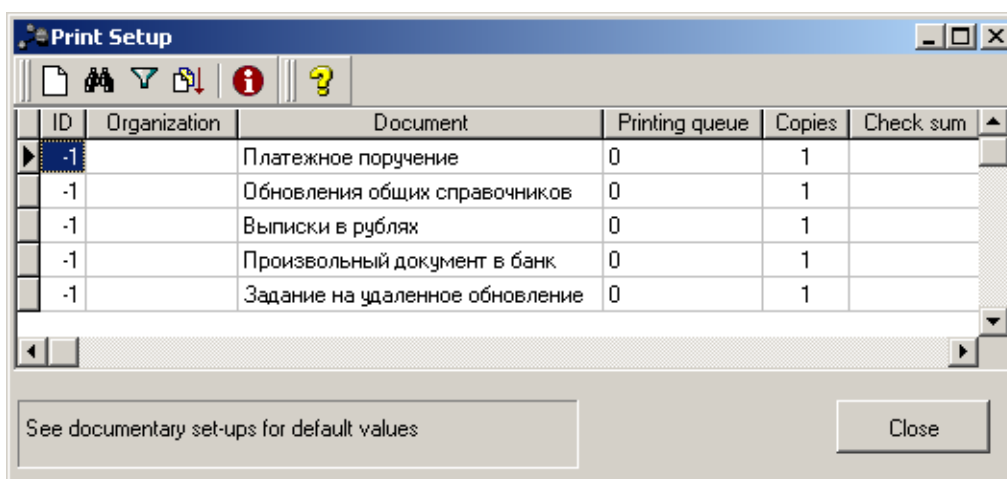
name of the field with the currency code of the amount;

to set an auto-archiving criterion, select a value on the drop-down list; for more information on how to work with archives, refer to the **Documentary Archives** chapter of the **Operator's Manual** (bsc_oper_eng.doc).

Document Print Setup

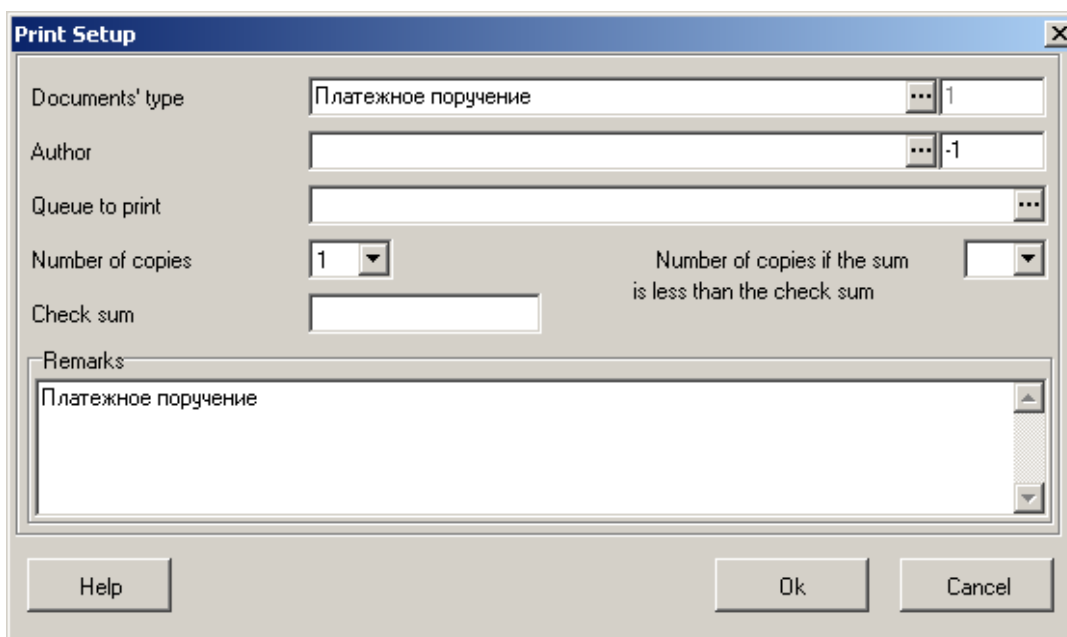
By default, all RBS documents are sent to the default printer and are printed in one copy. If you need to print some documents using a different printer, make sure it is registered in the system (see Registered Printers Options) and set print options properly.

- To set up print options for documents, go to the **Print Setup** directory (available at **Options** → **Print Options** → **Documents**).



Use this directory to set a printer and number of copies for each document type.

- Point to a row with the required document and double click on it.
 - ⇒ The **Print Setup** dialog box appears.



Documents' type

is a value to be extracted from the list of documentary schemes **registered with the system**;

Author

is a RBS abonent to be selected; for the setup to cover all the abonents, type -1 in the id field;

Queue to print

is a printer to be selected from the list of registered printers; blank field corresponds to the default printer; This printer will be used when you start printing from a scroller. When you print from a dialog, the default printer is used;

Number of copies

is the number of document copies to print;

Number of copies if the sum is less than the check sum

is the option defining the number of copies to print in case a document amount is less than the check sum specified;

Check sum

is a check sum to be specified;

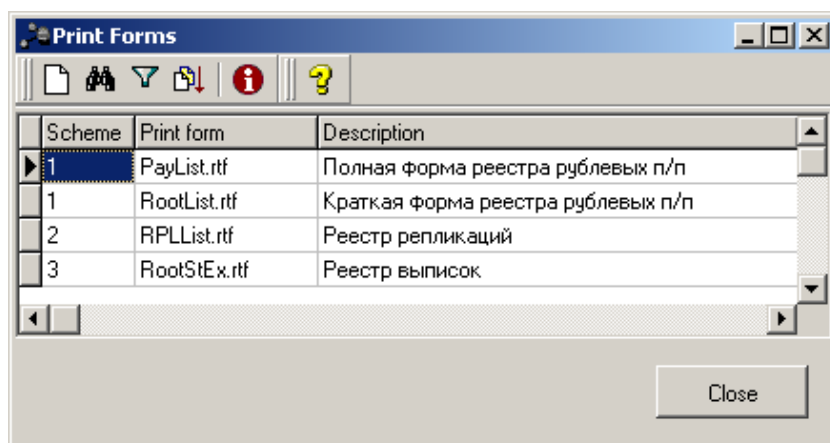
Remarks

is a field for remarks on the setup.

Should it be necessary for an abonent to have print options of a document different from those of the others, create two setup records. Enter the abonent's name and number in the **Author** field of one of them and enter -1 in the **Author** field of another.

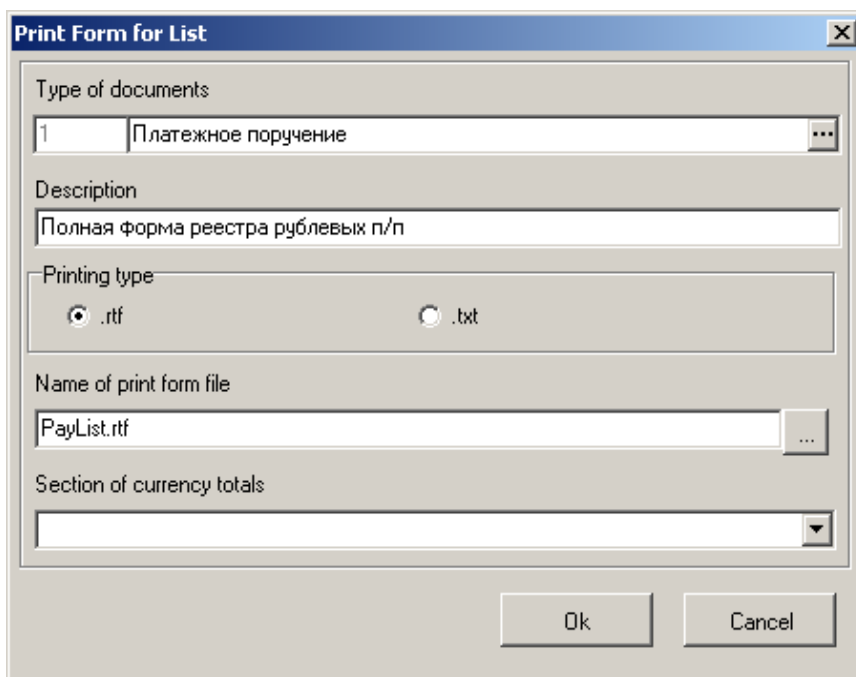
Lists Print Setup

- To set up print options for lists of documents, go to the **Print Forms** directory (available at **Options→Print Options→Lists**).



Here, each type of documents will have a list form as a RTF file.

- Point to a document type and double click on it.
 - ⇒ The **Print Form for List** dialog box appears.



Print Form for List

Type of documents
 1 Платежное поручение ...

Description
 Полная форма реестра рублевых п/п

Printing type
☒ .rtf ☐ .txt

Name of print form file
 PayList.rtf ...

Section of currency totals
 [Empty field with dropdown arrow]

Ok Cancel

Type of documents

Description

Printing type

Name of print form file

Section of currency totals

to be selected from the list of documentary schemes registered with the RBS;
 remarks on the print form;

you can print a list of documents as RTF or TXT;
 if you are using a dot-matrix printer, select TXT;

when you change selection, specify relevant print forms;
 name of the file to store the print form; stored in SUBSYS\PRINT\RTF;

print form must correspond to the print type selected:

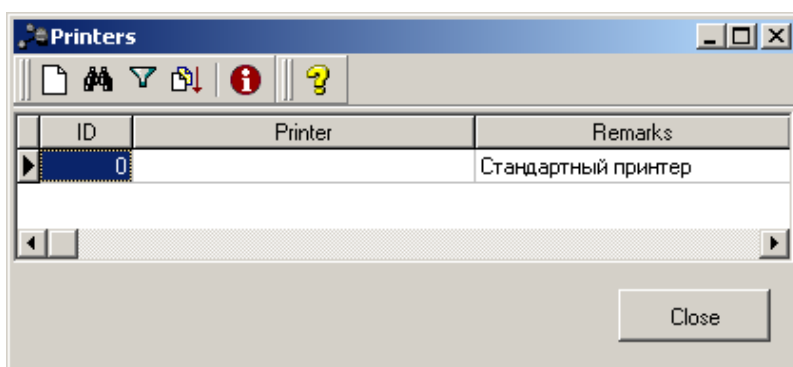
to print in RTF – a RTF file (*.rtf),

to print in TXT – a TXT file (*.txt);

name of the print form section to contain foreign currency total; the field is active for RTF.

Registered Printers Options

- To set up registered printers, open the Printers window (available at **Options→Print Options→Printers**).

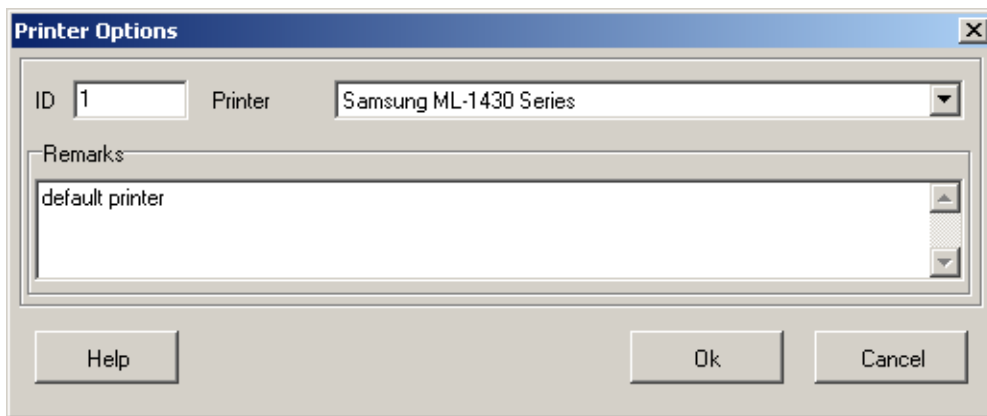


Printers

ID	Printer	Remarks
0		Стандартный принтер

Close

- To enable a printer that is not on the list, add a record into the list of printers.



The 'Printer Options' dialog box has a title bar with a close button. It contains an 'ID' field with the value '1', a 'Printer' dropdown menu showing 'Samsung ML-1430 Series', and a 'Remarks' text area containing 'default printer'. At the bottom are 'Help', 'Ok', and 'Cancel' buttons.

To set up a printer, define the following options:

- ID** is a printer id in the system;
- Printer** is the printer's id in the application to print documents (see port in the printer's settings);
- Remarks** is your comment.
- Note:** ID=0 defines the default printer of your operating system.

Printer Description in List

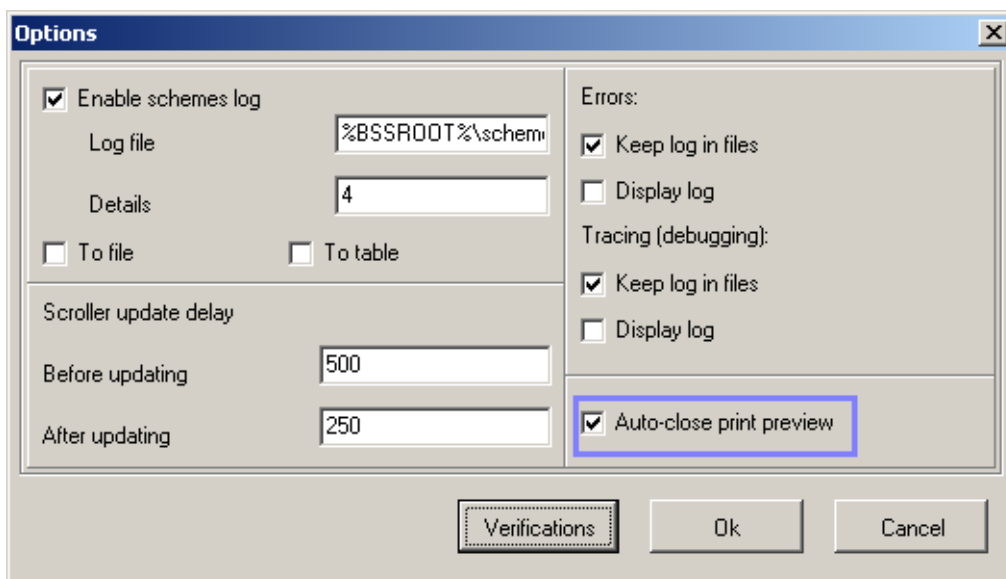
In different operating systems printers are described in different keys:

- Windows 95** HKEY_LOCAL_MACHINE\System\CurrentControlSet\Control\Print\Printers;
- Windows 98** HKEY_LOCAL_MACHINE\System\CurrentControlSet\Control\Print\Printers\;
- Windows 2000** HKEY_CURRENT_USER\SOFTWARE\Microsoft\WindowsNT\CurrentVersion\Device;
- Windows NT** HKEY_CURRENT_USER\Software\Microsoft\WindowsNT\ CurrentVersion\Devices.

MS Word Viewer Print Options

If you do not have **MS Word** on your workstation and **Microsoft Word Viewer** is installed instead, you must set up print options properly.

- To set up MS Word Viewer print options, select **Options → Adv. Settings**.
⇒ The **Options** window appears.



The 'Options' dialog box has a title bar with a close button. It is divided into several sections. On the left, there is a section for 'Enable schemes log' with a checked checkbox, a 'Log file' text field containing '%BSSROOT%\schem', a 'Details' spin box set to '4', and two unchecked checkboxes for 'To file' and 'To table'. Below this is a 'Scroller update delay' section with 'Before updating' and 'After updating' spin boxes set to '500' and '250' respectively. On the right, there is an 'Errors' section with a checked 'Keep log in files' checkbox and an unchecked 'Display log' checkbox. Below that is a 'Tracing (debugging):' section with a checked 'Keep log in files' checkbox and an unchecked 'Display log' checkbox. At the bottom right, the 'Auto-close print preview' checkbox is checked and highlighted with a blue rectangle. At the bottom center is a 'Verifications' button, and at the bottom right are 'Ok' and 'Cancel' buttons.

- Check the **Auto-close print preview** option.

Cryptographic Protection

Introduction

As BS-Client handles financial documents, security matters are of topical interest. The system takes advantage of steadfast cryptographic encryption and an electronic digital signature (EDS) for all the data the client and bank parts exchange. Encryption prevents data wiretap, whereas EDS authenticates a unique originator.

A client can receive one or more sets of keys from the bank. Each keys set comprises the client's private key and certificate (public key) and the bank's certificate (public key) and is supplied with BS-Client's installation disc. During system installation, private and public keys of each set are regenerated to ensure that the private key is available for its owner only. Then you must send your new public key to the bank. For more details on how to transmit public keys to the bank, see the Installation Guide (C_instal_eng.doc). All data the client and the bank exchange through BS-Client is encrypted and signed by these keys, so the client cannot work in the system without the key diskette. Also, the client cannot work in the system if the key diskette is damaged. Therefore, we recommend that you have a backup key diskette and keep it somewhere safe when you install the system and afterwards, when you change your keys.

Each document transmitted to the bank through the system requires signing by a set number (1 or 2) of digital signatures. When the bank receives documents, it verifies that their digital signatures are valid. Protection of the client's key diskette requires special emphasis. Key and system access passwords provide with additional levels of protection.

By default, BS-Client sets up options for keys usage and regeneration itself. Furthermore, there is an option for each abonent to choose preferable procedures of signatures and keys exchange as well as choose among available lengths of keys. To choose the procedures and key lengths, choose appropriate options in the cryptographic profile of the corresponding abonent and set appropriate options when generating keys. BS-Client will determine the procedures it must use.

The present chapter describes the types of cryptographic facilities used by BS-Client; how to set up the system for a new keys set; how to exchange information about crypto-keys between the bank and client parts; how to set up crypto-parameters to run crypto-operations in your BS-Client.

Set of Keys: General

For information protection, the RBS system takes advantage of various libraries for cryptographic transformations (cryptographic providers). When they form/verify digital signatures, encrypt/decrypt data, they apply the so-called **pairs of keys**, comprising the following inter-related keys: **public** and **private**.

A **private key** (a private key file or key written to a certain key carrier) is considered as confidential information. It is the key owner that is responsible for its protection from unauthorized duplication. When given a set of keys, a system user must be informed of the private keys storage rules and that no third parties should gain access to a private key carrier.

A **public key** is the second part of a keys pair. Currently, most cryptographic providers distribute public keys as **certificates**. A certificate is a public key authenticated by a digital signature of the **Certification Center (CC)** - a special-purpose body issuing certificates.

A public key is not considered as confidential information and can be distributed through open communication channels without any additional protection.

Each keys pair used in the system has a unique identifier - UID.

A set of keys can both be termless and have an expiry date. A certificate expiry date is determined automatically during the certificate's installation. To check it, go to the **Certificate** window. To open it,

- select **Options → Cryptographic Provider → EDS Abonents**.
 - ⇒ The **CryptoProfiles** window appears.
- Find a profile in the list of **CryptoProfiles** and press **Enter**.
 - ⇒ The **Profile** window appears.

□ Go to the **Certificates** tab, select a certificate, and press **Enter**.

⇒ The **Certificate** window appears.

To determine the certificate's expiration date, see values in the following fields:

Creation date

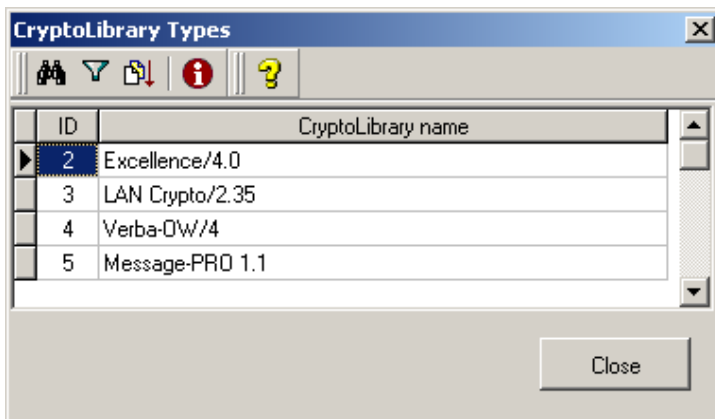
the certificate's valid-from date;

Expiry date

the certificate's expiry date.

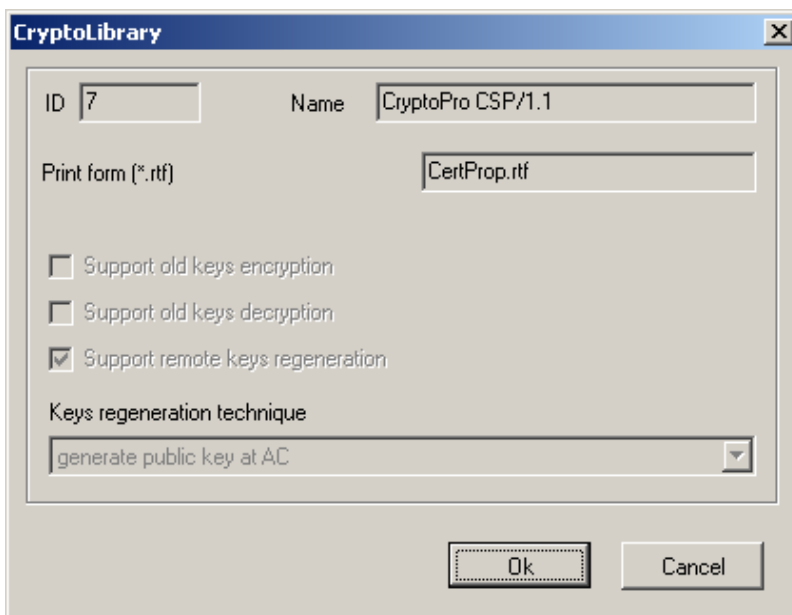
Supported Types of Cryptographic Providers

□ For the cryptographic providers supported by BS-Client see **Options→Cryptographic Provider→Types of CryptoProviders**.



Tip: Along with the crypto-libraries used in the system – **Excellence/4.0**, **LAN Crypto/2.35**, **Message-PRO 1.1**, **M-Pro v1.34 (GOST PSE)**, **M-Pro v2.x**, **CryptoPro CSP/1.1**, **Verba-OW/4**, **Crypto COM/2.2**, **Open SSL**, and **Crypto-C**, the list of crypto-libraries contains names of cryptographic providers that are registered but not used at the moment.

⇒ Each cryptographic provider has a list of default parameters. To view them, double-click on the record with the left mouse button.



ID

unique identifier of the crypto-library;

Name

its crypto-library name;

Print form (*.rtf)

a RTF file with a key card form that contains certificate information (for details on how to set a path to an RTF file of a key print form, see [Advanced CryptoProvider Settings](#));

Support old key encryption	if checked, encryption by the abonent's old keys is available;
Support old key decryption	if checked, decryption of data encrypted by the abonent's old keys is available; valid for the Excellence/4.0 и LAN Crypto/2.35 libraries;
Support remote keys regeneration	remote regeneration is used in the sense of remote update of the client part's working keys; it can appear necessary to update your keys in the following cases: <ul style="list-style-type: none"> - when you install and set up the BS-Client system, its registration key and certificate with limited validity period require regenerating; - routine keys regeneration when the expiry date of your current working certificate approaches; - anytime at will of the Client; if checked, the crypto-library will support remote keys regeneration; valid for the libraries Excellence/4.0, LAN Crypto/2.35, Message-PRO 1.1, M-Pro v1.34 (GOST PSE), M-Pro v2.x, CryptoPro CSP/1.1, Crypto COM/2.2, Open SSL, and Crypto-C;
Keys regeneration technique	choose from the list of available values; Available: <p>generate public key by user - your public key and certificate will be generated in the client part without the Certification Center (CC) involved). Valid for the Excellence/4.0, LAN Crypto/2.35 libraries.</p> <p>generate public key at AC - the client part generates a request for a new certificate to CC, which then issues a new certificate per the request. Valid for the libraries Message-PRO 1.1, M-Pro v1.34 (GOST PSE), M-Pro v2.x, CryptoPro CSP/1.1, Crypto COM/2.2, Open SSL, and Crypto-C.</p>

Tip: It is not recommended that you change the parameters.

For each cryptographic provider to operate in the system, modules from other vendors are required into the bargain. For Excellence/4.0, LAN Crypto/2.35, Message-PRO 1.1, M-Pro v1.34 (GOST PSE), M-Pro v2.x, and Open SSL they are included into the suite; modules for CryptoPro CSP/1.1, Verba-OW/4, Crypto COM/2.2, and Crypto-C are not supplied. All the libraries of supplied cryptographic providers are added during client part installation.

Types of Cryptographic Transformations

Different cryptographic transformations require different parts of the pair of keys.

Operation	Required key(s)
Generate a digital signature	Private key of the signing abonent;
Verify a digital signature	Public key (certificate) of the abonent that signed it;
Encryption	Public key (certificate) of the abonent that receives encrypted data;
Decryption	Private key of the abonent that receives encrypted data.

Signing Documents

A digital signature is used to control data integrity and authenticate a data originator.

You can only sign clear data.

One or two signatures can be "affixed" to a document. The required number of signatures is defined in its setup.

An abonent with the right to sign by the single signature can sign documents that require two.

BS-Client signs documents with regard to the set parameters. Here are the parameters:

3. System user's cryptographic profile.
3. Document's parameters
 - Name of the documentary scheme
 - ID of the company to create the document
 - ID of the workstation to create the document
 - Document amount
4. The 'Display the dialog to select a signing abonent' option.

Moreover, a user must have access to the private key signing the documents.

The **Profile** dialog box contains the unique identifier of the cryptographic profile and all the user's rights to cryptographic operations. [Go to the Number of Signatures](#) window to set the number of signatures that documents require.

[To set the 'Display the dialog to select a signing abonent' option, go to the Advanced CryptoProvider Settings](#) window and open the **Documents** tab. If checked, a list of abonents appears, with UIDs appropriate to receive parameters of their signatures, when the user signs documents; when the user select a signing abonent, only UIDs of the given abonent stay in the list. If un-checked, no list of signature abonents appears and documents are signed by the first available key.

Validating Signatures

Any abonent with access to the public key of the abonent that saved the document can verify its digital signature.

The following parameters are verified: by who and when the data was signed, whether the data is garbled or not.

If the document was signed by inactive (but enabled) key, this is no reason to declare the signature invalid.

When verifying signing of documents, the following are considered source parameters:

4. System user's cryptographic profile.
5. Type of the cryptographic library used to sign the document.
6. Number of signatures on documents.

The **Profile** dialog box contains the unique identifier of the cryptographic profile and all the user's rights to cryptographic operations. [Go to the Number of Signatures](#) window to set the number of signatures that documents require.

Signing Packages

Transport packages are signed automatically, should the signing abonent have the option "right to receive/send mail" checked in his/her profile.

Transport packages are signed by the signing abonent's private key. If the abonent has several keys available for signing, the first of them will be applied.

Below are the source parameters of signing transport packages:

1. System user's cryptographic profile.
2. UID of the client to send data to.

Validating Package Signatures

Digital signatures of transport packages are verified automatically should the receiving abonent have rights to receive/send mail checked in his/her profile.

Any abonent, having in his/her folder the public key of the abonent that saved the document, can verify the digital signature.

The following parameters are verified: by who and when the data was signed, whether the data is garbled or not.

If the package was signed by inactive (but enabled) key, this is no reason to declare the signature invalid.

Also, there is an option to verify signing manually using your old set of keys.

When verifying signing of packages, the following are considered source parameters:

1. System user's cryptographic profile.
2. Type of the cryptographic library used to sign the package.

Encrypting Packages

Data encryption is necessary to prevent its illegal inspection, when stored or transmitted through any communication channels.

To reduce volume of encrypted data, the system can pack them by its own archiving procedure before encrypting. You cannot pack data after encryption. The user's setup contains the option of preliminary data compression.

To encrypt, the system uses procedures of a corresponding crypto-library.

Data is encrypted by the public key (certificate) of their receiver.

If the abonent does not insert him/herself into the list of abonents to encrypt for, s/he will fail to decrypt the data.

For encryption, the following are source parameters:

1. System user's cryptographic profile.
2. Type of the cryptographic library used to sign the package.
3. UID to encrypt for.

Decrypting Packages

Transport packages are decrypted automatically, should the abonent receiving decrypted data have the option "right to receive/send mail" checked in his/her profile.

If compressed, data is un-packed automatically during decryption of transport packages.

Before decrypting, the system checks that the data is accessible and then decrypts it using procedures of a corresponding crypto-library. Data integrity is controlled.

To decrypt transport packages, a private key of the abonent that received decrypted data is required. If unable to decrypt by active keys, the system uses inactive (but enabled) ones.

For decryption, the following are source parameters:

1. System user's cryptographic profile.
2. Type of the cryptographic library used to encrypt the package.

CryptoKeys Setup

BS-Client requires the following operations to set options of crypto-keys:

- Enter a new crypto-profile for your abonent;
- Register a new certificate of the abonent;
- Specify advanced rights to sign;
- Specify the number of signatures to affix to your documents;
- Specify additional crypto-options.

If you need to set up crypto-keys within a registered crypto-profile, you do not have to enter a new profile. The other crypto-options are to be set for the appropriate cryptographic facilities, in any order.

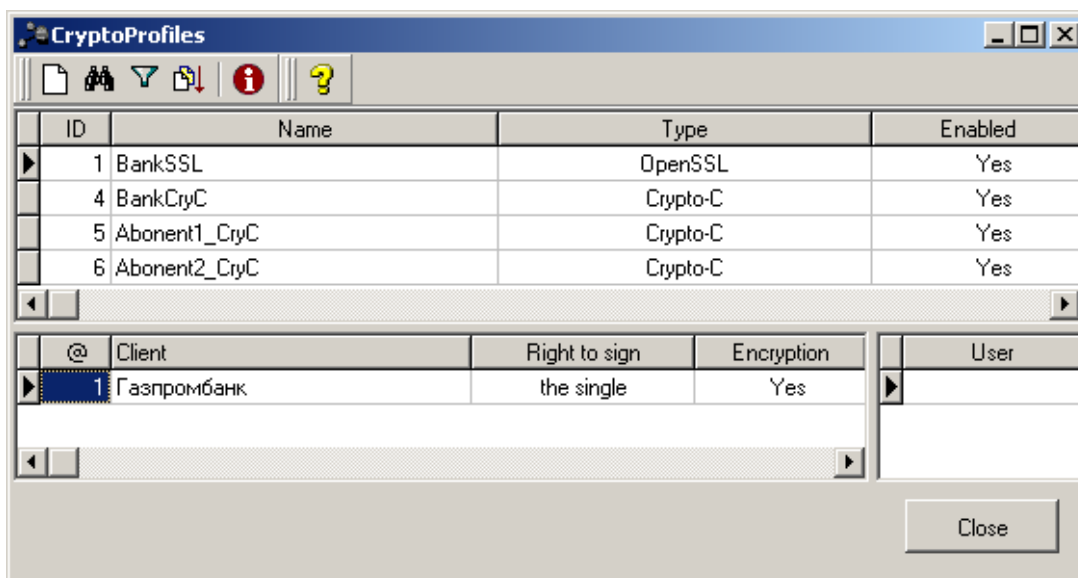
Provided that there are two bank part administrators, you need to cross register certificates. It means that both administrators register their certificates for each other in order to be able to validate another

administrator's signature on an outgoing document. The same procedure takes place when a bank part administrator has the key changed.

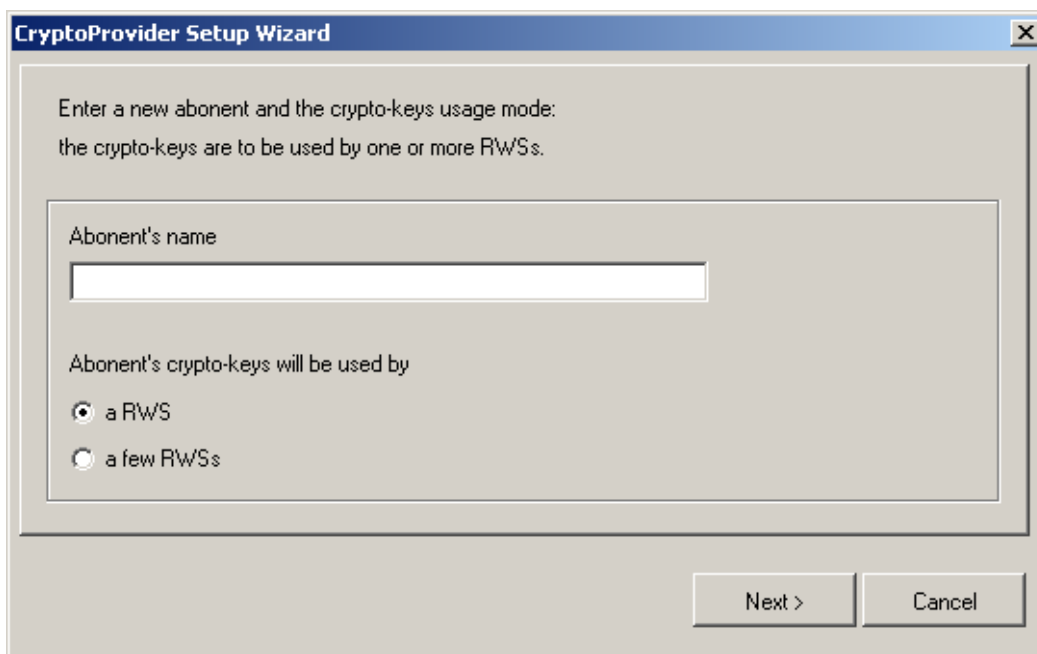
For information on how to cross register certificates, see [Registering Certificates Manually](#).

Inserting New CryptoProfile

- Select **Options→Cryptographic Provider→EDS Abonents**.
- ⇒ The **CryptoProfiles** window appears.



- To add a new profile, point to the **crypto-profiles** list and press **Ins**.
- ⇒ The **CryptoProvider Setup Wizard** window appears.



- Specify the following parameters:

Abonent's name name of the abonent's profile;

Abonent's crypto-keys will be used by

a RWS Declare one crypto-user per one remote workplace.

a few RWSs Allow one crypto-user to apply the keys set on different remote workplaces.

Attention! It is not recommended that you use inverted (double) commas in signature names.

- Populate the dialog fields and click on Next.

Abonent's crypto-keys will be used by one RWS

- ⇒ If you set that the abonent's crypto-keys can be used on **one remote workplace only**, the next **CryptoProvider Setup Wizard** window appears.

- Specify the following parameters:

@	RWS number; to be selected from the directory;
RWS	RWS name;
System user name	user's login (active and required for personal keys only);
no right to sign	check it to disable signing of documents;
right to sign all documents by	check it to enable signing of documents; should you check this option, go to the next field to select the number of signatures (the single signature; signature A; signature B); this option is closely associated with the number of required signatures;

Attention! When setting up your crypto-provider, add a relevant record into the **Number of Signatures** directory. For more information, see Number of Signatures to Affix. Otherwise, for documents of your organization, the system will take this option as **Number of Signatures=1**.

Let us consider status changes of a document to be signed (beginning with **New** and up to **Signed**) against the **Right to sign all documents** option.

Required number of signatures	Status before signing	Status after signing		
		signature A	signature B	single signature
1	New	Signed	Signed	Signed
2	New	Signed I (awaiting II)	Signed II (awaiting I)	Signed
	Signed I (awaiting II)	inapplicable	Signed	Signed

	Signed II (awaiting I)	Signed	inapplicable	Signed
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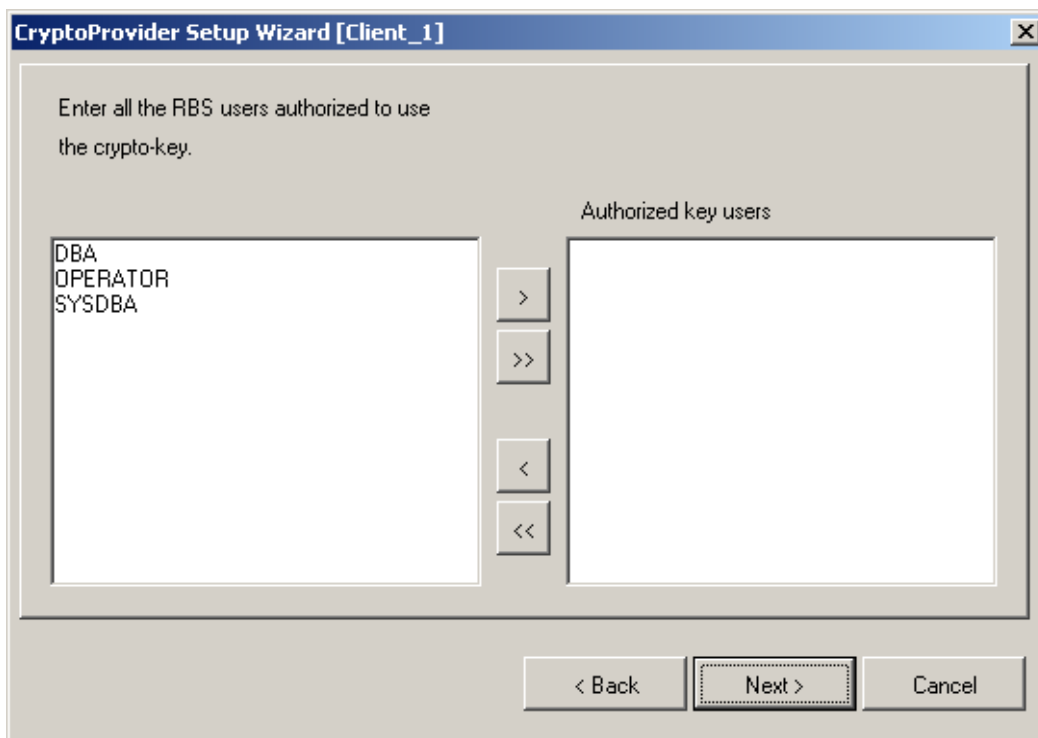
Advanced rights to sign

check [advanced rights to sign](#). Later you can assign appropriate rights reasoning from document details; advanced rights can only be properly assigned after the crypto-profile is registered with the system (click **Ok** in this window to register it); to set advanced rights, click on **Advanced rights to sign documents** (or select **Options** → **Cryptographic Provider** → **Advanced Rights to Sign**).

Right to receive / send mail

rights to receive / send mail; it is recommended that you check the box;
with the option un-checked, transport packages will not be encrypted and signed by the keys of this crypto-profile.

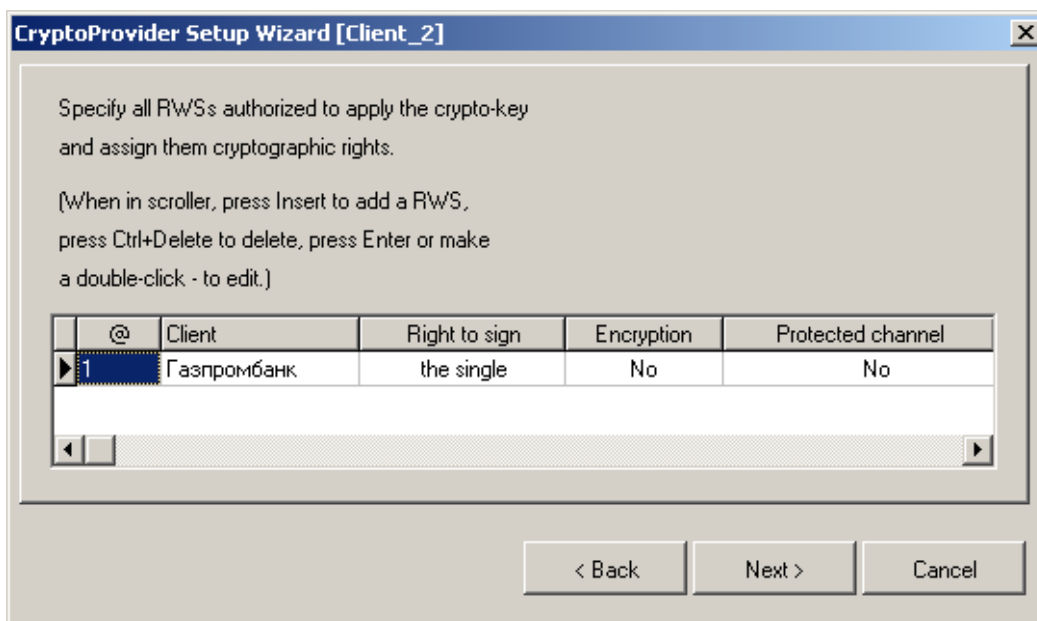
- Populate the dialog fields and click on **Next**.
 - ⇒ The next **CryptoProvider Setup Wizard** window appears for you to set the user's rights to crypto-keys.



- Compile a list of keys for the user by the     buttons.
- Click on **Next**.
 - ⇒ The next **CryptoProvider Setup Wizard** window appears for you to specify setup parameters of the abonent's new certificate (see [Registering New Certificate](#)).

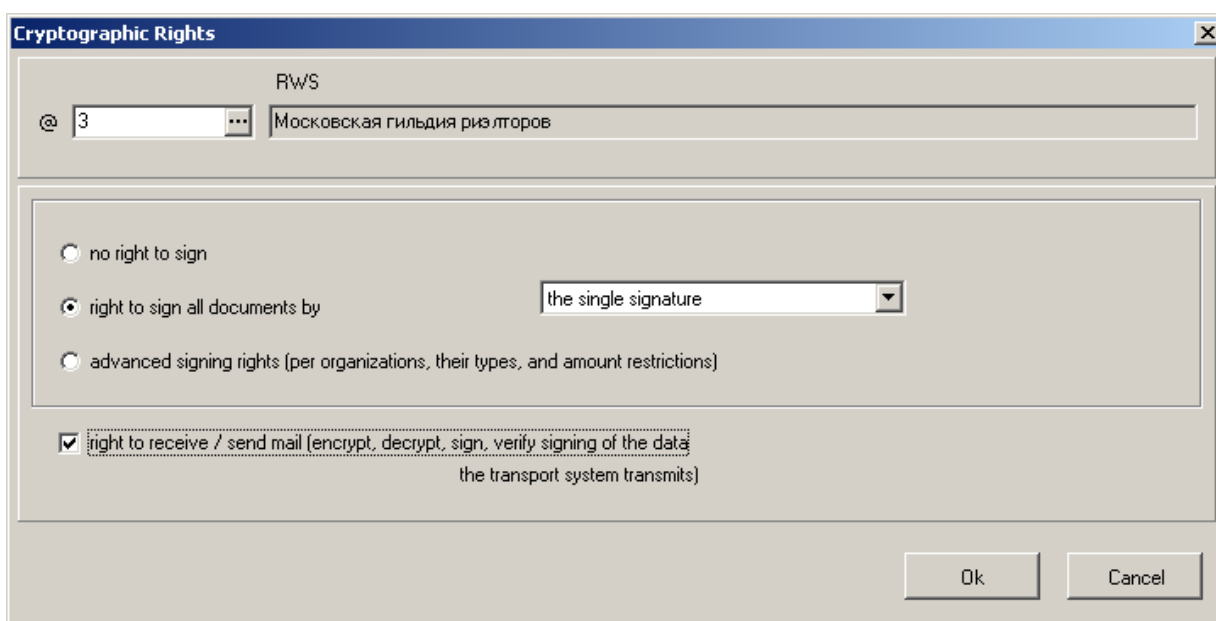
Abonent's crypto-keys will be used by a few RWSs


- ⇒ Should you allow the abonent to use the crypto-keys **on a few remote workplaces**, the next **CryptoProvider Setup Wizard** window appears.



Specify all the remote workplaces where the new abonent's keys can be used.

- To insert a new record, point to the list of RWSs and press **Ins**.
⇒ The **Cryptographic Rights** window appears.



- Populate the **Cryptographic Rights** window fields and click **Ok**.
⇒ You are back in the **CryptoProvider Setup Wizard** window.
- To insert another record in the list of RWSs, press **Ins** again. Specify its rights to cryptographic operations and again click **Ok**. Follow the procedure for all RWSs that you authorize to use the crypto-keys.
- As soon as you compile the list of RWSs, click on **Next**.
⇒ The next the **CryptoProvider Setup Wizard** window appears for you to specify the user's rights to the crypto-keys.
- Select a **System user name** on the value list. Use  to compile a list of keys the given abonent can use from among the keys within the system installation disc. Repeat the procedure for *each* system user to work on your workstation and sign documents. Click on **Next**.

- ⇒ The next **CryptoProvider Setup Wizard** window appears for you to enter parameters of a new certificate (see [Registering New Certificate](#)).

Registering New Certificate

You can register a new certificate in **Profile** right after entering a new profile.

Had you clicked **Ok** right after entering your abonent's profile, the procedure described here is inapplicable. **Profile** closes as soon as you click **Ok**. The crypto-profile will be registered with the system. When you open a registered profile, its **Certificate** tab is different.

You can register a new certificate in the **CryptoProvider Setup Wizard** window after you enter a new abonent (see [Inserting New CryptoProfile](#)).

For details on how to register a new certificate for a registered abonent, refer to [Registering New Key in CryptoProfile](#).

- Specify the following options in the **CryptoProvider Setup Wizard** window:
- Crypto-library type** the type of cryptographic facilities to use; the field offers a drop-down list;
- Identifier (UID)** the unique identifier of the keys set; the value is entered automatically upon registering the certificate;

Operating Certificate	the certificate that can be used; an operating certificate must be active;
Technologic Certificate	the certificate that was supplied within the suite; you cannot use it; you have to re-generate it; to enable your technologic certificate, check the 'active' radio button to make it active; otherwise, you can only sign by your operating key; not applicable to the bank part.
Input date	
Expiry date	certificate's use-by date; the value is entered automatically upon registering the certificate.
Advanced	radio button for classifying crypto-parameters; the option is disabled by default; with the option checked, 4 tabs appear (options for signature, signature validation, encryption, decryption); check it if the key's (certificate's) options differ for signature, signature validation, encryption, and decryption.

⇒ As you select a crypto-library, the **Details** group of fields will be auto-populated with default parameters of the chosen crypto-provider. For description of different cryptographic providers see Key Device Options.

□ To set up the keys for the crypto-profile, click on **Certificate Installation Wizard**.

⇒ You will be prompted to choose paths to the following folders (you can leave default values or specify your own):

Folder with signature installation program	the folder storing installation programs of crypto-keys;
Path to file with abonent's certificate	the path to file storing abonent's signature certificate;
Path to file with AC's certificate	the path to file storing Authorization Center's certificate;
Folder to install private key to	the folder to store the private key of signature;
Folder to install certificate to	the folder to store the file with signature certificate (the system will move clients' public keys here after registering them);
Public key folder	the folder to store the file with the certificate of the profile.

Note: The folders to store private and public keys must be protected from unauthorized access.

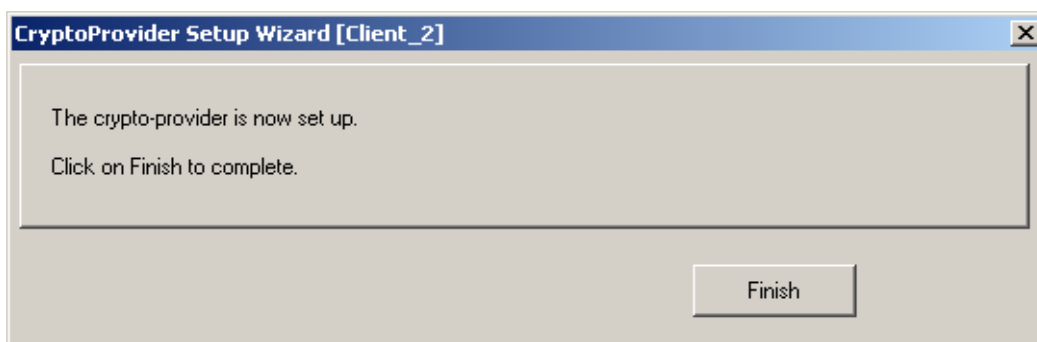
□ When you are prompted to choose a path, each time you can either input the path manually or click on **Browse** and choose an existing path.

□ Click **Ok** as soon as you finish.

⇒ You are back in the **CryptoProvider Setup Wizard** window. All of the signature parameters will contain those of the registered EDS.

□ Click on **Next**.

⇒ The following **CryptoProvider Setup Wizard** window appears.



□ Click on **Finish** to complete certificate installation.

□ You are back in the Crypto-profiles directory.

Registering New Key in CryptoProfile

- To add a new key into a registered profile, select **Options→Cryptographic Provider→EDS abonents**.
- Find the target profile in the list, open it, and go to the **Certificates** tab.

Profile

Abonent's name: Abonent1_CryC ☐ disabled

Cryptographic rights | **Certificates** | Advanced rights to sign

Crypto-library type: Crypto-C

Identifier (UID)	A	T	Period starts	Period finishes
IK1_crypto_C	1	0	14.09.2004	14.09.2005

Ok Cancel

Caution! You cannot change the crypto-library type set for the abonent's profile.

- Point to the list of certificates and press **Ins**.
- The **Certificate** window opens. Click on [Certificate Installation Wizard](#) to register a new key for the abonent.

Advanced Signature Rights

Advanced rights can define whether a client can sign documents with certain

- document type
- company
- amount (with upper and/or lower limit)
- whether it meets advanced restrictions set by external handlers

If yes, by which signature.

- To view advance rights, select **Options → Cryptographic Provider → Advanced Rights to Sign** (or go to **Profile**, select the **Cryptographic rights** tab, and click on **Advanced rights to sign documents**).

Advanced Rights to Sign

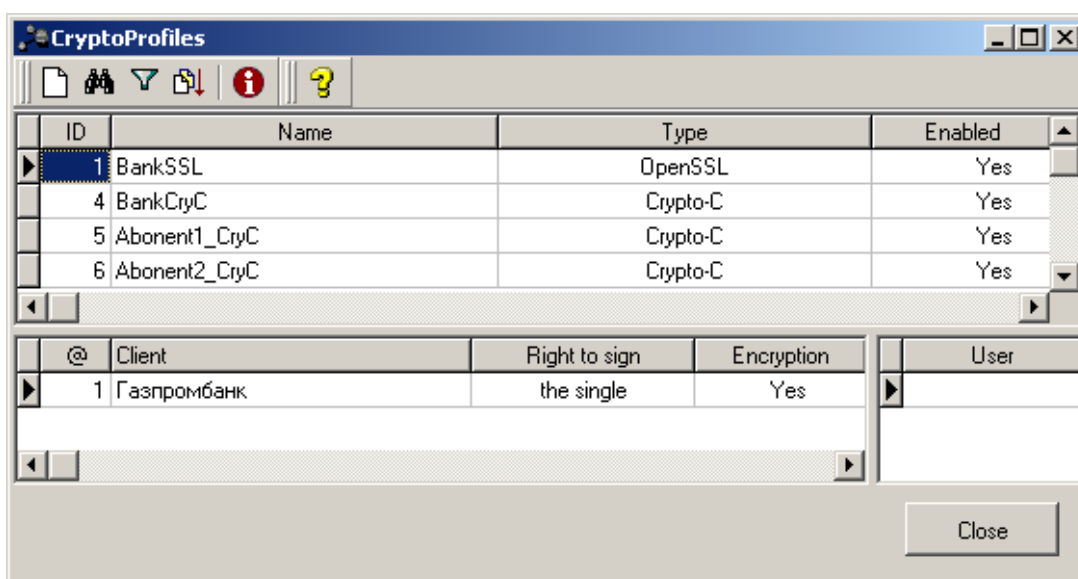
Nos.	ID	@	Abonent	Document	Right to sign	Organization	Restriction
1	12	10		Any document	signature No.1		without any limits
2	12	10		Any document	signature No.2		without any limits
3	13	10		Any document	the single		without any limits

Close

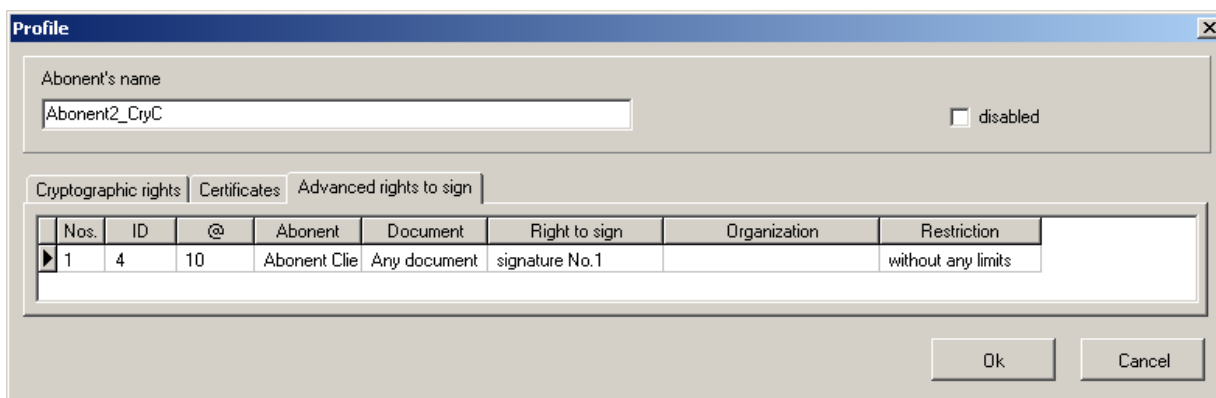
- To view a record, select its row and press **Enter** or double-click on it.
⇒ The **Advanced Right to Sign** window appears.

Or

- Select **Options → Cryptographic Provider → EDS Abonents.**
- ⇒ The **CryptoProfiles** window appears.



- Find the record in the list, highlight it, and press **Enter**.
- The **Profile** window appears. Go to the **Advanced rights to sign** tab.



- To view details, highlight the target record and press **Enter** or double-click on it.
- ⇒ The **Advanced Right to Sign** window appears.

ID

the abonent
has the right to affix

to documents

Restriction

the company's system number; this is a directory-selection field;

the unique identifier of the crypto-profile;

select a value on the drop-down list: no right, the single, the first, the second signature;

select a value on the drop-down list; you can select a documentary scheme or 'all documents';

select a restriction on the drop-down list. The value will define mandatory options;

the following values are available:

- without restrictions,
- with restriction on document amount; should you select this value, specify **minimum document amount** and/or **maximum document amount**
- with advanced restriction; select it if there are restrictions of external handlers; you will have to specify the **restriction type** and **handler**;

Attention! You can limit a document amount for Payment Orders only. It is not recommended to select 'all documents' or documents of types other than Payment Order.

Minimum document amount

the smallest possible amount; the field is active should you select the 'with restriction on document amount'

Restriction;

Maximum document amount

the largest possible amount; the field is active should you select the 'with restriction on document amount'

Restriction;

Restriction type

select it from the list of external handlers for signing restrictions or type it in; the field is active should you select the 'with advanced restriction' **Restriction;**

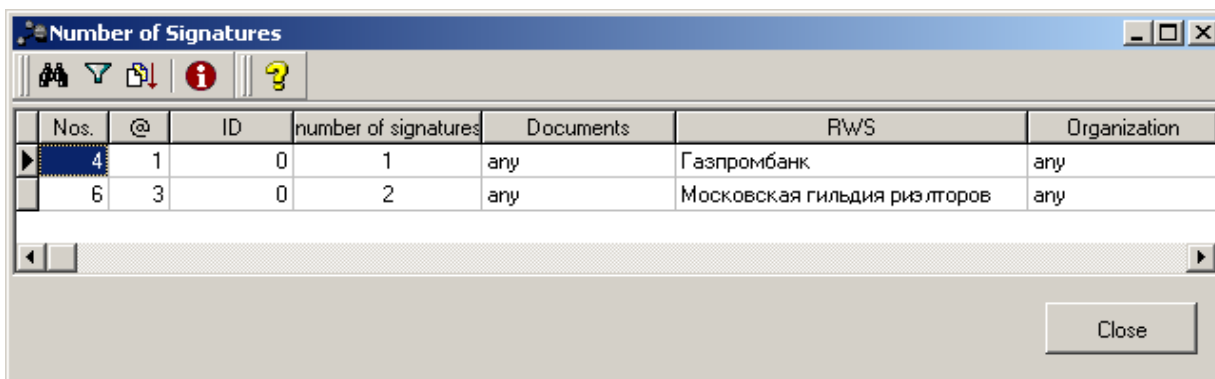
Handler

select it from the list of external handlers for signing restrictions (auto-populated when you select a **Restriction type**) or type it in; the field is active should you select the 'with advanced restriction' **Restriction.**

Number of Signatures to Affix

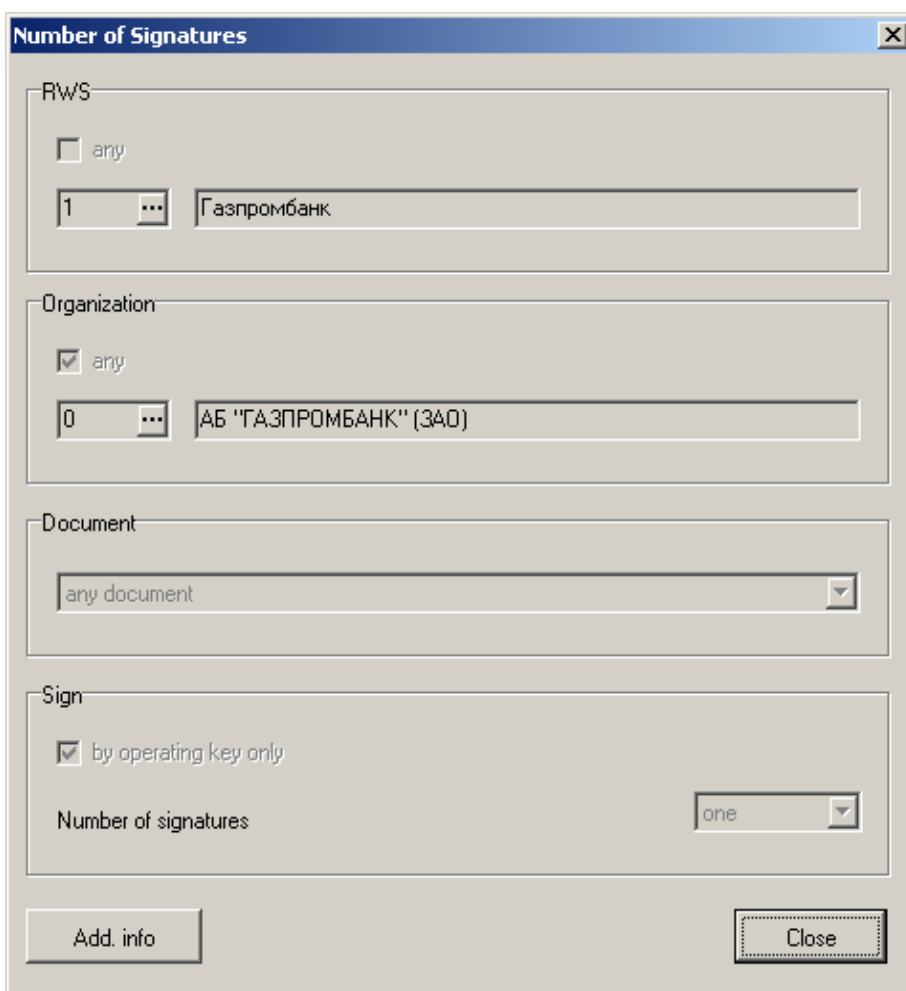
The number of signatures to affix is defined in the bank part. In the client part you can only view the settings.

- Select **Options** → **Cryptographic Provider** → **Number of Signatures on Documents**.
 - ⇒ The **Number of Signatures** window appears. The window will contain information on the number of signatures per clients, companies, and document types.



Nos.	@	ID	number of signatures	Documents	RWS	Organization
4	1	0	1	any	Газпромбанк	any
6	3	0	2	any	Московская гильдия риэлторов	any

- To view the operating key pair, select the appropriate row and press **Enter** or double-click on it.



Number of Signatures

RWS

☐ any

1 ... Газпромбанк

Organization

☒ any

0 ... АБ "ГАЗПРОМБАНК" (ЗАО)

Document

any document

Sign

☒ by operating key only

Number of signatures: one

Add. info Close

RWS

Organization

Document

Sign

select the workstation ID and name on the value list of workstations or check **any**;
 select the organization's ID and name on the value list or check **any**;
 the documentary scheme;
 is checked, you can sign by your operating key only (the working key, not the technologic one);
 if un-checked, you can sign by all the keys (including technologic ones, should they be 'active');

Number of signatures

the mandatory number of signatures; the field offers a drop-down list.

Advanced CryptoProvider Settings

- After you've set encryption keys, you need to set signing and encryption options extended to all the users. Besides, there is a number of additional crypto-settings to be set. Select **Options → Cryptographic Provider → Adv. CryptoProvider Settings**.

⇒ The **Advanced CryptoProvider Settings** window appears. There are three tabs: **Transport**, **Documents**, and **Certificates**.

Transport

will contain signing and encryption options for transport packages;

Documents

will contain options for signing and removal of signatures;

Certificates

will contain options for expiry dates validation, paths to files with message exchange acknowledgement acts.

The following options must match for the bank and client parts to provide for correct system operation:

on the **Transport** tab:

Encrypt packages

Compress data

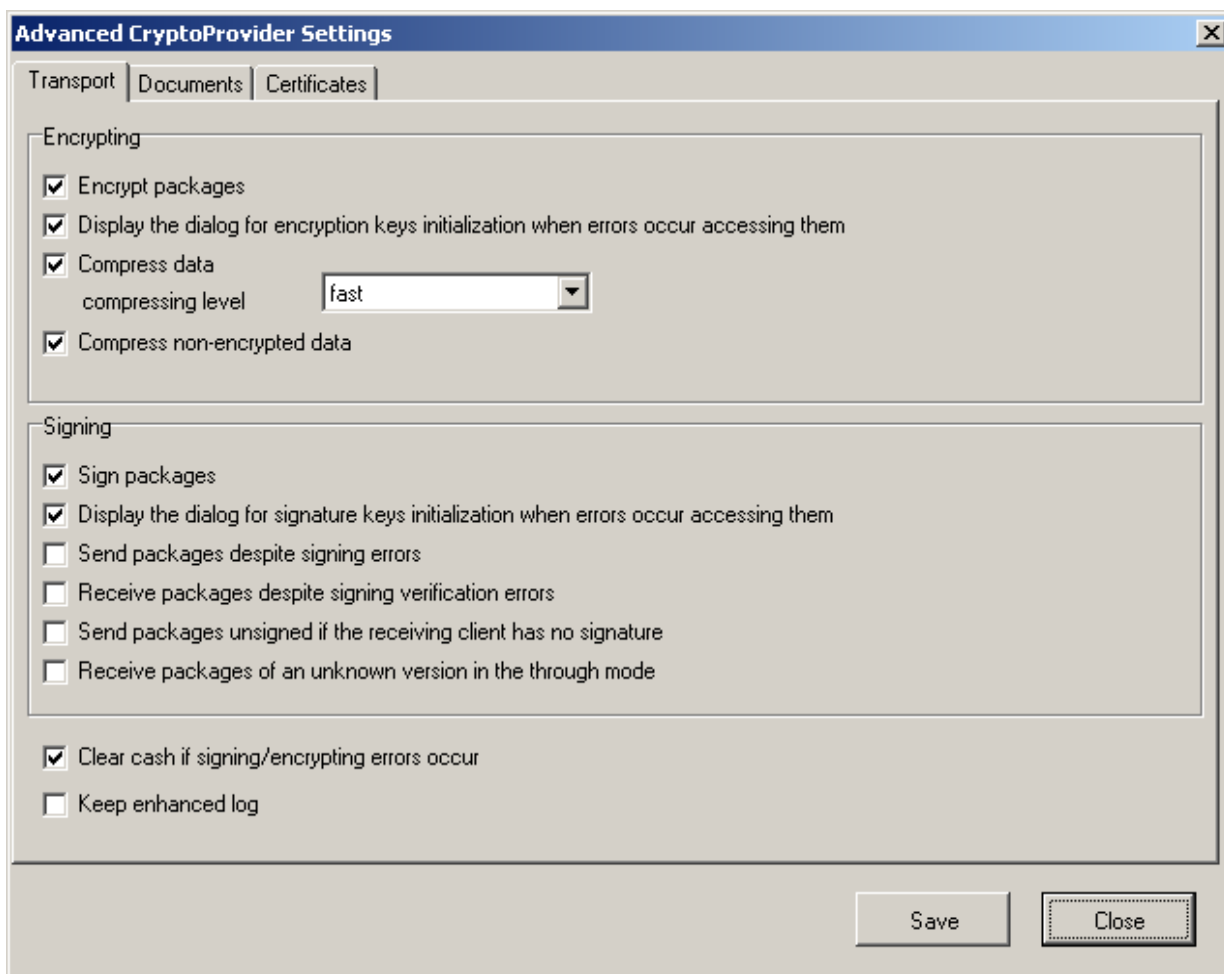
Compress non-encrypted data

Sign packages

on the **Documents** tab:

Sign in the text mode

See below for the details.



<p>The upper Transport pane contains the Encrypting group, the lower pane - the Signing group.</p> <p>Encrypt packages</p> <p>Display the dialog for encryption keys initialization when errors occur accessing them</p>	<p>packages will be encrypted should you check the option;</p>
<p>Compress data</p>	<p>check the option to pop up the error message should a key access error occur. If it's un-checked, error messages are only stored in the logs: %BSSRoot%\error.log, %BSSRoot%\Exe\btrerror.log and %BSSRoot%\SUBSYS\Logs\Crypto*.log. Should Initializing encryption keys be un-checked, the option is inactive;</p>
<p>Compress non-encrypted data</p>	<p>with the option checked, data is compress before encryption. Data is ZIPPed;</p> <p>with the option checked, the system will compress data that is not subject to encryption.</p>
<p>Now you need to set up signing parameters for transport packages.</p> <p>Sign packages</p>	<p>packages are only signed with the option checked. Thus, even with signing key for transport packages specified, un-checked Sign packages will disable signing;</p>
<p>Display the dialog for encryption keys initialization when errors occur accessing them</p>	<p>check this option to pop up an error message when a key access error occurs. With the option unchecked, error messages are only stored in the logs: %BSSRoot%\error.log, %BSSRoot%\Exe\btrerror.log and %BSSRoot%\SUBSYS\Logs\Crypto*.log. Should Initializing signing keys be un-checked, the option is inactive;</p>
<p>Send packages despite signing errors</p>	<p>with the option checked, the transport subsystem sends packages unsigned due to signing errors. With the option</p>

Receive packages despite signing verification errors

un-checked, a package with signing errors will not be sent. An appropriate error message will be stored in the logs: %BSSRoot%\error.log, %BSSRoot%\Exe\bttrerror.log and %BSSRoot%\SUBSYS\ Logs\Crypto\ *.log;

Send packages unsigned if the receiving client has no signature

with the option checked, the transport subsystem receives packages with errors detected during signing validation. With the option un-checked, the transport subsystem will not process packages with errors detected during validation of their signing. Error messages will be stored in the logs: %BSSRoot%\error.log, %BSSRoot%\Exe\bttrerror.log and %BSSRoot%\SUBSYS\ Logs\Crypto\ *.log;

Receive packages of an unknown version in the through mode

with the option un-checked, the transport subsystem will pop up an error message in the case that the system is trying to send the document to a client with no signing key. With the option checked, such packages are sent;

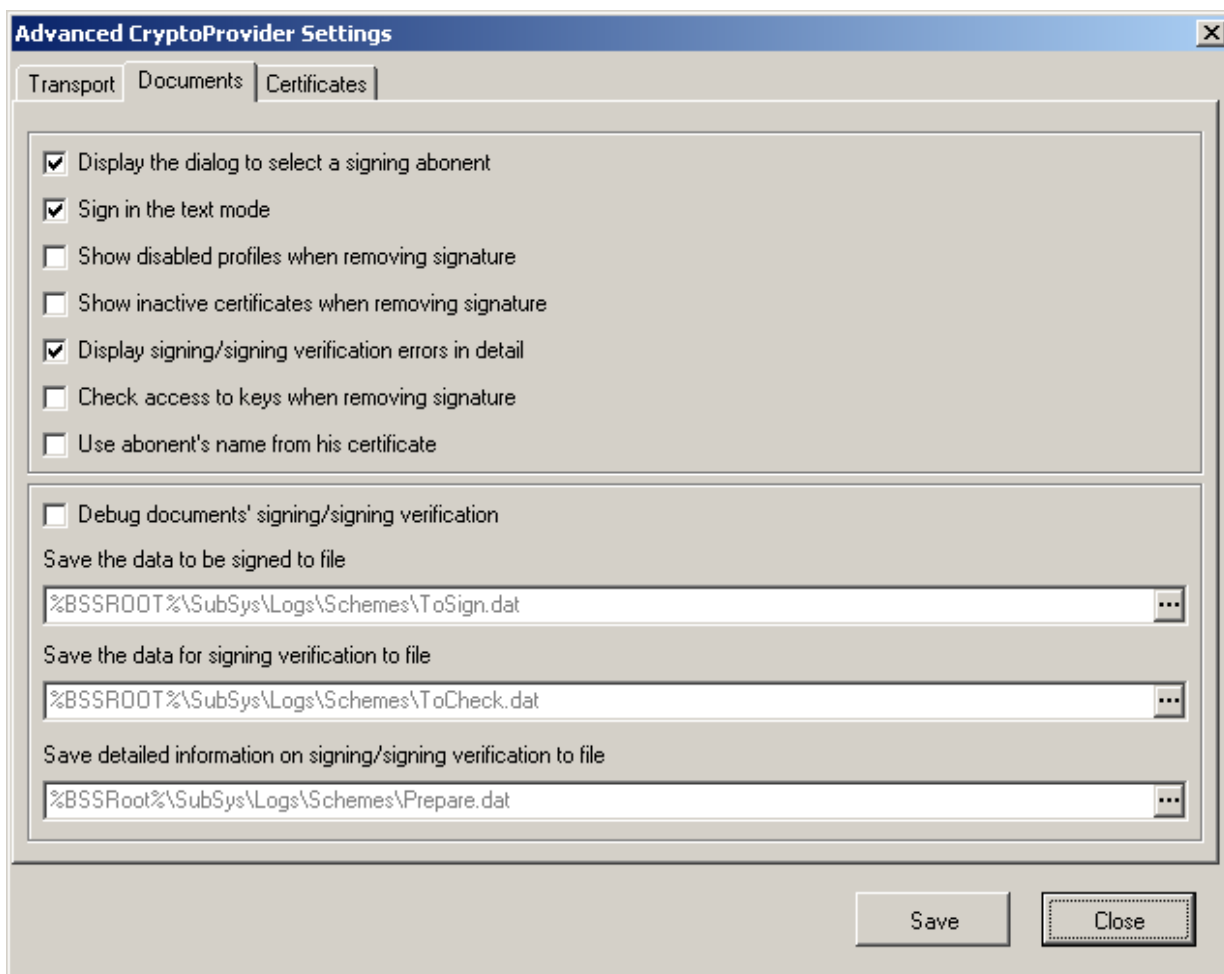
Clear cash if signing/encrypting errors occur

with the option un-checked, the transport subsystem validates the sender's crypto-provider version, specified in each packages. With the option checked, no validations take place. Packages are processed by the standard tools;

Keep enhanced log

data read from the drive is stored in the cache memory for a certain period of time. When referred to, the data is read from the cache memory 10 to 1,000 times as fast. When signing/encrypting errors occur, you need to clear the cache memory. This is the very purpose of the option. If the client works with M-Pro v1.34 (GOST PSE), M-Pro v2.x, it is recommended that you check the option; check this option for the signing and encryption journalizing procedure to cover a larger period. The logs %BSSRoot%\error.log, %BSSRoot%\Exe\bttrerror.log and %BSSRoot%\SUBSYS\ Logs\Crypto\ *.log will involve source packages, signing and encryption results, etc.

Attention! It is recommended to un-check **Keep enhanced log** for the case of the standard operation. This feature makes journalizing files expand fast and the system slow down.



The **Documents** tab contains options significant for signing and removing a signature(s):
Display the dialog to select a signing abonent

with the option checked, the system offers a list of abonents with UIDs enabling signing; when you select a signing abonent, its UIDs are left in the list and the others are not displayed. With the option un-checked, the list of signing abonents is not available; packages will be signed by the first available key;

check this option to enable text mode signing;

Sign in the text mode
Show disabled profiles when removing signature

check this option to show disabled profiles in the list at removing a document signature;

Show inactive certificates when removing signature

check this option to show disabled certificates in the list at removing a document signature;

Display signing/signing verification errors in detail

check this option to display detailed descriptions of signing/validation errors or to save them to file or table; storage of error description had been specified in the transport subsystem setup;

Check access to keys when removing signature

check this option for the operations of signing and removing signatures to verify that signing keys are accessible; only the one that affixed the signature can remove it;

Use abonent's name from his certificate

check this option for the printing operation to extract a crypto-abonent's name from its certificate; otherwise, it will be obtained from the DisplayName field of the

**Debug documents' signing/
signing verification**

**Save the data to be signed
to file**

**Save the data for signing verification
to file**

**Save detailed information
on signing/signing verification to file**

CryptoProfile table (the **Abonent's name** field in the **Profile** window);

check this option to save to file the data that was last signed, data for signing validation, and detailed information about signing/signing validation; information can be stored in files for an unlimited period of time;

the path to and name of the file to store the data signed last; the field is active should you check the **Debug documents' signing/signing verification** option;

the path to and name of the file to store the last debugging data for signing validation; the field is active should you check the **Debug documents' signing/signing verification** option;

the path to and name of the file to store detailed information about signing/validation; the field is active should you check the **Debug documents' signing/signing verification** option.

Advanced CryptoProvider Settings

Transport Documents Certificates

Controlling certificates

☒ Check certificates' periods of validity at startup

Notify of expiry in advance (days) 30

Print forms

Crypto-library type CryptoPro CSP/1.1

Acknowledgement act for client's certificates
%BSSRoot%\SUBSYS\PRINT\RTF\keyexch.rtf

Acknowledgement act for bank's certificates
%BSSRoot%\SUBSYS\PRINT\RTF\bkeyexch.rtf

Save Close

The **Certificates** tab contains two groups of fields: **Controlling certificates** and **Print forms**

**Check certificates' periods of validity
at startup**

Notify of expiry in advance (days)

check this option to check the certificate's expiry at startup; appropriate auto-procedures must be enabled;

Crypto-library type

Acknowledgement act for a customer's certificates

Acknowledgement act for the bank's certificates

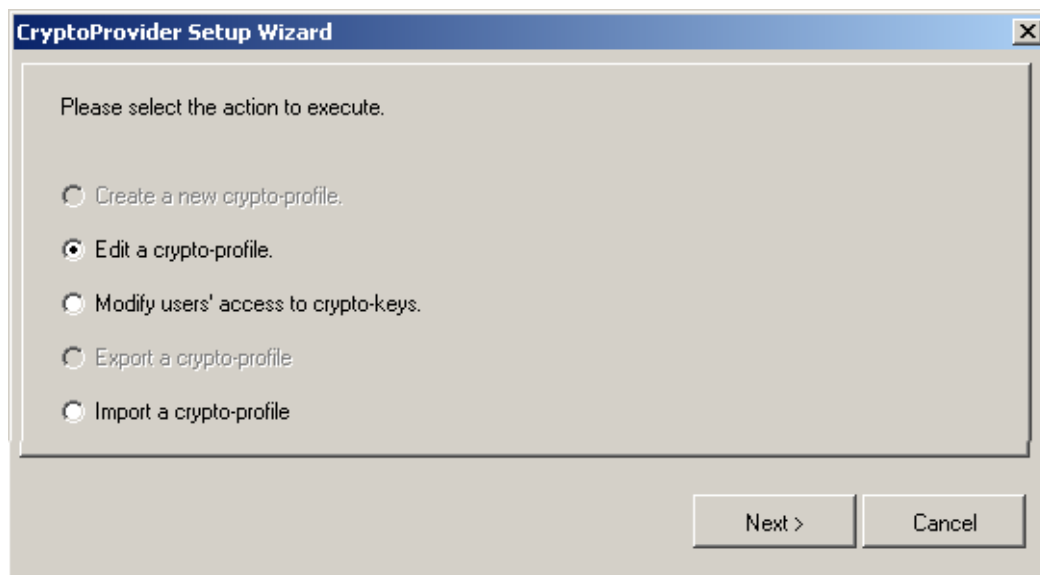
the number of days preceding the expiry date; starting with the first day, the system will pop up the warning at each log-in;
the identifier of the crypto-library type; the field offers a drop-down list;

the path to the acknowledgement act for the public key enabling message exchange. The key must belong to the client's authorized person; the file contains a print form for the key card; the field is populated automatically upon selection of a **Crypto-library type**;

the path to the acknowledgement act for the public key enabling message exchange; the file contains a print form for the key card; the field is populated automatically upon selection of a **Crypto-library type**.

CryptoAbonents Setup Wizard

- Select **Options** → **Cryptographic Provider** → **CryptoAbonents Setup Wizard**.
 - ⇒ The **CryptoProvider Setup Wizard** window appears.

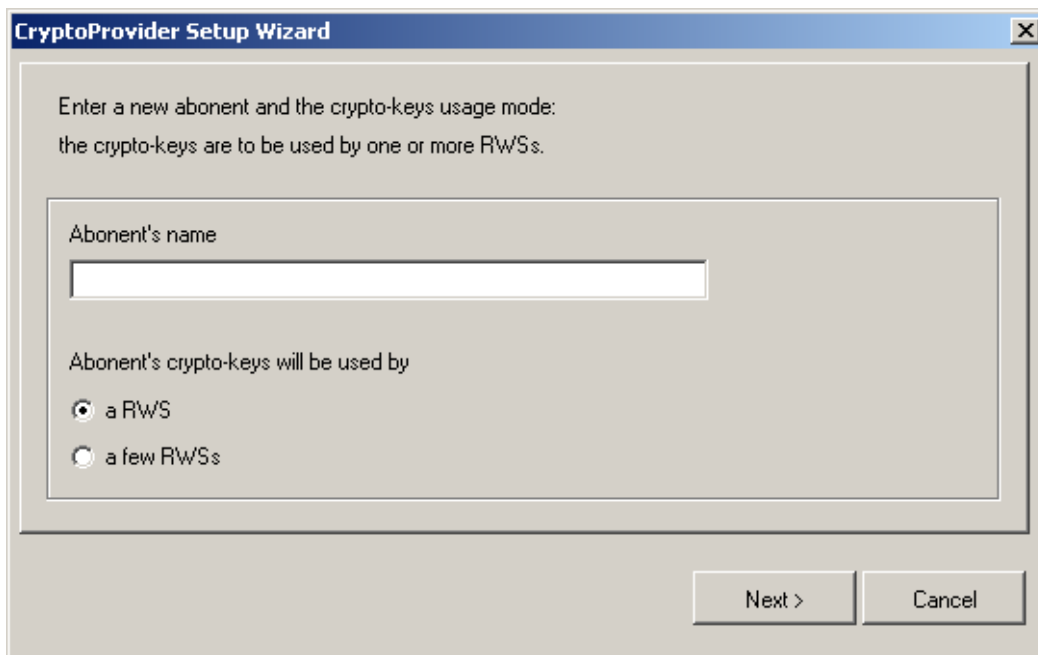


BS-Client supports the following modes of the **CryptoAbonents Setup Wizard** to set cryptographic keys:

- Create a new crypto-profile;
- Edit a crypto-profile;
- Modify users' access to crypto-keys;
- Import a crypto-profile.

Creating New CryptoProfile

- Check the **Create a new crypto-profile** option and click on **Next**.
 - ⇒ The **CryptoProvider Setup Wizard** window appears.



CryptoProvider Setup Wizard

Enter a new abonent and the crypto-keys usage mode:
the crypto-keys are to be used by one or more R/Ws.

Abonent's name

Abonent's crypto-keys will be used by

☒ a RWS

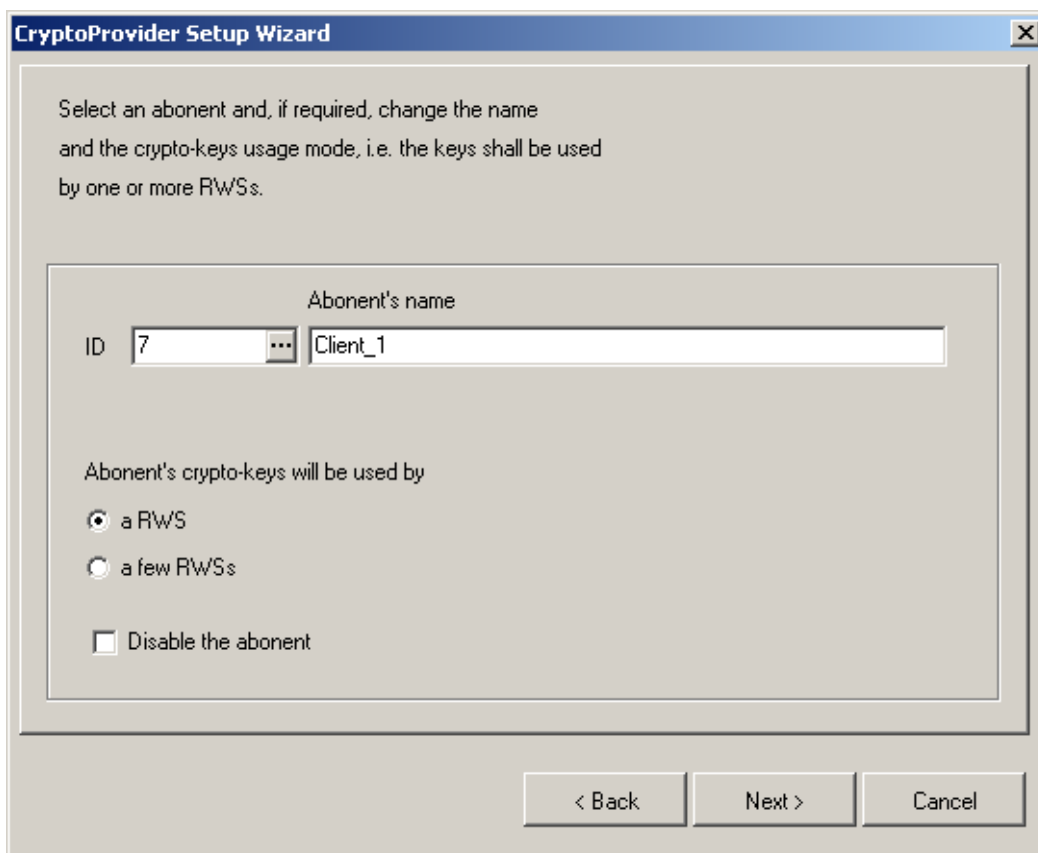
☐ a few R/Ws

Next > Cancel

For details on its parameters, see Inserting New CryptoProfile.

Editing CryptoProfile

- Check the **Edit a crypto-profile** option and click on **Next**.
- ⇒ The **CryptoProvider Setup Wizard** window appears.



CryptoProvider Setup Wizard

Select an abonent and, if required, change the name
and the crypto-keys usage mode, i.e. the keys shall be used
by one or more R/Ws.

Abonent's name

ID 7 ... Client_1

Abonent's crypto-keys will be used by

☒ a RWS

☐ a few R/Ws

☐ Disable the abonent

< Back Next > Cancel

- Edit dialog fields and click on **Next**. For details on its parameters, see Inserting New CryptoProfile.
- ⇒ The next **CryptoProvider Setup Wizard** window appears.

If necessary, edit the abonent's RWS and the crypto-rights

RWS

@ 1 ... Газпромбанк

☐ no right to sign
☒ right to sign all documents by the single signature
☐ advanced signing rights (per organizations, their types, and amount restrictions)
☒ right to receive / send mail (encrypt, decrypt, sign, verify signing of the data the transport system transmits)
☐ right to channel protection

< Back Next > Cancel

- Edit dialog fields and click on **Next**. For details on its parameters, see Inserting New CryptoProfile.
- ⇒ The next **CryptoProvider Setup Wizard** window appears where you specify rights of abonents to the cryptographic keys.

Enter all the RBS users authorized to use the crypto-key.

DBA
OPERATOR
SYSDBA

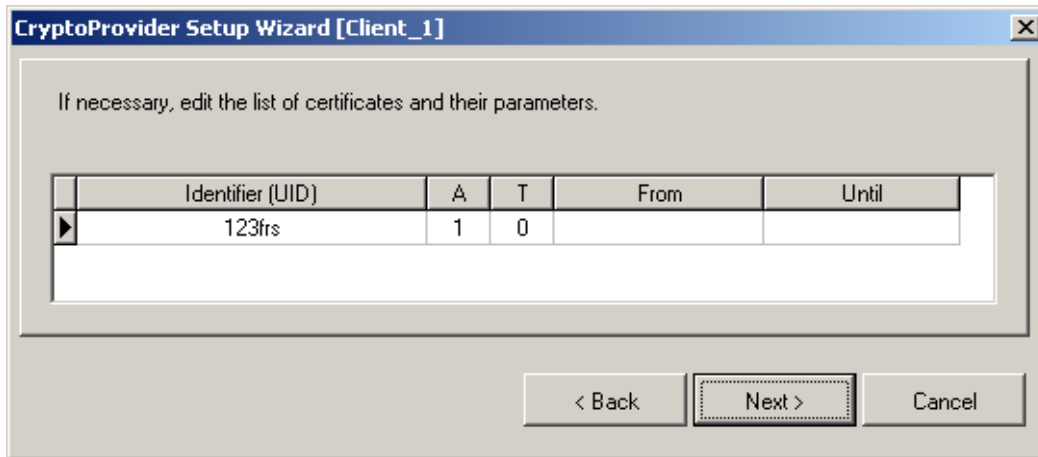
> >> < <<

Authorized key users

< Back Next > Cancel

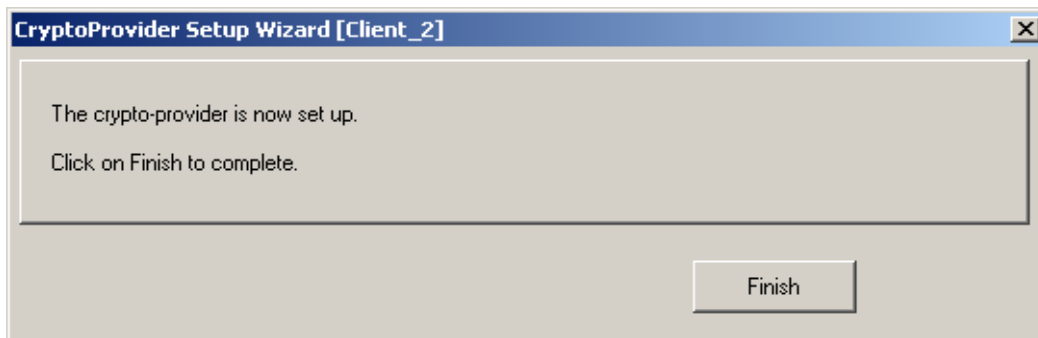
- Use to compile a list of accessible keys for this user. Click on **Next**.

⇒ The next **CryptoProvider Setup Wizard** window appears.



Here you can edit the list of certificates and their options.

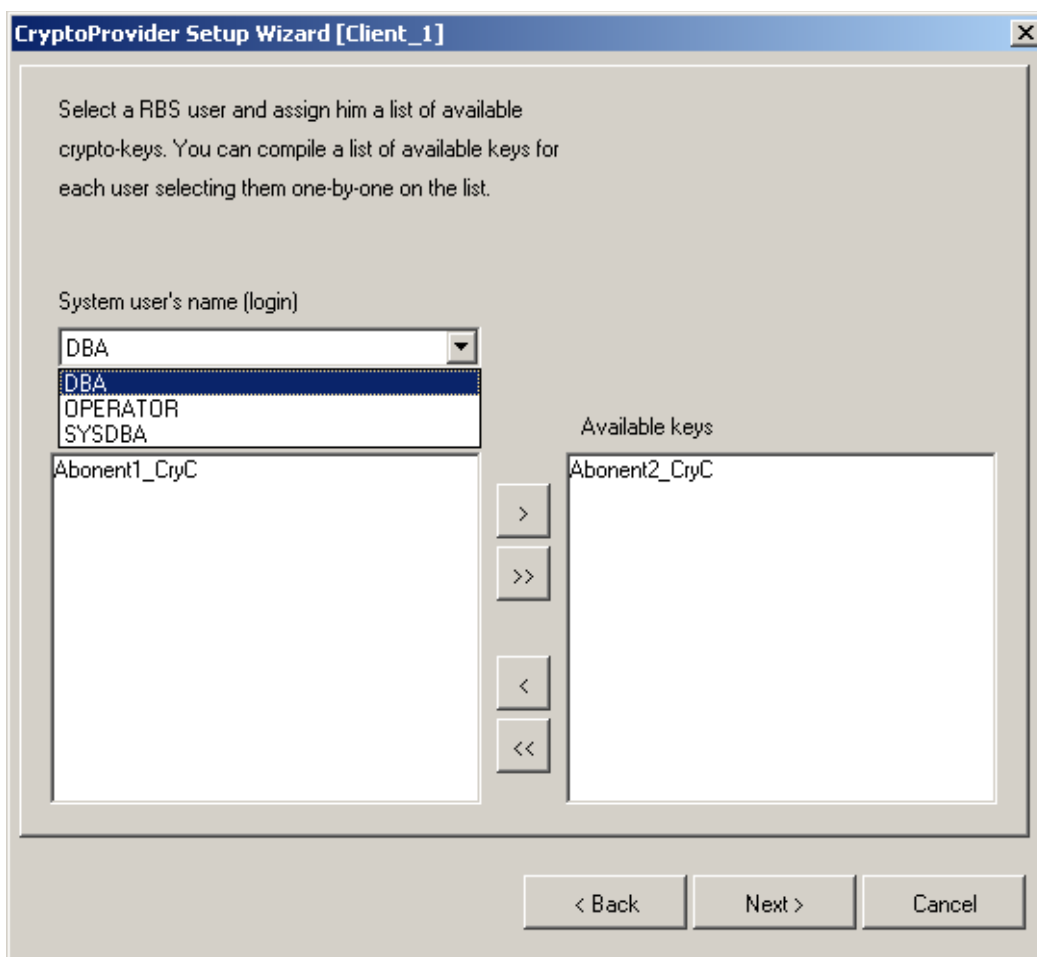
- To insert a new record, point to the list of certificates and press **Ins**. To edit a record, highlight it in the list and press **Enter**.
 - ⇒ The **Certificate** window appears.
- Specify the certificate's options and click **Ok**.
 - ⇒ You are back in the **CryptoProvider Setup Wizard** window.
- Click on **Next**.
 - ⇒ The next **CryptoProvider Setup Wizard** window appears.







- Click on **Finish** to complete the set-up process.

Modifying Access to CryptoKeys

- Check the **Modify users' access to crypto-keys** option and click on **Next**.
 - ⇒ The **CryptoProvider Setup Wizard** window appears.



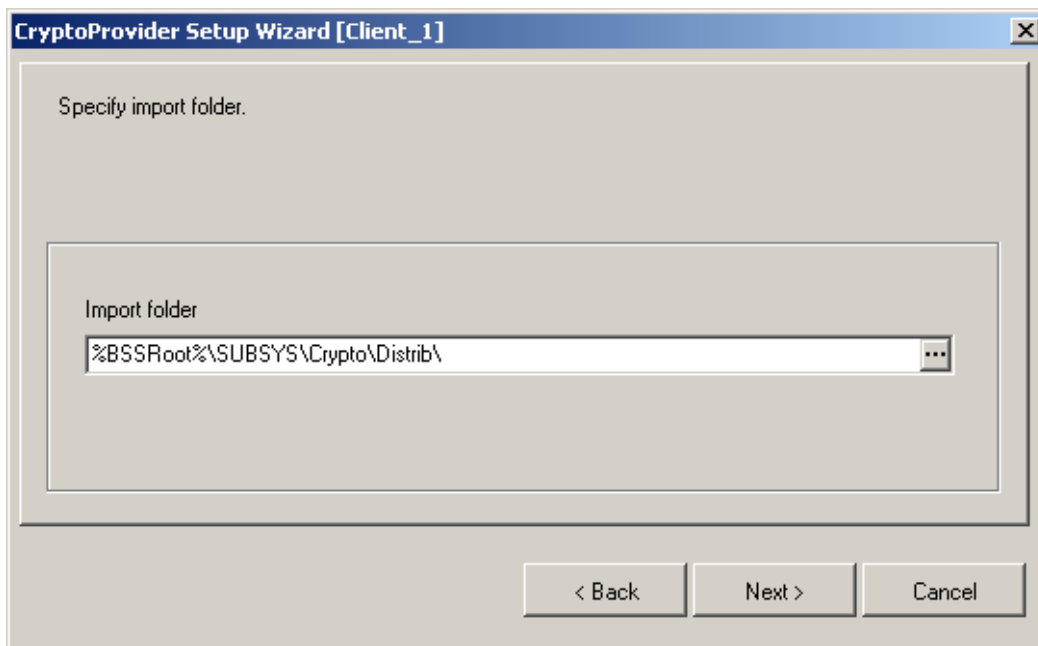
- Select a **System user's name (login)** from the list of values. Use     to compile a list of accessible keys for this user from among the list of keys available in the system installation disc. Follow the procedure for *each* system user to work on your workstation with rights to sign documents.
- Click on **Next**.
 - ⇒ The next **CryptoProvider Setup Wizard** window appears.
- Click on **Finish**.

Importing CryptoProfile

At a client's request, the bank prepares an installation disc of an electronic signature (generates its (technologic) key, certificate, etc.). BS-Client's bank part operator inputs details of the new cryptographic abonent (creates the abonent's profile, assigns advances rights, etc.) and sets its options (inputs certificate details, registers the keys, etc.) Presently, details of the new profile are exported into a file to a specified folder. Contents of the folder are sent to the client.

Having received the results of the bank part setup, export files, and keys, the client registers the new abonent with the system.

- Check the **Import a new crypto-profile** option and click on **Next**.
 - ⇒ The **CryptoProvider Setup Wizard** window appears.



- Specify path to the folder to store the incoming import file with the client's cryptographic profile. The folder will contain **Profile.cfg** and **Profile.eif**. Also, the folder will store system information, certificates, and the cryptographic installation disc supplied within the 'client' RWS installation disc and contains all profiles and their options set in the bank part.
- Click on **Next**.
 - ⇒ The next **CryptoProvider Setup Wizard** window appears.

CryptoProvider Setup Wizard

Imported abonent

Abonent's name

ID: 1 Client_Exc

Specify private and public keys folders to set up new abonent's parameters

Private keys folder

%BSSRoot%\SUBSYS\KEYS\CryC\K3_Crypto_C\SEC\

Public keys folder

%BSSRoot%\SUBSYS\KEYS\CryC\K3_Crypto_C\PUB\

< Back Next > Cancel

- You need to specify folders to store private and public keys of the new signature abonent. Click on **Next**.
- ⇒ The next **CryptoProvider Setup Wizard** window appears.

CryptoProvider Setup Wizard [Client_1]


Enter all the RBS users authorized to use the crypto-key.

Authorized key users

DBA
OPERATOR
SYSDBA

> >> < <<

< Back **Next >** Cancel

- Use  to compile a list of accessible keys for this user from among the list of keys available in the imported installation disc.
- Click on **Next**.
 - ⇒ The next **CryptoProvider Setup Wizard** window appears.
- Click on **Finish** to complete the set-up process.
 - ⇒ Setup of the abonent's cryptographic profile is now complete. Register the public keys / certificate following prompts of the installation wizard.

Exchanging Public Keys

BS-Client requires that you change public keys (certificates) in the following cases:

- Client keys were changed.
- Bank Administrator's keys were changed.
- Certification Center issued new keys.

Let us closely consider the procedure of changing keys for the above cases.

Tip: When a client's, bank's, or CC's keys are being changed, old keys are not replaced with new ones, but simply blocked. Details of new keys are added to the list of certificates belonging to a crypto-profile.

Changing Client Keys (Remote Regeneration)

Regeneration of client keys proceeds on the client's workstation. Before starting regeneration, the client must have a working set of keys to exchange data with the bank part.

When a few remote workplaces use the same set of keys, it is imperative that the abonent's certificate (public key) be stored on its carrier beside the private keys that are common for the workplaces concerned.

The regeneration procedure can be initiated on a client workstation:

- after BS-Client was installed and set up. You will need to regenerate the registration key and certificate as they are of limited validity. The initial set on a secret key carrier had been received from the bank's security administrator.
- as a regular key change, when your working certificate is about to expire;
- any time when the client chooses to update the working keys.

Regenerating CryptoKeys Remotely

BS-Client supports various cryptographic providers. Procedures of remote regeneration vary as well:

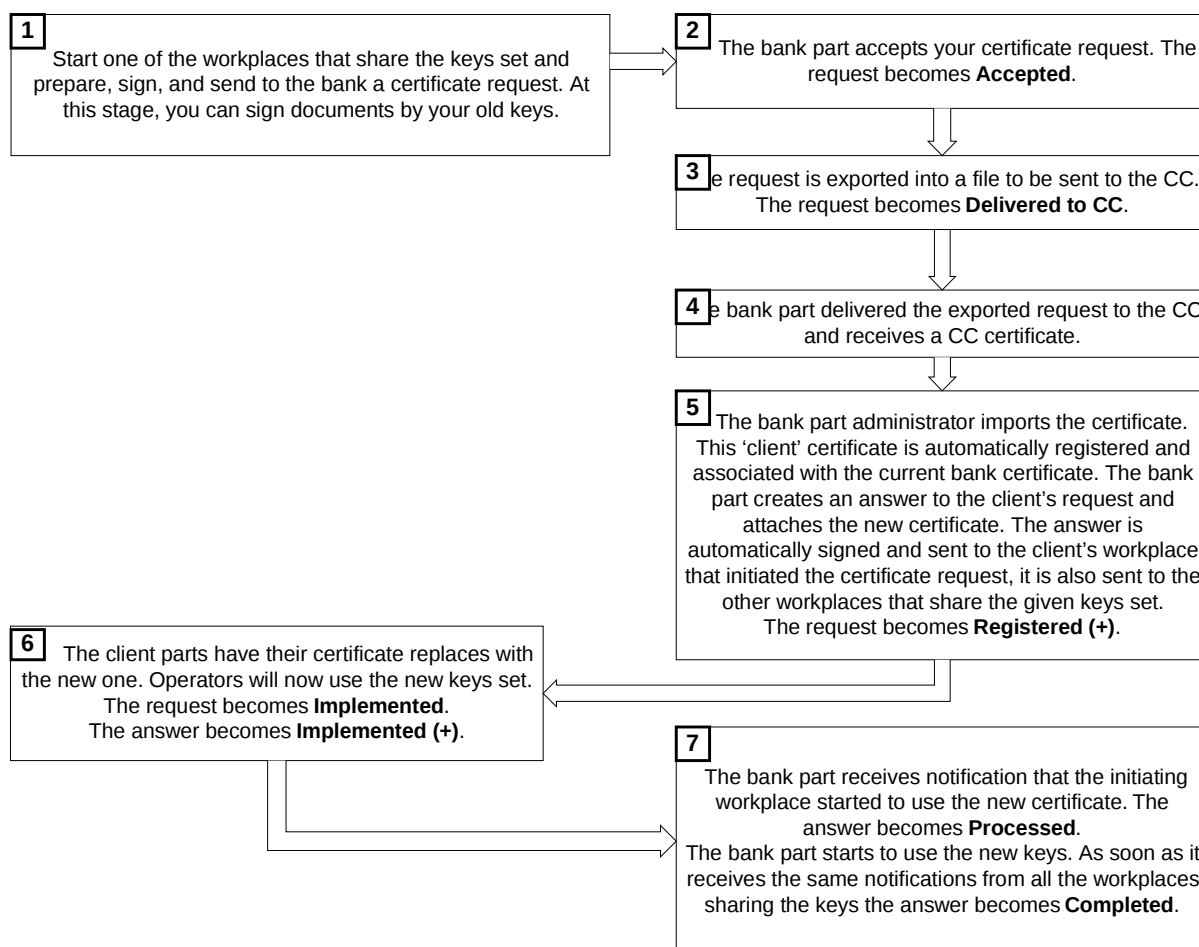
For Excellence/4.0, LAN Crypto/2.35	a public key is generated in the client part without the Certification Center involved; for
--	---

**Message-PRO 1.1,
Crypto Pro CSP/1.1, CryptoPro CSP 2.0,
MS Crypto API 2.0, M-Pro v1/34 (GOST PSE),
M-Pro v2.x, Open SSL, Crypto-C**

a new certificate request to CC is generated in the client part. CC will issue a new certificate per the request.

Verba-OW/4 does not support keys regeneration.

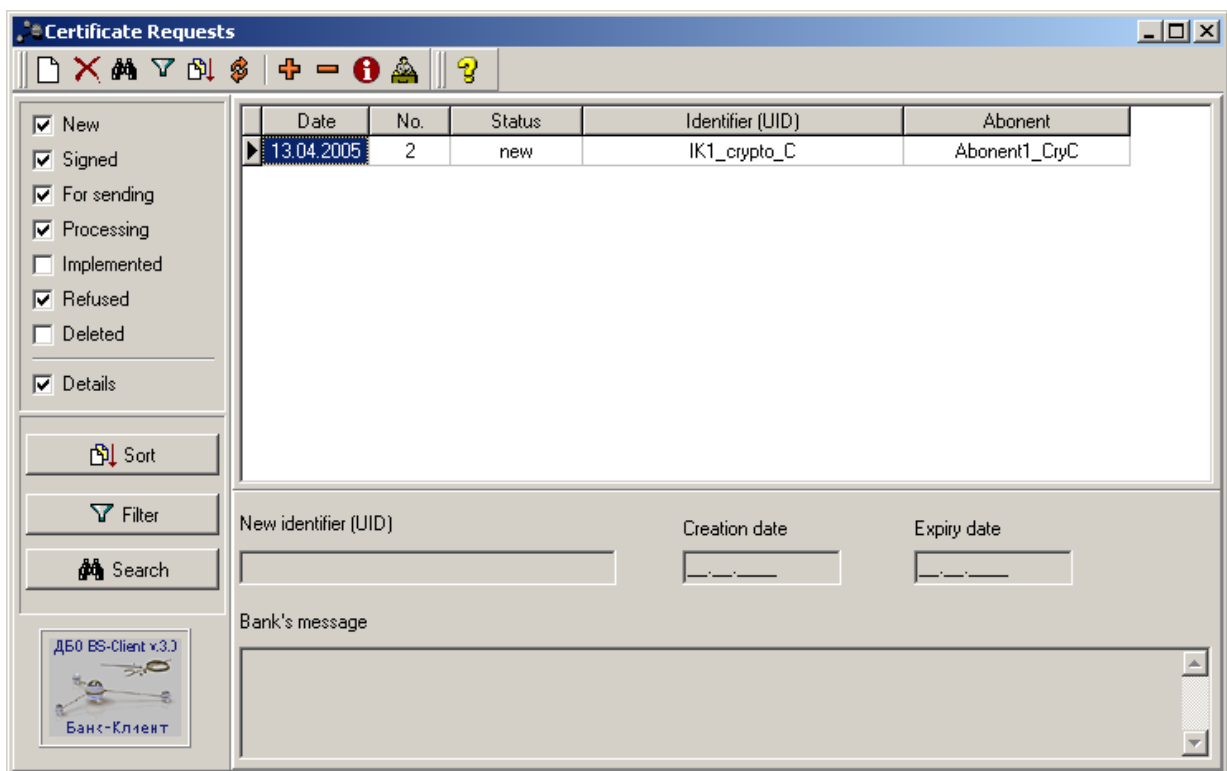
Certificates Regeneration Scheme



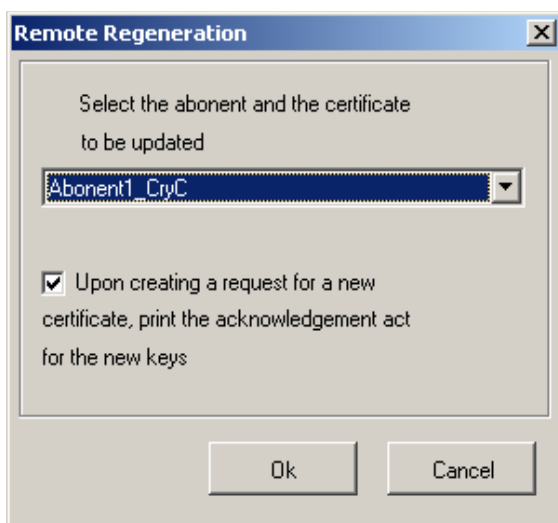
Note: steps 2, 3, 4, 5, and 7 run in the bank part. For more information, refer to the **Bank Part Administrator Manual** (Rus.: **Справочник администратора Банка**) BS_Admin.doc, supplied in the Russian suite.

Creating Certificate Request

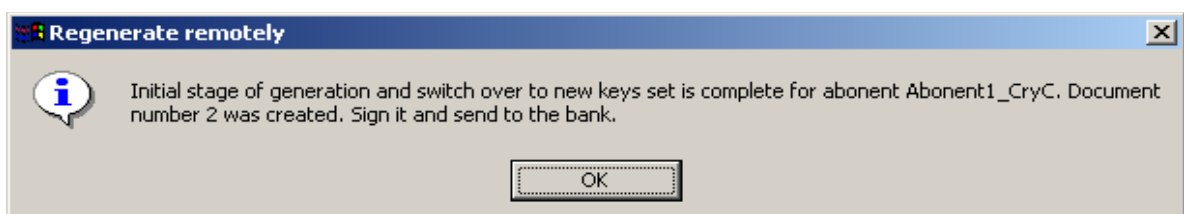
- To create a request to register a certificate, select **Options** → **Cryptographic Provider** → **Certificate Registration Requests**.
 - ⇒ The **Certificate Requests** window appears.



- Press **Ins** to create a new request.
- ⇒ The **Remote Regeneration** window appears.



- Select the abonent that owns the certificate to be regenerated. If you need to print out an acknowledgement act for your new keys, check the option. Click **Ok**.
- ⇒ You will be prompted to insert the carrier with the abonent's keys to be regenerated.
- ⇒ A message appears notifying of the first stage being completed. A document will be created to contain the request for a new certificate. Its status will be **New**.



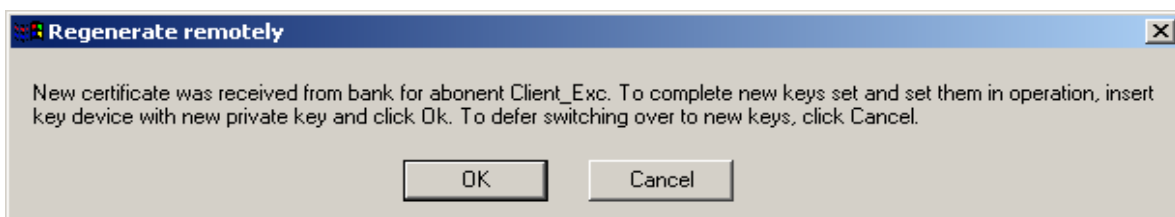
- Sign the document and send it to the bank using the pop-up menu commands (**Sign** and **For sending**).

Attention! Transport should have been started.

- ⇒ A new client certificate will be created per the request in the bank part. The document will have the number and identifiers of the old crypto-key. The certificate request will become **Implemented**.

Registering New Certificate

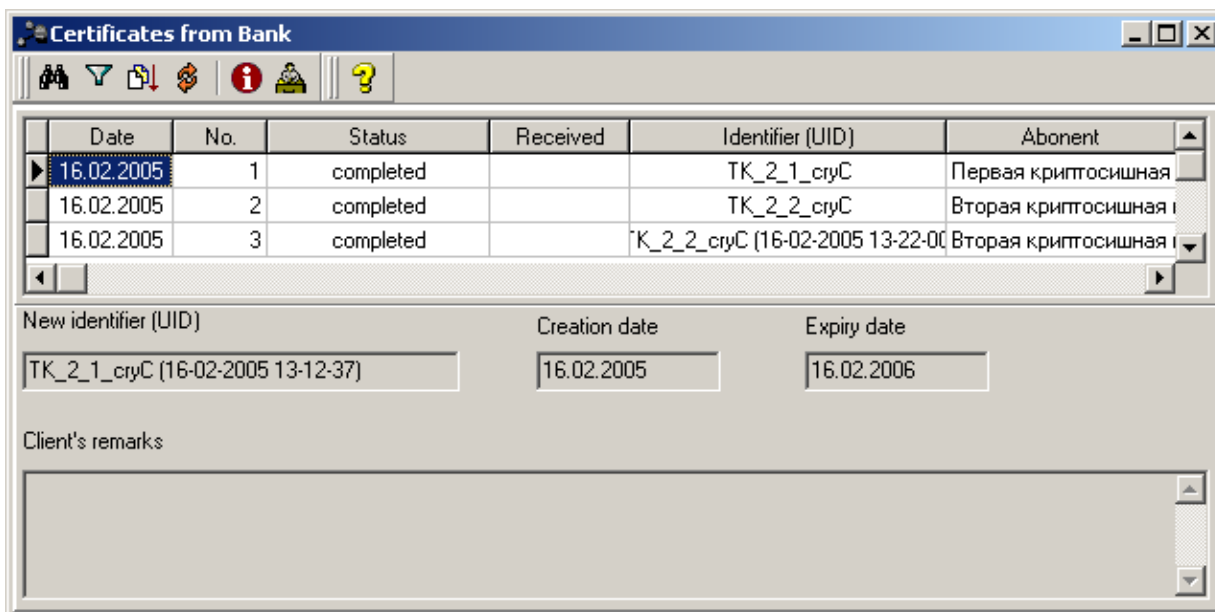
- ⇒ You will receive an answer to your request and a new certificate from the bank.



- Click **Ok** to complete the generation of your new keys set and to put it into operation. Perform all the actions prompted to register your new certificate.
 - ⇒ You will be prompted to insert the carrier with the abonent's keys to be regenerated.
 - ⇒ Your old certificate will be replaced with your new one.
 - ⇒ The system will send a registration acknowledgement to the bank. After that you can start using your new keys.

Had you deferred keys replacement when first prompted, i.e., when the system received an answer to your request from the bank part, you can start the procedure later on. Use the following procedure:

- Select **Options → Cryptographic Provider → Certificates from Bank**.
 - ⇒ The **Certificates from Bank** window appears.



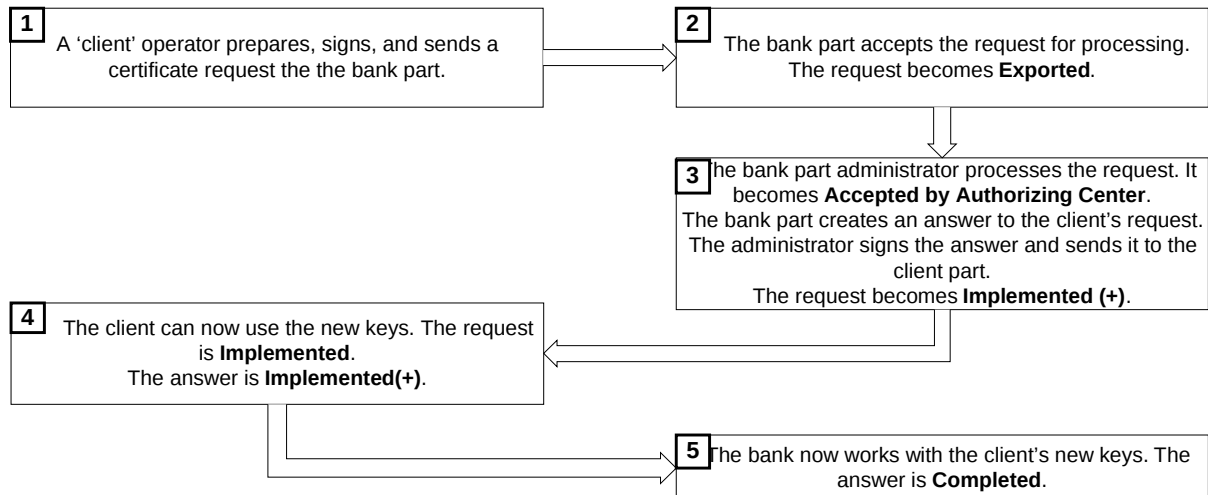
It will contain a list of certificates from the bank. When received, documents are inserted as **Identified**. Ad hoc scheduler procedures validate documents' signing. Should the validation succeed, the documents become **Valid EDS**.

- Select a document and run **Process documents** to register your new certificate.
 - ⇒ You will be prompted to insert the carrier with the abonent's keys to be regenerated.

- ⇒ Your old certificate will be replaced with your new one. The document will become **Implemented**.
- ⇒ The system will send a registration acknowledgement to the bank. The document will become **Implemented +**. After that you can start using your new keys.

Regenerating Excellence/4.0, LAN Crypto/2.35 public keys remotely

Public Keys Regeneration Scheme




Note: steps 2, 3, 4, 5, and 7 run in the bank part. For more information, refer to the **Bank Part Administrator Manual** (Rus.: *Справочник администратора Банка*) BS_Admin.doc, supplied in the Russian suite.

Creating Key Regeneration Request

- ☞ Select **Options → Cryptographic Provider → Key Regeneration Requests**.
- ⇒ The **Key Regeneration Requests** scroller appears.

The window displays a list of requests with the following columns: Date, No., Status, Unique identifier, and Abonent. The first row is highlighted. On the left, there are checkboxes for New, Signed, For sending, Processing, Implemented, Refused, Deleted, and Details. Below these are buttons for Sort, Filter, and Search. At the bottom left is a logo for 'ДБО BS-Client v3.0' and 'Банк-Клиент'. The details section on the right includes fields for Number, Date, Organization, Authorization Center, and AC's message, along with a Signature keys section.

Press **Ins** or click  to pop up a **Key Regeneration Request**.

The dialog box contains the following fields: Organization (with the value 'ЗАО "МИЗЛЬ-Недвижимость"'), Authorization Center (with the value 'Газпромбанк'), and CryptoKeys (a dropdown menu). At the bottom, there are buttons for '< Back', 'Next >', and 'Cancel'.

Populate the fields:
Organization

the organization to initiate the request for crypto-key regeneration (a directory-selection field). Should there be only one company, it appears in the field as the only choice;

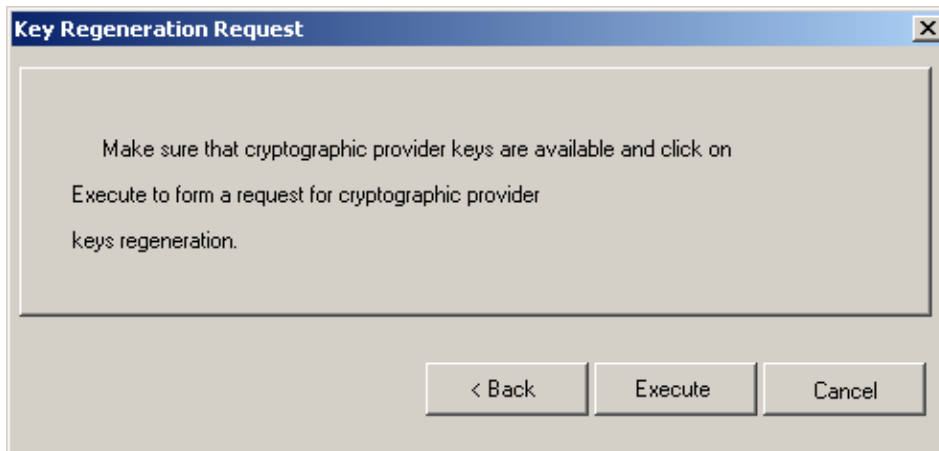
Authorization Center

the organization (AC) to receive the request (a directory-selection field). Usually, it is the bank. Should the client

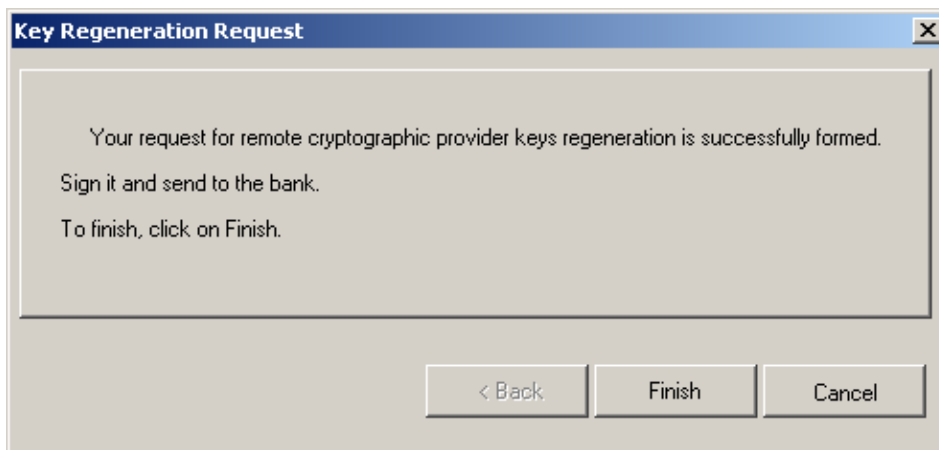
have only one bank, it appears in the field as the only choice;
import the identifier of the crypto-keys to be regenerated.

CryptoKeys

- Click on **Next** when you have all data inputted.
 - ⇒ Should all its data be correct, a system notification appears.



- Click on **Execute** to confirm request generation.
 - ⇒ With the request successfully generated, a notification appears.



- Click on **Finish**.
 - ⇒ The list of key regeneration requests will be enlarged with a **New** request. Sign it and send to the bank.
- Select a request and run **Sign** to sign it and **For sending** to send it to the bank.

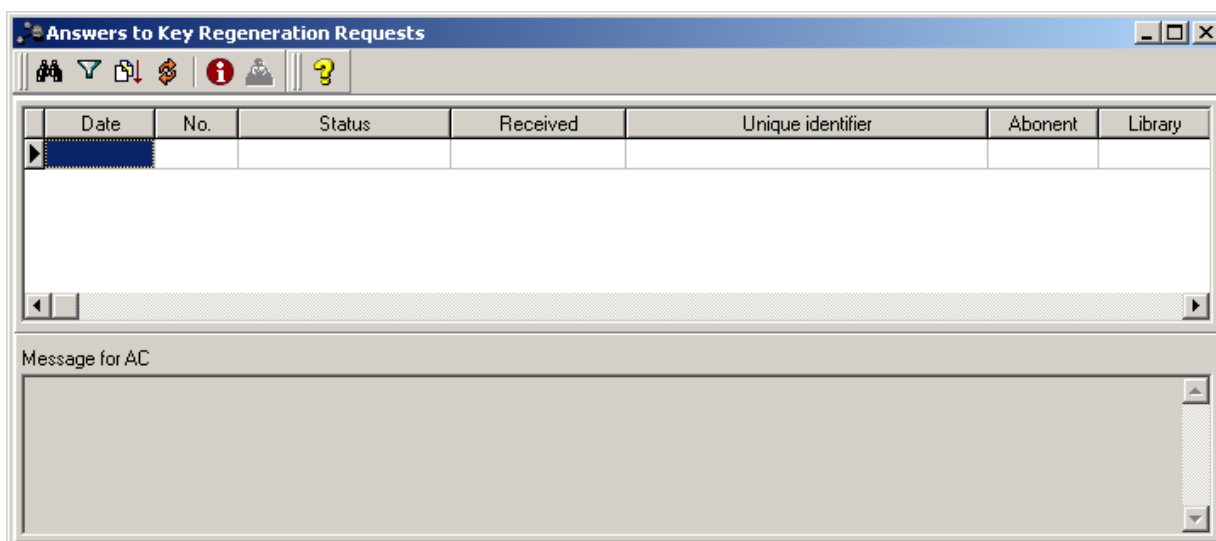
Attention! Transport should have been started.

- ⇒ Until new keys are received from the bank, no operations with documents can be performed, i.e., your old keys are disabled.
- ⇒ The bank part receives your regeneration request and processes it. After validating its signing, the bank part will send an acknowledgement and answer to your client part.
- ⇒ The bank part will register your new public key. After that it will send an implementation acknowledgement; your request will become **Implemented** +.
- ⇒ The bank generates a reply to the client part's request. The document will have the number and identifiers of the old crypto-key.

Registering Your New Key

To complete the procedure of public keys replacement, process the bank's reply. Use the following procedure:

- Select **Options → Cryptographic Provider → Answers to Key Regeneration Requests**.
 - ⇒ The **Answers to Key Regeneration Requests** scroller appears.



It will contain a list of replies from the bank. When received, documents are inserted as **Identified**. Ad hoc scheduler procedures validate documents' signing. Should the validation succeed, the documents become **Valid EDS**.

- Select a document and run **Finish** to register your new key.
 - ⇒ The client's public key will be registered.
 - ⇒ The document will become **Implemented**.
 - ⇒ The system will send a registration acknowledgement to the bank. The document will become **Implemented +**. After that you can start using your new keys.

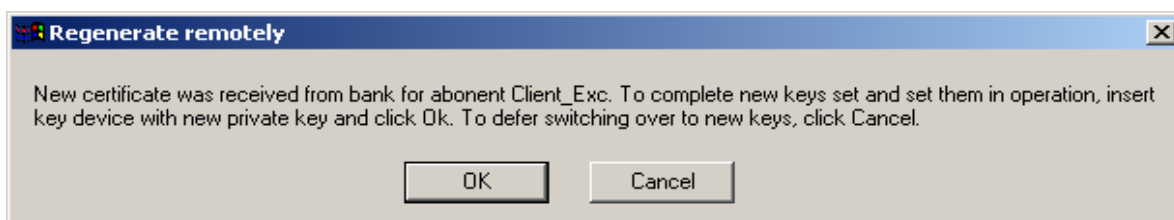
Changing Bank Keys

Changing Bank Part Administrator's Keys

It can appear necessary to change the keys of the bank part administrator. For a bank part administrator to successfully switch to new keys, s/he will need to deliver the new public key (certificate) to all the abonent client parts. Only with all the client parts switched to the new public key (certificate) can the administrator abandon his/her old keys.

- ⇒ The bank part administrator's new key (certificate) is generated in the bank part to be delivered to all client parts. You will receive the new certificate from the bank part.

Note: In case of Excellence, no bank part administrator's keys are delivered.

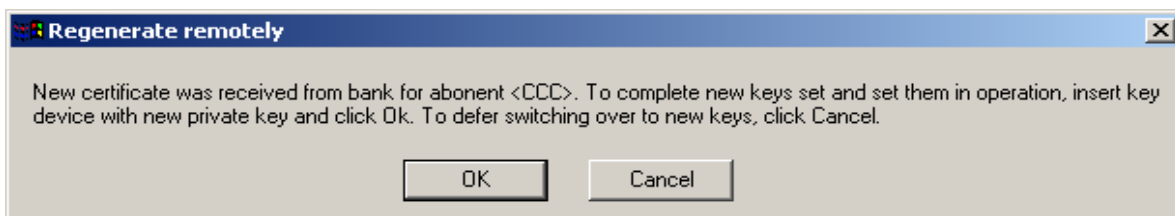


To register the new certificate from the bank, use the procedure described in Registering New Certificate.

Delivering Certification Center's Certificate

The Certification Center can replace its operating key. For Message-PRO 1.1, M-Pro v1.34 (GOST PSE), M-Pro v2.x, CryptoPro CSP/1.1, or Open SSL key users to work with certificates issued by the CC after it changed its keys, deliver the new certificate of the CC to the clients. Do this before "clients" and RBS administrators receive certificates signed by the new CC key.

- ⇒ Message-PRO 1.1, M-Pro v1.34 (GOST PSE), M-Pro v2.x, CryptoPro CSP/1.1, or Open SSL key users will receive the new CC certificate.



To register the new CC certificate, use the procedure described in Registering New Certificate.

Generating Certificate Requests Manually

Generating Certificate and Private Key Request Manually

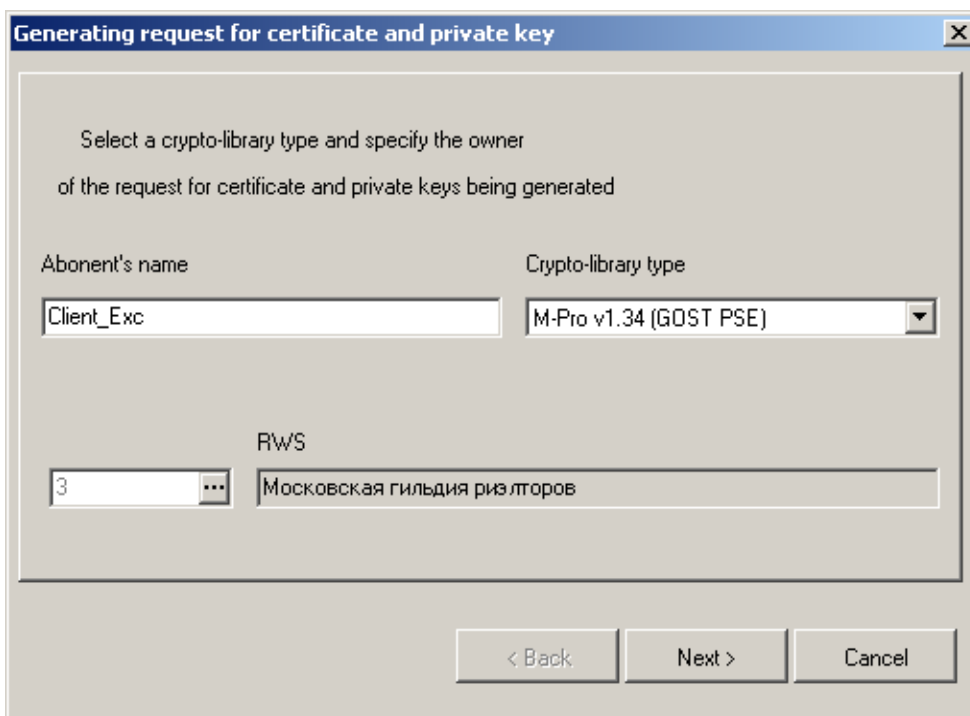
Message-PRO 1.1, M-Pro v1.34 (GOST PSE), M-Pro v2.x, CryptoPro CSP/1.1, and Open SSL keys are generated automatically. Also, BS-Client supports manual generation of keys. You can use it to generate keys for new abonents. The procedure is implemented for the bank and client parts of the Bank-Client service.

The procedure results in generation of a new private key for an abonent and of a request for certificate.

The procedure runs for crypto-libraries that use a pair of private key and certificate for signing and encrypting.

To generate a certificate manually, use the following procedure:

- Select **Options → Cryptographic Provider → Generate Certificate Manually**.
 - ⇒ The **Generating request for certificate and private key** dialog box appears.



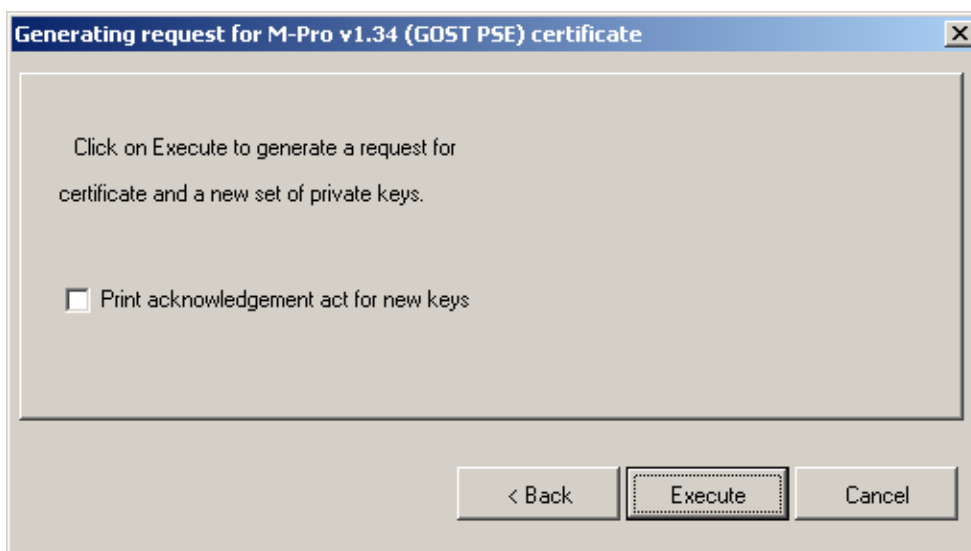
Abonent's name
Crypto-library type

the profile name of the abonent;
the crypto-library identifier;

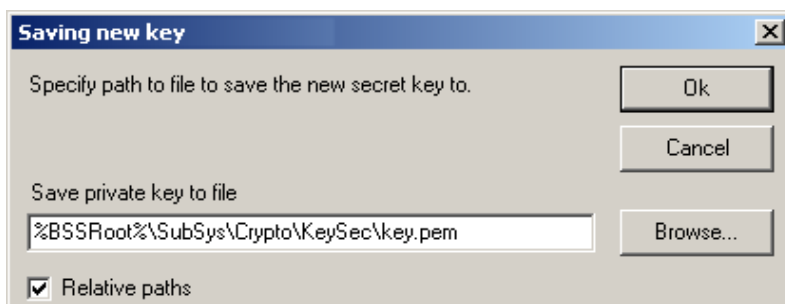
RWS

the number and name of the workstation to generate the request for.

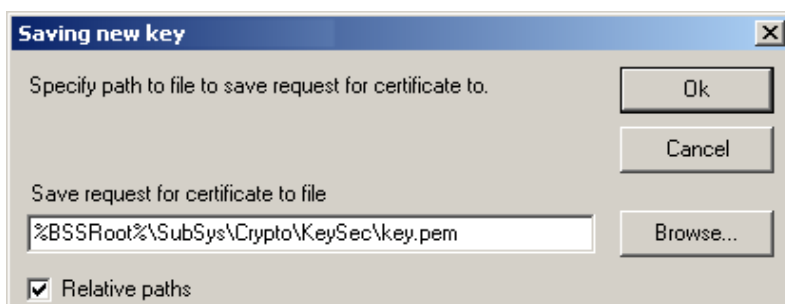
- Populate dialog fields and click on **Next**.
 - ⇒ The next window appears for certificate details. The window layout depends on the **Crypto-library type** specified. For the description of certificate parameters per crypto-libraries, see Certificate Request Options.
- Input certificate details and click on **Next**.
 - ⇒ The following window appears.



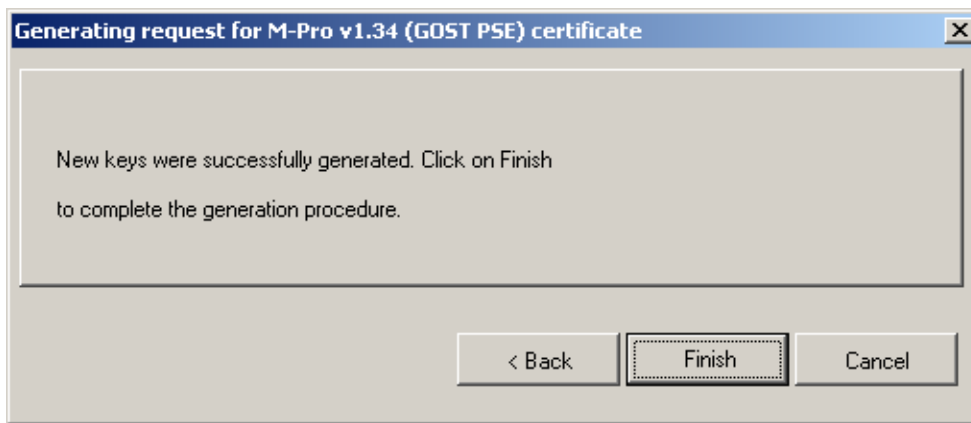
- Click on **Execute** to generate the certificate request.
 - ⇒ You will be prompted to choose the file to save your new private key to.



- ⇒ Also, you will be prompted to choose the path where to store the certificate request.



- ⇒ Had you checked **Print acknowledgement act for new keys**, an acknowledgement act is generated and displayed in Notepad.
- ⇒ The following window appears.



- Click on **Finish** to complete the generation.
- Now use your cryptographic facilities to process the certificate request and generate a certificate.
- Go to [Certificate installation wizard](#) to set up the generated crypto-set. Now you can use it. Besides, you can input a new crypto-profile. Select **Options → Cryptographic Provider → Generate Certificate Manually**. Here you can also set up a keys set in the **Certificate installation wizard**.

Certificate Request Options

Message-PRO 1.1 Certificate Request Options

Generating request for Message-PRO 1.1 certificate

Enter your certificate details

Details

Country: RU

State, region:

City (locality):

Organization: Московская гильдия риэлторов

Department:

Identifier: Client_Exc

E-mail address:

Request type: Autosigned

Key length: 768

< Back Next > Cancel

Country

the keys owner's country (2-letter code); this field is mandatory;

State, region

the keys owner's state/region; this field is mandatory;

City (locality)

the keys owner's city/town of location; this field is mandatory;

Organization

the workstation name; filled automatically;

Department

the keys owner's division/department within the company;

Identifier

the abonent's profile name; filled automatically;

E-mail address

the abonent's electronic mail;

Request type

the type of the certificate request; choose from the list of available values;

Key length

the length of the signing key; filled automatically; it is not recommended to change the default value.

Crypto COM/2.2 Certificate Request Options

Generating request for Crypto COM/2.2 certificate

Enter your certificate details

Details

Private key length: 1024

Public key length: 256

Key validity period: 730

Identifier:

< Back Next > Cancel

Private key length
Public key length
Key validity period
Identifier

the default length of the private key (bit) is **1024** for GOST;
the default length of the public key (bit) is **256** for GOST;
the default validity period (days) is **730**;
the abonent's profile name is auto-populated.

Crypto Pro CSP/1.1 Certificate Request Options

Generating request for CryptoPro CSP/1.1 certificate

Enter your certificate details

Details

Country State, region Locality

RU

Organization

Московская гильдия риэлторов

Department

Identifier E-mail address

Client_Exc

Certificate applicability

1.3.6.1.5.5.7.3.2;1.2.643.2.2.34.2

Secret key applicability

Private key to export No

Request type CP_GOST_R3411_R3410

Validity period (days) 365

< Back Next > Cancel

Country

the keys owner's country (2-character code); the field is mandatory;

State, region

the keys owner's state/region; this field is mandatory;

Locality

the keys owner's city/town of location; this field is mandatory;

Organization

the workstation name; filled automatically;

Department

the keys owner's division/department within the company;

Identifier

the abonent's profile name; filled automatically;

E-mail address

the abonent's electronic mail;

Certificate applicability

itemize using a semicolon;

Secret key applicability

itemize using a semicolon;

Private key to export

select a value on the drop-down list;

Request type

the type of the certificate request; filled automatically; it is not recommended to change the default value;

Validity period (days)

period in days when the key is still valid; the default period is 365 days.

MS Crypto API 2.0 Certificate Request Options

Generating request for Ms Crypto API 2.0 certificate

Enter your certificate details

Details

Cryptographic service provider
Crypto-Pro Cryptographic Service Provider

Country State, region Locality
RU

Organization Department
Московская гильдия риэлторов

Identifier E-mail address
Client_Exc

Certificate applicability
1.3.6.1.5.5.7.3.2;1.2.643.2.2.34.2

Secret key applicability

Private key to export No

Request type RSA_SHA1RSA

Key length 1024

< Back Next > Cancel

Cryptographic service provider

Country

State, region

Locality

Organization

Department

Identifier

E-mail address

Certificate applicability

Secret key applicability

Private key to export

Request type

Validity period (days)

select the crypto-provider name on the drop-down list;
the keys owner's country (2-character code); the field is mandatory;
the keys owner's state/region; this field is mandatory;
the keys owner's city/town of location; this field is mandatory;
the workstation name; filled automatically;
the keys owner's division/department within the company;
the abonent's profile name; filled automatically;
the abonent's electronic mail;
itemize using a semicolon;
itemize using a semicolon;
select a value on the drop-down list;
the type of the certificate request; filled automatically; it is not recommended to change the default value;
period in days when the key is still valid; the default period is 365 days.

M-PRO v1.34 (GOST PSE) Certificate Request Options

Generating request for M-Pro v1.34 (GOST PSE) certificate

Enter your certificate details

Details

Country: RU

State, region:

City (locality):

Organization: Московская гильдия риэлторов

Department:

Identifier: Client_Exc

E-mail address:

Request type: Autosigned

< Back Next > Cancel

Country

the keys owner's country (2-character code); this field is mandatory;

State, region

the keys owner's state/region; this field is mandatory;

City (locality)

the keys owner's city/town of location; this field is mandatory;

Organization

the workstation name; filled automatically;

Department

the keys owner's division/department within the company;

Identifier

the abonent's profile name; filled automatically;

E-mail address

the abonent's electronic mail;

Request type

the type of the certificate request; choose from the list of available values.

M-PRO v2.x Certificate Request Options

Generating request for M-Pro v2.x certificate

Enter the parameters of your certificate

Details

Country: RU

State, region:

City (locality):

Organization: Московская гильдия риэлторов

Department:

Identifier: Client_Exc

E-mail address:

Request type: Autosigned

< Back Next > Cancel

Country

the keys owner's country (2-character code); this field is mandatory;

State, region

the keys owner's state/region; this field is mandatory;

City (locality)

the keys owner's city/town of location; this field is mandatory;

Organization

the workstation name; filled automatically;

Department

the keys owner's division/department within the company;

Identifier

the abonent's profile name; filled automatically;

E-mail address

the abonent's electronic mail;

Request type

the type of the certificate request; choose from the list of available values.

Open SSL Certificate Request Options

Generating request for OpenSSL certificate

Enter your certificate details

Details

Country: RU

State, region:

Locality:

Organization: Московская гильдия риэлторов

Department:

Identifier: Client_Exc

E-mail address:

Key length: 1024

< Back Next > Cancel

Country

the keys owner's country (2-character code); this field is mandatory;

State, region

the keys owner's state/region; this field is mandatory;

Locality

the keys owner's city/town of location; this field is mandatory;

Organization

the workstation name; filled automatically;

Department

the keys owner's division/department within the company;

Identifier

the abonent's profile name; filled automatically;

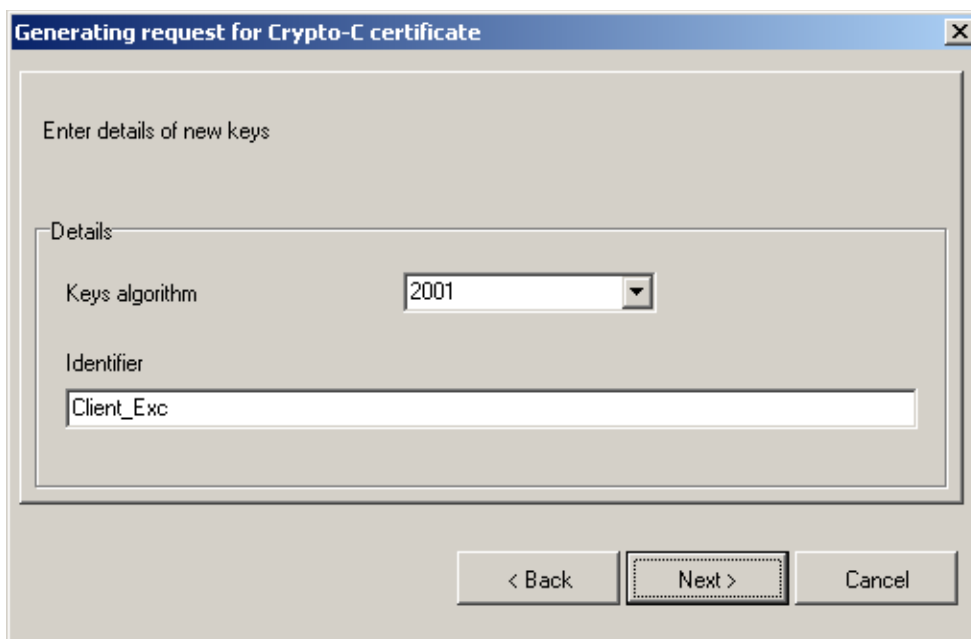
E-mail address

the abonent's electronic mail;

Key length

the length of the private key (bit); choose a value from 512 to 2048, divisible by 8 (it will affect keys generation and regeneration); by default: **1024**.

Crypto-C Certificate Request Options



Keys algorithm

Available:

1994 stands for GOST 34.10 - 1994

2001 stands for GOST 34.10 - 2001;

Identifier

the abonent's profile name; filled automatically.

Registering Certificates Manually

- To register new certificates for registered abonents, select **Options → Cryptographic Provider → EDS Abonents**.
- Find a profile in the list, open it, and go to its **Certificates** tab.
- Point to the certificate and run **Register certificate** from the pop-up menu.
- Click **OK** to save the data.

Key Device Options

All options of key devices are set automatically when a key is inputted.

The present chapter fully describes all key devices available in BS-Client. Please use the information as reference material only. It is not recommended to change default options.

Excellence /4.0 Key Device Options

Mnemonic user name

this is a user name to log in the Excellence crypto-provider;
path to the folder with the secret key to sign/validate
signing;

Secret key directory

Public key directory

path to the folder with the public keys to sign/validate
signing;

Signature algorithm

the signature algorithm: GOST – the GOST P34.10-94
algorithm, RSA – the RSA algorithm;
c (**GOST**);

Encryption algorithm

encryption algorithm: GOST - the GOST 28147-89
algorithm;

Work directory

leave the default value (**GOST**);
the work folder for the crypto-system;

Language

the interface language (RU for Russian, EN for English);

Signature key length

the length of the signature key; leave the default value
(**512**);

Encrypt for UID	not used;
New abonent name	the user ID;
Note:	'New abonent name' cannot exceed 255 characters.
Exchange key length	the length (bit) of the private key to exchange (encrypt) data;
Password request time out	timeout for a password request from the key device (Touch memory); store the password in the cache memory for a few seconds since the last password request; the default value is 60 ; you can change it, if required; this option is used to set the cache memory. A few passwords can be stored in the cache memory at a time. For each user the cache memory stores a password. For Touch Memory tablets the cache memory will store one record. The case is that user UID is in the device and the system cannot determine the stored key owner without reading the data from the device;
Master key file	the name of the file storing the master key for keys protected by it;
Last operation password time out	the password request timeout since the moment of the last operation (the default value is 5 ; you can change it, if required); store the password in cache for a few seconds since the last password usage;
Template directory	the folder to store temporary files of the remote generation procedure;
Device dll	full path to and name of the library file for the key device;
Port number	the number of the port to connect the key device to;
Device type	the type of the key device;
Use previous keys for decrypt	check the option to decrypt data encrypted by a sender's old public keys; available values: blank , zero - use the current private key for decryption; negative figures (-1,-2,-3,.....) – use the previous key, the one preceding the previous key, etc. in the descending order (specify one number); positive figures - use the key with this number (it is recommended that you use negative numbers);
Touch Memory Window Time Out	seconds to wait for the tablet to touch; when a Touch Memory tablet is missing during an operation, a notification like 'Insert you tablet into the reader' appears. There is a parameter controlling the time (sec) for the notification to be displayed (tablet insert timeout). If a user fails to insert the tablet, the window closes and an error message like 'tablet is missing' appears.

CryptoPro CSP/1.1 Key Device Options

User UID (Common name)	the certificate name (it must match the key container name); if User UID (Common name) was not defined (blank), UID will be read from the certificate specified in 'User certificate file;' the certificates directory will not be initialized and its certificates will not be validated. if there is a User UID (Common name) specified, all the operations will be started; also, the specified 'User UID (Common name)' will be compared with the one in the certificate; if the values do not match, an error is returned;
Note:	Letter case is of importance!
User certificate file	full path to and name of the file with the current user's certificate; = A:\Self.cer ;
CA certificates dir	full path to the folder with the root certificates of Certification Centers (CCs); = A:\CA ;

Abonents certificates dir	path to the folder with certificates of abonents and non-root Certification Centers (i.e., CCs that are not self-signed); = A:\BONNET ;
Hash Algorithm	the hashing algorithm (available values: GOST_R3411, SHA1, MD2, MD5); = GOST_R3411 ;
Encrypt Algorithm	the encryption algorithm (available values: GOST_28147, RC2CBC, RC4, DESCBC); = GOST_28147 ;
Encrypt for UID	when the system calls the EncodeData function with blank recipient UID, it will encrypt data for the UID entered here (to be used for Defenders);
Key request time out	timeout (sec) to store cache since the last time the system read the key from its device; = 60 ;
Last operation key time out	timeout (sec) to store a key in the cache memory since the last time the key was used; = 5 ;
Key gen - Common name	UID (Common name) of the new user; = New ;
Key gen - e-mail	e-mail of the keys owner; = new@new.ru ;
Key gen - Company	the keys owner's company; = New User Company ;
Key gen - Department	the keys owner's division/department within the company; = New User Department ;
Key gen - City	the city/town of the keys owner's location; = New User City ;
Key gen - State	the keys owner's state/region; = New User State ;
Key gen - Country/Region	the keys owner's government/region (2-character code); = RU ;
Key gen - Request filename	full path to and name of the file with the certificate request; = A:\new.req ;
Attention!	If you work with CryptoPro CSP/1.1, you must have the CryptoPro software installed on your workstation.
Key gen - Request Type	the certificate request type (different for each crypto-provider); available values: RSA_MD5RSA, RSA_SHA1RSA, X957_SHA1DSA, or an algorithm mask, e.g., 1.2.643.2.2.4 corresponds to CP_GOST_R3411_R3410; this parameter depends on the keys type of a selected crypto-provider. for Crypto Pro: = CP_GOST_R3411_R3410 ;
Key gen - Expire period	the certificate's validity period (days); this parameter will be used to create the 'next certificate validity period' attribute; it is used for key generation and regeneration; the default value = 365 ;
User UID Location	where to store UIDs within certificates; this will be applied to all certificates; = CN ; available values: CN,L,S,O,OU,E,SN correspond to different Subject parts within a certificate; CN - Common Name (default value); O – Organization etc.; SN - UID = certificate series number;
Container Name Location	where to store a key container within a certificate; available values: CN,L,S,O,OU,E correspond to different Subject parts within a certificate; CN - Common Name (default value) O - Organization etc. TITLE - a container name will be stored in the TITLE extension field.
Notes:	the 'User UID Location' and 'Container Name Location' options will be applied to all library functions, including key generation and regeneration procedures. These parameters will make your old certificates compatible with your new library and will help to smoothly migrate to clients' usage of a certificate series number as a UID.

Suppose a client's certificate was generated by the old library with UID = Common Name from the certificate's subject and with the container name. In this case specify the following to migrate to usage of a series number instead of a UID:

User UID Location SN
Container Name Location CN

Specify the following for clients of VTB that store the UID and container name in the E field to migrate to UID = series number:

User UID Location SN
Container Name Location E

Specify the following for new clients using a series number instead of a UID:

User UID Location SN
Container Name Location TITLE

Specify this attribute as early as at the start of keys generation as the system write the key container name to the certificate request at its generation and then the name goes to the certificate. Also, you can generate keys with any combination of attributes. However, we recommend that in the case of UID = series number you should store a container name in TITLE. A certificate's subject will not have to store any remote banking system information.

Crypto COM/2.2 Key Device Options

Current dir	path to the keys root directory (inclusive) to store the CRT and SEC (or SEC0) folders; = A:\ ;
Secret Path	path to the subfolder with private keys from SEC (or SEC0) (folder data is confidential); = A:\sec ;
Public Path	path to the subfolder with public keys from CRT and certificates; = A:\crt ;
User Id	= H.0 ;
Hash Algorithm	the hashing algorithm (available: 34.11 , MD5 , SQR); = 34.11 ;
Cipher Algorithm	encryption algorithm (available: 28147 , 28147-ECB , DES , DES-ECB); = 28147 ;
Random file	name of (and full path to) the file storing the context of the random-number generator (file data is confidential). Full path to the @rand file. Its usual folder is either SEC or somewhere on the same level with CRT and SEC; = A:\@rand ;
Attention!	Please note that Random File must not be stored on your hard disk. This is the initial vector of random-number generator initialization. Keep it safe as your private keys. This file is cached by the standard means so you can save it to a floppy disk with your private keys.
Encrypt for UID	nothing will be written here about the bank's digital signatures. Clients' UIDs relevant to the bank's signature to be used for the same operations; it is used by Defenders. When you call EncodeData with an empty receiver UID , the system will encrypt for the UID specified by this attribute; = H.0 ;
Key request time out	time in sec. to store cache since the last reading of a key carrier (=60);
Last operation key time out	time in sec. to store a key in cache since the last key usage (=5);
Verify validity of cert and key files	this is used to verify authenticity and check validity periods of a certificate and private keys (= Yes);
Tip:	To enable the check, select Yes for the new attribute. Otherwise, no authenticity or validity checks will be carried out. For certificates authenticity check, the system will need certificates of the certification centers (the .aut files) in the folder specified in the " Secret Path " attribute). The certificates must be organized in subfolders by the rule of abonents' certificates organization in certificates directory, as prescribed by the CryptoCom certificates storage rules.

Use Intel Hardware Random driver

this attribute will enable Intel Hardware Cryptographic Service Provider to feed the random-number generator of Crypto Com 2.2 (=No);

Tip: Should you select **Yes**, the hardware-based random-number generator supplied within Intel Hardware Cryptographic Service Provider will feed your generator. Should you select **No**, the random-number generator will be fed by the standard means of Crypto Com 2.2. Before using the hardware-based random-number generator:

1. Make sure that you have a mother board with i810 or i815 chip set.
2. Install Intel Hardware Cryptographic Service Provider.
3. Install the Intel Hardware Random driver.

ATTENTION! This driver must be used on workstations with i810 or i815 chip set. For the other workstations you must set the option 'Use Intel Hardware Random driver' to **No**. Otherwise, the random-number generator of Crypto Com 2.2 may not work properly.

Should any errors occur during Intel Hardware Random driver operation, the system will pop up the error code 7: Can not initialize Intel Hardware Random driver 81x, or the Crypto API error (too large negative number).

Key gen - Subject

UID of new keys; used to generate keys for the Crypto Com 2.2; **library**

Key gen - Dir

folder to store the keys; used to generate keys for the Crypto Com 2.2; **library = A:\;**

Template dir

folder to store temporary files created for remote generation; **= C:\;**

Key gen - Secret key length

default private key length is **1024** bits for Gost; used to generate and re-generate keys;

Key gen - Public key length

default public key length is **256** bits for Gost; used to generate and re-generate keys;

Key gen - Key expire period

default keys validity is **730** days; used to generate and re-generate keys.

Current user certificate

current certificate of the keys owner; it must be stored in the folder specified in the **Current dir** attribute; **= A:\self.crt.**

Message-PRO 1.1 Key Device Options

Current certificate

current certificate of the keys owner; it must be stored in the folder specified in the **Certificates directory** attribute;

Certificates directory

full path the folder storing all certificates; names of certificate files are compiles as follows: an abonent's UID (Common Name) plus .pem;

Private disk/directory

folder in KEYS to store the current private key key.pem;

Cipher algorithm

encryption algorithm;

Digest algorithm

signature algorithm=**SHA1**;

Key length

key length=**768**;

New private key

full name of the new file (with the regenerated key);

Encrypt key on password

attribute to show if the key is password protected or not;

Certificate request

path to the file with the exchange key certificate request;

Request signature key

path to the file with signature key certificate request;

Country

country;

State or province

state, region;

Locality

population aggregate;

Organization

keys owner's organization;

Organization unit

organization's division;

Common name

UID (**Common name**) of the new user; its length can be not more than 40 chars;

E-mail address

keys owner's e-mail;

Detail error file

path to the log file ;

Encrypt for UID

should there be no recipient UID specified, data will be encrypted for the UID specified in this attribute (used by Defenders only);

Encode for UID

specify recipient UID (**Common Name**) in the **Encode for UID** attribute;

UID Type	where to store the UID in the user's certificate; available values: CN - Common Name SN - Series number
Tip:	Should you use the mode where a certificate's series number is used as the UID , the files stored in the certificates folder are re-named automatically with respect to their series numbers, no spaces, case retained. Also, you should store the current user's certificate both in the certificates folder under the name relevant to its UID and elsewhere under any name. Specify the latter file in Current Certificate of this user.
Request signature type	type of the certificate request.

M-Pro v1.34 (GOST PSE) Key Device Options

Current certificate	current certificate of the keys owner; it must be stored in the folder specified in the Certificates directory attribute;
Certificates directory	full path the folder storing all certificates;
Private disk/directory	folder in KEYS to store the current private key key.pem;
Cipher algorithm	encryption algorithm = RUS-GAMMAR ;
Digest algorithm	signature algorithm = R3410-R3411 ;
Key length	key length=1024;
New private key	full name of the new file (with the regenerated key);
Encrypt key on password	attribute to show if the key is password protected or not;
Certificate request	path to the file with the exchange key certificate request;
Request signature key	path to the file with signature key certificate request;
Country	country;
State or province	state, region;
Locality	population aggregate;
Organization	keys owner's organization;
Organization unit	organization's division;
Common name	UID (Common name) of the new user; not longer than 40 chars;
E-mail address	keys owner's e-mail;
Detail error file	path to the log file;
Encrypt for UID	default encryption; should there be no recipient UID specified, data will be encrypted for the UID specified in this attribute (used by Defenders only);
UID Type	where to store the UID in the user's certificate; available values: CN - Common Name SN - Series number
Tip:	Should you use the mode where a certificate's series number is used as the UID , the files stored in the certificates folder are re-named automatically with respect to their series numbers, no spaces, case retained. Also, you should store the current user's certificate both in the certificates folder under the name relevant to its UID and elsewhere under any name. Specify the latter file in Current Certificate of this user.
Request signature type	type of the certificate request.

M-Pro v2.x Key Device Options

Current certificate	current certificate of the keys owner; it must be stored in the folder specified in the Certificates directory attribute ;
Certificates directory	full path the folder storing all certificates;
Private disk/directory	folder in KEYS to store the current private key key.pem;
Cipher algorithm	encryption algorithm = RUS-GAMMAR ;
Digest algorithm	signature algorithm = R3410-R3411 ;
Key length	key length = 1024 ;
New private key	full name of the new file (with the regenerated key);
Encrypt key on password	attribute to show if the key is password protected or not;
Certificate request	path to the file with the exchange key certificate request;
Request signature key	path to the file with signature key certificate request;
Country	country;

State or province	state, region;
Locality	population aggregate;
Organization	keys owner's organization;
Organization unit	department;
Common name	UID (Common name) of the new user; not longer than 40 chars;
E-mail address	keys owner's e-mail;
Detail error file	path to the log file;
Encrypt for UID	default encryption; should there be no recipient UID specified, data will be encrypted for the UID specified in this attribute (used by Defenders only);
UID Type	where to store the UID in the user's certificate; available values: CN - Common Name SN - Series number
Tip:	Should you use the mode where a certificate's series number is used as the UID , the files stored in the certificates folder are re-named automatically with respect to their series numbers, no spaces, case retained. Also, you should store the current user's certificate both in the certificates folder under the name relevant to its UID and elsewhere under any name. Specify the latter file in Current Certificate of this user.
Request signature type	type of the certificate request.
Private keys timeout	applied when caching the private key;
New Keys Path	path to the folder to store the new (re-generated) private key;
Title	reserved parameter.

LanCrypto/2.35 Key Device Options

Sign private key	path to the private key to sign/validate signature;
Sign vault	path to the file with public keys to sign/validate signature;
Sign method	this attribute will be determined automatically, leave the default option;
Sign UID	ID of the public key specified in Sign private key ;
Encrypt private key	path to the private key to encrypt/decrypt;
Encrypt vault	path to the file with public keys to encrypt/decrypt;
Encrypt method	this attribute will be determined automatically, leave the default option;
Encrypt UID	default encryption (for Defender); the value will be determined automatically, it is not recommended to change the default option;
New user name	user's ID;
New short user name	name of the private key owner;
New key expire period	months of key validity;
Touch memory port number	number of the port to connect the key device (Touch memory) to; there can be none;
Password/TM Request Time Out	timeout of a password request sent to the key device (Touch memory); this option is used to set the cache memory. A few passwords can be stored in the cache memory at a time. For each user the cache memory stores a password. For Touch Memory tablets the cache memory will store one record only as the user's UID is on the very tablet, i.e., the system cannot determine the owner of the key in cache without reading the tablet.
Encrypt for UID	default encryption; should you specify Encrypt for UID , the system will encrypt for the value specified here; should you leave Encrypt for UID blank, the system will encrypt for the value from Encrypt UID (used for Defenders only);
Touch Memory Window Time Out	time in sec. to wait for the tablet to touch; when a Touch Memory tablet is missing during an operation requiring one, a notification like 'Insert you tablet into the reader' appears. There is a parameter controlling

Template directory

the time (sec) for the notification to be displayed (tablet insert timeout). Should you fail to insert a tablet, the window closes and an error message like "tablet is missing" appears;
folder to store temporary files created for remote generation;

Verba-OW/4 Key Device Options

Attention! You must have the Verba software installed to be able to work with the Verba-OW/41 cryptographic provider!

Verba-OW has library features to work with keys stored on your hard disk. Your encryption private key and signature private key will be protected and stored on your hard disk. Private keys are encoded by ad hoc '*individual keys*' (CKD — for encryption keys, CKDI — for signature keys) that are again encoded by the primary key (GK.DB3). Once your private keys (XXXX.HSG , KS_XXXX и SEC_XXXX.KEY) are prepared for storage on your hard disk, the system copies them from the key device to the folder, named against the rules for key paths, on your hard disk.

Attention! Before proceeding to operation of your remote banking system, load the proper keys into **asrkeyw.exe**. Load encryption (decryption) keys and signature validation keys into the zero slot; there is no such restriction for signature keys.

Path to secret

path to the folder with keys (it must contain the DB1,DB2,HD1,HD2 sub-folders as well as the gk.db3 and uz.db3 files); = **A:**;

Path to public

Path to signature public keys (to the folder with the Faxkey and Openkey sub-folders); = **A:**;

Key serial number

Series number of keys (6 digits, beginning with the 5th in signature UID);

Note: This number must be the same in the bank and client parts.

Encode UID

native encryption UID ; it will appear in asrkeyw's window in the 'encryption' column once keys are loaded;

Sign UID

native signature UID; it will appear in the bank part in asrkeyw's window in the 'signature' column once keys are loaded;

Encrypt for key number

number of the abonent to encrypt for; the leading four characters in the recipient's encryption UID;

Key device

key device; = **a**; ; this can be a Touch memory tablet;

Key request time out

time in sec. to store cache since the key was last read from the key device; = **60**;

Last operation key time out

time in sec. to store a key in the cache memory since its last application; = **5**;

Use 0 slot for verify signature

the options are 'Yes' or anything else standing for 'No.' Should you select 'Yes,' signature validation will run from the 0 slot. Otherwise, signature validation can run from any slot; = **No**;

Reset key in drv on start=

available options are 'Yes' or anything else standing for 'No.' If 'No,' the keys that are loaded in the asrkey driver will be deemed loaded at the moment of next crypto-operation (i.e. if there are keys in asrkey, relevant data will be stored in cache). For the other options, the keys in asrkey are deemed outdated and will be ignored. The default value = **Yes**.

Touch Memory Window Time Out

time in sec. to wait for the tablet to touch; = **5**; to be used for a Touch memory tablet only;

when a Touch Memory tablet is missing during an operation requiring one, a notification like 'Insert you tablet into the reader' appears. There is a parameter controlling the time (sec) for the notification to be displayed (tablet insert timeout). If a user fails to insert the tablet, the window closes and an error message like 'tablet is missing' appears.

Open SSL Key Device Options

User Secret key	name of the private key file; the default name is =A:\self.key ;
User Certificate	full path to and name of the file with the current user's certificate; the default value =A:\self.cer ;
Abonents dir	path to the folder to store abonents' certificates and those of non-root Certification Centers (i.e., not auto-signed Certification Centers); the default value =A:\ABONENTS ;
CA dir	full path to the folder to store root certificates of Certification Centers (CCs); the default value =A:\CA ;
CRL dir	the default value =A:\CRL ;
RND file	name of the initialization file for a random-number generator; the default value =A:\@rand
Hash Method	hashing algorithm (available values: SHA, MD5); the default value =SHA ;
Encrypt Method	encryption algorithm (available values: RC4, RC2_ECB, RC2_CBC, RC5_ECB, RC5_CBC); the default value =RC4 ;
Encrypt for UID	when the system calls the EncodeData function with blank recipient UID, it will encrypt data for the UID entered here (to be used by Defenders only); the default value =User1 ;
Key request time out	time in sec. to store cache since the key was last read from its device; the default value =60 ;
Last operation key time out	time in sec. to store a key in cache since its last application; the default value =5 ;
Key gen - Key Length	key length; choose a value from 512 to 2048, divisible by 8 (it will affect keys generation and regeneration); the default value =1024 ;
Key gen - Common name	UID (Common name) of the new user; the default value =User1 ;
Key gen - e-mail	keys owner's e-mail the default value =User1@usermail.ru ;
Key gen – Company	keys owner's organization; the default value =BSS ;
Key gen – Department	keys' owner's division within the organization; the default value =Development ;
Key gen – City	keys owner's city/town of location; the default value =Moscow ;
Key gen – State	keys owner's state or region; the default value =RU ;
Key gen - Country/Region	keys owner's state/territory (2-letter memo code); the default value =Russia ;
Key gen - PKey filename	name of the file to write the certificate request to; the default value =A:\new.req ;
Key gen - SKey filename	name of the file to store the private key; the default value =A:\new.sec .

Crypto-C Key Device Options

User PKey/Certificate	file with the keys owner's public key; by default, A:\self.pub
User Secret key	file with the keys owner's private key; by default, A:\self.sec
Abonents dir	Folder of abonents' certificates; by default, A:\ABONENTS
CA dir	Reserved for expected usage: A:\CA
Encrypt Method	0 - Stream Mode, 1-Cipher Feedback Mode; by default, 1
Encrypt for UID	By default, encrypt for UID; by default, User1
Key request time out	time in sec. to store cache since the key was last read from its device;

Last operation key time out	by default, 60 time in sec. to store a key in cache since its last application;
Key gen - GOST	by default, 5 create keys for each algorithm. Available values: 1994 stands for GOST 34.10 - 1994 2001 stands for GOST 34.10 - 2001*; by default, 1994 ; the attribute is applied by the key generation (re-generation) procedure
Key gen - UID	key UID at generation; by default, User2
Key gen - PKey filename	file of the new public key at generation; by default, A:\new.pub
Key gen - SKey filename	file of the new private key at generation; by default, A:\new.sec

Transport Subsystem

Transport Options

To set up transport options, select **Tools → Transport**:

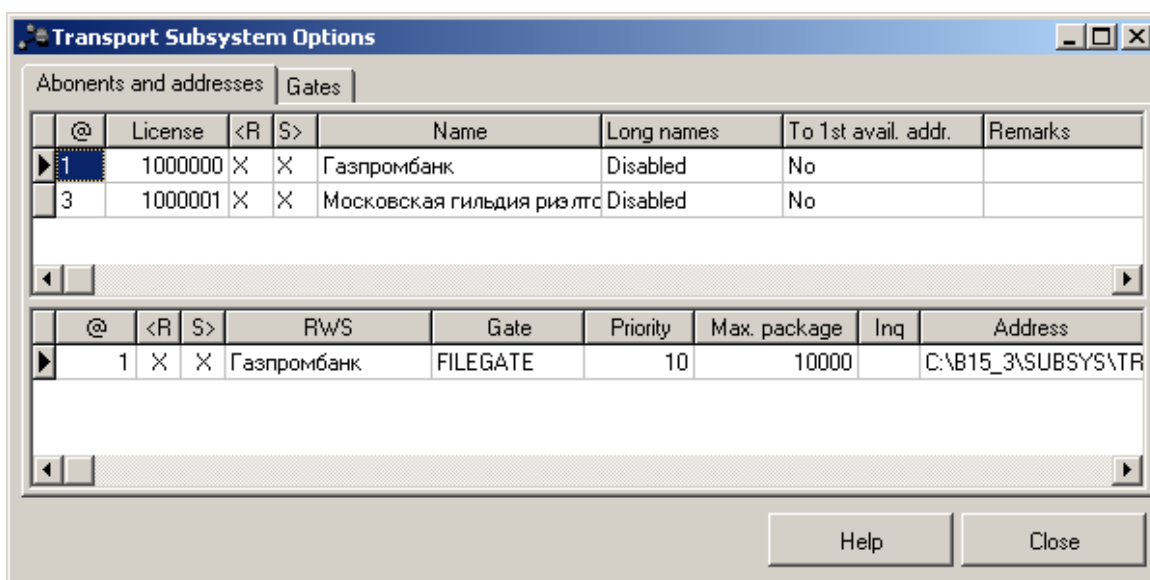
Start	Run it to start the transport subsystem;
Stop	Run it to stop the transport subsystem;
Reprocess	Run it to reprocess packages that the system failed to send during the last connection session for some reason (the bank was closed, connection was dropped, etc.);
Send Delayed	With the system set up accordingly, you can create packages with documents and prepare them for sending; run this command to send the prepared packages to the bank, if required;
Note:	The standard BS-Client suite is not set up to use Send Delayed ;
Reprocess erroneous	Run it to re-encrypt packages that were unsuccessfully processed;
Send Inquiry to Bank	Run it to send an inquiry if there is any mail for the client at the bank;
Options	Run it to customize general transport options;
Communication Log	Run it to open the Data Packages Table.
Adv. T-Mail Settings	T-Mail for 'clients' is set up in the bank part at 'client' installation disc generation. Run this command to customize advanced T-Mail settings. Note that correct setup is only possible after you set up addresses for the file gate.

Transport Subsystem Setup

The transport subsystem is set up in the bank part. The settings are then included into the installation disc of the client part when created. The options are automatically set up during system installation.

Caution! If you need to change the settings, consult your serving bank as to the specific settings of e-connection between your system and the bank part. Only after that can you modify the settings.

- Select **Options → Transport**.
- ⇒ The **Transport Subsystem Options** window appears.



The **Abonents and addresses** tab has two scrollers. The first one will contain two rows: bank abonent and client abonent. When you select a row, the lower scroller will display the selected abonent's addresses.

The **Gates** tab has two scrollers as well. The first one will contain all the available gates. The second one will display a list of documentary schemes to be processed by the gate selected above. Do not modify the data without prior agreement with the bank.

The following gate types are supplied in the standard suite: TCPGATE, MAILGATE, MAPIGATE, MODEMGT and FILEGATE. Gates are supplied as external *.dll modules that import/export data packets.

Tip: Should you use Outlook Express 6 with your MAPIGATE, there can appear the notification that the system is attempting to send a e-mail message "message text" in your name when you try to send a note.

For a workaround, go to Outlook Express, select **Tools → Options → Security** and de-select 'Internet zone (Less secure, but more functional).'

Editing Abonent's Profile

If necessary, you can edit a connection mode for any abonent. Use the following procedure:

- Go to the **Abonents and addresses** tab and point to a record in the upper list. Double-click it.
 - ⇒ The **Abonent's Options** dialog box appears.

The dialog contains the following viewable and editable parameters:

License number

The number of the transport license received when purchasing the system. It is entered automatically and is non-editable.

Operation mode

item defines the abonent's operation mode: the abonent's documents will go in both directions, or just out or in, or the abonent is disabled (no connection).

Send

item defines an order of sending of documents.

Allow long file names

By default, package files that go through the file gate are named by the following short pattern: xxxxxxxx.xxx. Please note that there are operating systems and software products that do not support long file names. We recommend that you do not check this option.

The following **Operation mode** options are available for checking:

Receive / Send

when logged in as this abonent, you can both receive and send packages;

Receive only

when logged in as this abonent, you can only receive packages;

Send only

when logged in as this abonent, you can only send packages;

Disabled

the abonent is disabled.

An option that you check in the **Send** section will be applied if there are several addresses set up. If checked, the options define the following:

To the main address (one or more)

packages will be sent to the address(es) of highest priority;

To the first available address

packages will be sent to the first address of the highest priority from among the queue of available addresses.

- Click on **Save** to save the entered data.

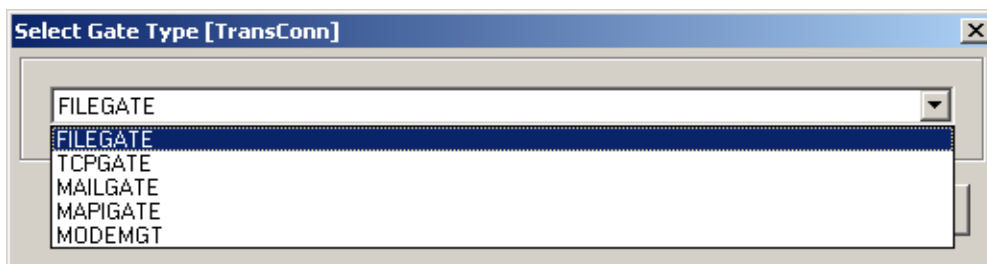
⇒ You are back in the **Transport Subsystem Options** window. The list of abonents now contains the data you entered in the dialog.

Caution! The list of abonents must contain information of both the Client and the Bank. For the transport subsystem to work properly, at least one address must be set up for each.

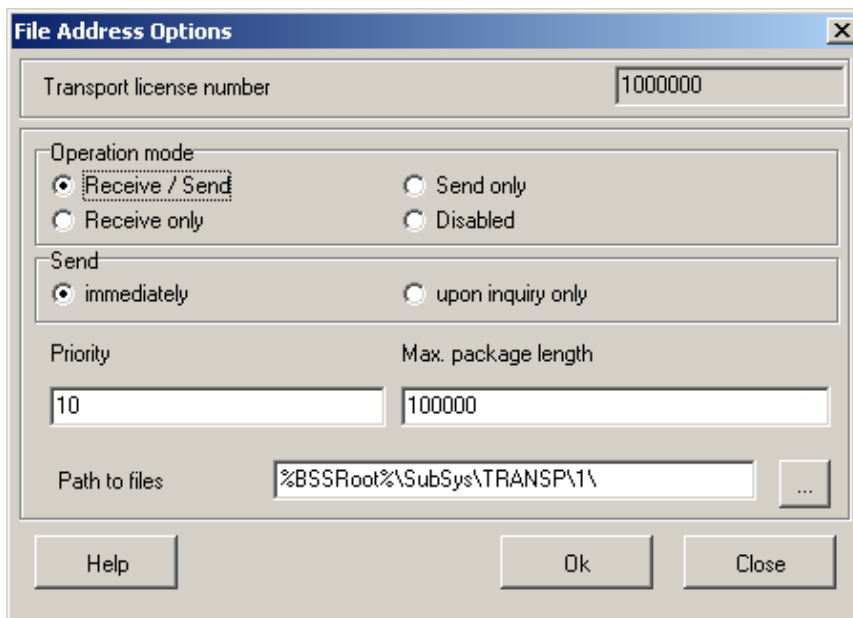
Inputting New Address

If you communicate with the bank through a gate so far unused, you must enter and set up addresses for each abonent of the selected gate.

- To enter addresses, use the lower list on the **Transport Subsystem Options** window. Here you can enter addresses of the abonent selected in the upper list (marked by □).
- Press **Ins** to open a dialog box for a new address.
 - ⇒ The following window appears:



- Select a gate in the list and click **Ok**.
 - ⇒ The dialog box for the selected gate appears. For example, you've chosen the file gate. The file gate setup window will appear:



Select an operation mode for the given address in the **Operation mode** section.

The **Send**, **Priority**, and **Max. package length** options are essential for the **Bank's** address set-up,

Check one of the following options in the **Send** section:

immediately

when you run **Send to Bank** from the pop-up menu of a payment document, a package is formed for sending and an appropriate record enters the system database;

upon inquiry only

when you run **Send to Bank** from the pop-up menu of a payment document, a package is formed for sending (as above), but information about it will only be stored in the

system database. A package will be formed for sending upon receiving an inquiry from a counterpartner.

Tip: Check **immediately** in the client part.

Priority is applicable if you have several addresses set up. If you checked **to the first available address** as the **Send** order in the abonent's options, the system will send documents to the address with the highest priority. Should it be unavailable, the transport subsystem will try to send document to an address with a lower priority.

If you checked there **to the main address**, the system will send documents to the address with the highest priority. Should it be unavailable, sending is delayed till the next time.

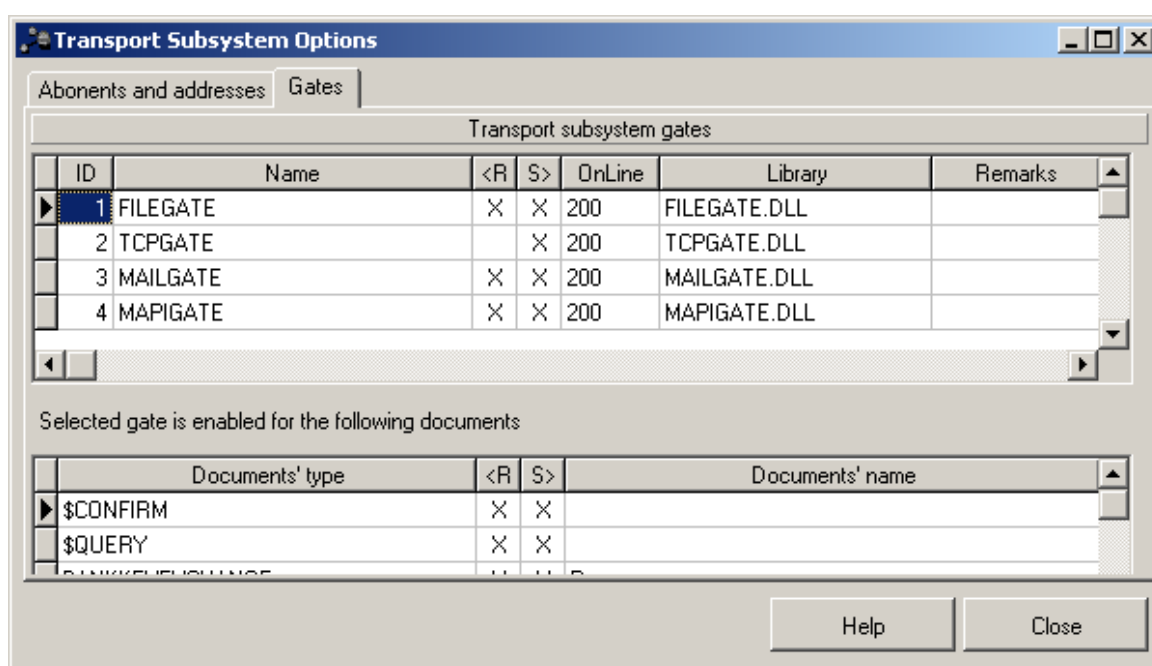
If you checked there **to the main address (changeable upon inquiry)**, the address you received the inquiry from is assigned the highest priority. Documents will be sent to the address with the highest priority, namely, to the address you received the inquiry from. Should it be unavailable, the transport subsystem will try to send document to an address with a lower priority.

Note: The more the parameter, the higher the priority.

Note: For your new transport subsystem parameters to take action, stop transport and restart it (run **Tools → Transport → Stop** or **Tools → Transport → Start**, correspondingly) or restart the RBS server.

For more details on addresses setup in case of different gates see chapters with corresponding titles below.

Gates Setup



- Go to the **Gates** tab, point to the **Transport subsystem gates** scroller, and open the **Gate Description** window. To open the latter, point to a row with a gate name and press **Enter** (or double click on the selected row).

Let's take the TCP gate as an example:

Gate Description [TransConn]

Name: TCGATE Delivery level: 200

Library file (dll): TCGATE.DLL Name of gate's installation dll: ILTCP.DLL

Operation mode:
☐ Receive / Send ☒ Send only ☐ Receive only ☐ Disabled

Remarks:

Setup dialog [Self]	Setup dialog [Other]	Gate options dialog
TransAddrConnDataTCPSelfDialog	TransAddrConnDataTCPOtherDialog	TransConnTCPSettingsDialog

Options Ok Cancel

Name you can change the gate name; note, however, that **Transport Subsystem Options** will display the changes after restart;

Delivery level gate's initial package delivery level ;

Library file name of the gate library to use;

Name of gate's installation dll name of the gate installation library to use.

Caution! You **MUSTN'T CHANGE** default values in Library file and Name of a gate installation dll.

In this window check one of the following options for the **Operation mode**:

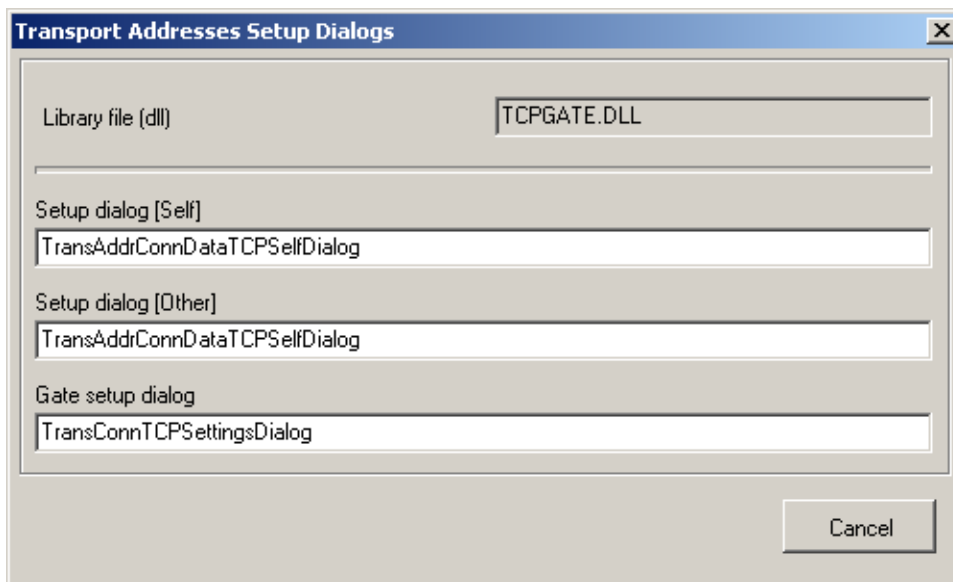
Receive / Send enables both sending and receipt of packages through the gate;

Send only enables only sending of packages through the gate;

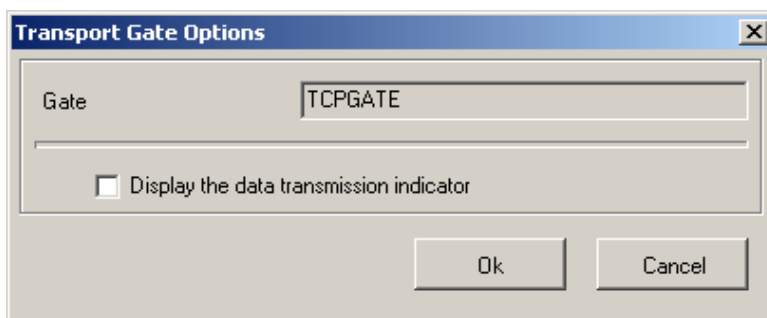
Receive only enables only receipt of packages through the gate;

Disabled disables the gate.

- **Gate Description** contains information about dialogs for set-ups of transport addresses in its lower pane. Press **Ins** or double-click on a list row to open a corresponding Transport Addresses Setup Dialog for editing.

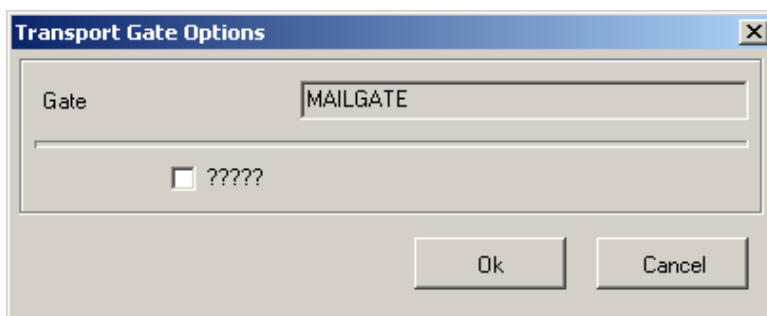


- To customize gate parameters, click on **Options** at the bottom of the **Gate Description**.
 - ⇒ There are no customizable parameters for FILEGATE and MAPIGATE.



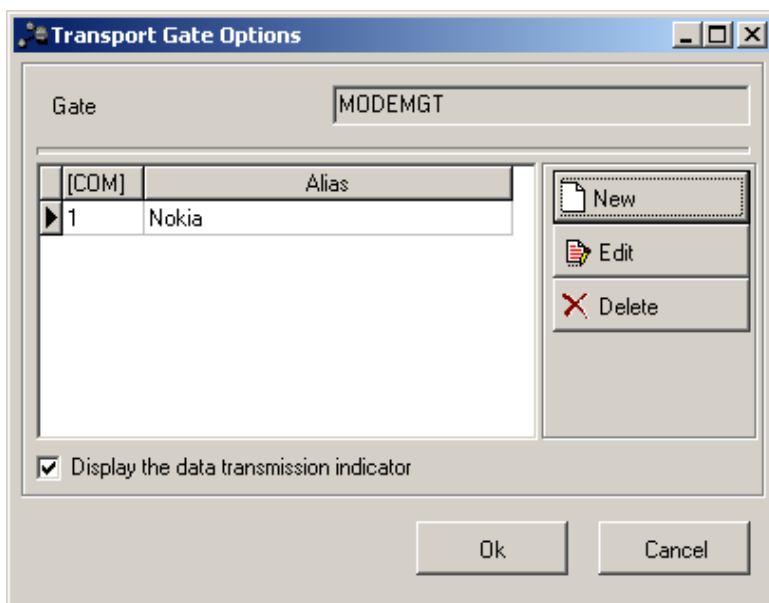
Display the data transmission indicator

indicator of data transmission (sent/received bytes) will appear at attempt to establish connection).



Read after sending only (here: ?????)

at connection attempt, the system will check received data after sending.



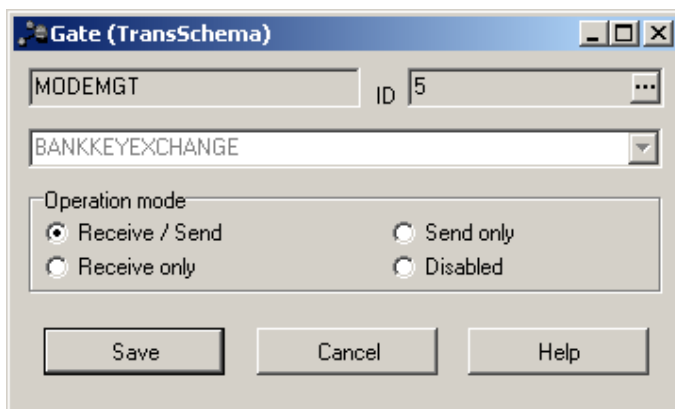
Display the data transmission indicator if it's checked, indicator of data transmission (sent/received bytes) will appear at attempt to establish connection).

- To create a new connection, click on **New** or press **Ins**. To modify one of registered connections, click on **Edit**.

Note: Remote connections are created and modified by standard tools of your operating system. You can select set up channels for addresses set-ups.

Documentary schemes for gates are customized in the scroller **Selected gate is enabled for the following documents** on the **Gates** tab.

- Select a row with the name to customize and press **Enter** (or double click on the list row). Press **Ins** to create a new document.
- ⇒ The **Gate** dialog box appears.



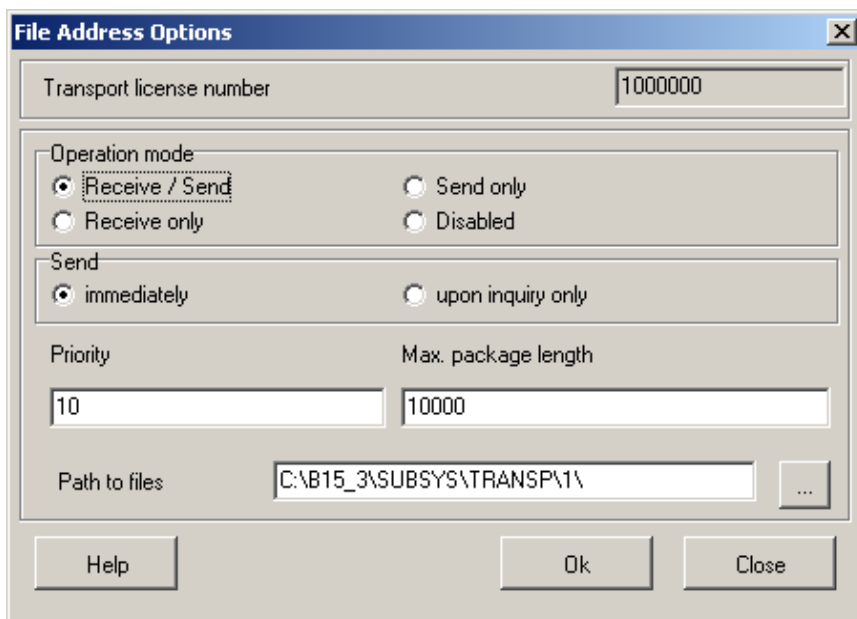
- Select a documentary scheme on the drop-down list, specify an appropriate operation mode, and click on **Save**.

Run the pop-up menu command **Enable / disable receipt and send**, available in both scrollers of **Transport Subsystem Options**, to change the operation mode of a gate or scheme.

This command, unlike the gate (documentary scheme) setup window, will not allow you to select either **Receive only** or **Send only**. The **Enable / disable receipt and send** will set either **Receive / Send** or **Disabled** mode.

File Gate Addresses Options (FileGate)

- Pop up the Address Options window from the **Abonents and addresses** tab. To pop it up, press **Enter** or double-click on the file address.



For a correspondent's address the window will have a similar layout.

Set up the parameters as follows:

- for the input address:

Operation mode

Priority

Path to files

- for a correspondent's address:

Operation mode

Priority

Path to files

Receive / Send;

the more the value, the higher the priority of a given address over the other addresses;

path to the folder to be checked for availability of files from your correspondent.

Receive / Send;

the more the value, the higher the priority of a given address over the other addresses;

path to the folder where prepared packages will be created for transferring to the correspondent.

Note: Go to **Gates**, open the window for FILEGATE options, and check **Receive / Send** in the **Operation mode** group.

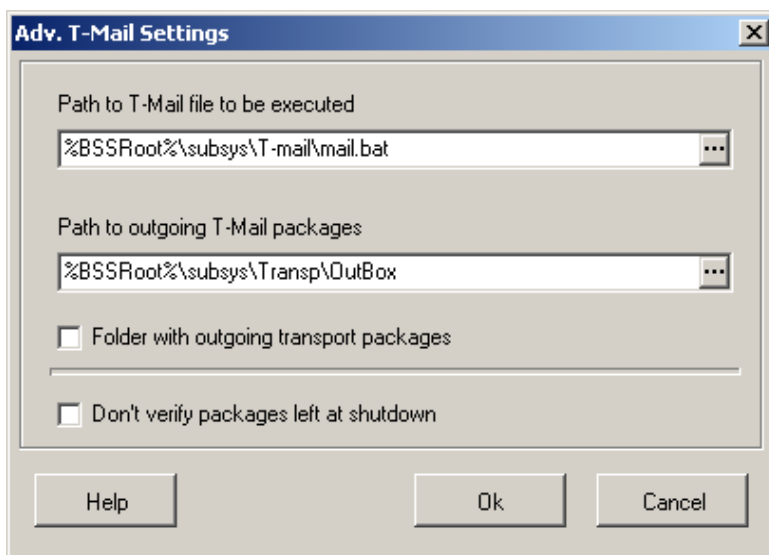
T-Mail Options

The **T-Mail** transport system is a subsystem exchanging data between the client part and server through T-Mail.

The Mail Package T-Mail is set up for clients during generation of relevant installation discs on BS-Client's server.

- Advanced T-Mail settings are available at **Tools → Transport → Adv. T-Mail Settings**.

Note: Correct setup is only possible after you set up addresses for the file gate.



Path to T-Mail file to be executed

path to the file launching the T-Mail program: contacts the bank, sends outgoing package, and receives incoming packages from the server default path is %BSSRoot%\SubSys\T-MAIL\MAIL.BAT

Path to outgoing T-Mail packages

path to outgoing T-Mail packages; default, the value is taken from the transport settings, captured at installation disc generation, and corresponds to the bank's File Gate Address %BSSRoot%\SubSys\TRANSP\1\;the client part's close procedure scans the folder; should it contain anything, the system will not be closed till T-Mail finishes transfer of the packages to the bank.

Folder with outgoing transport packages

with the option checked, path to outgoing T-mail packages is the one from the transport settings specified at generation;

Tip: You cannot check **Folder with outgoing transport packages** should there be no registered FileGate address.

Don't verify packages left at shutdown

when you shut down the 'client' system, it checks contents of the folder with outgoing packages; Should the option be un-check and the folder contain files, the system does not shut down until T-Mail packages are transmitted to the bank part.

Tip: Before you start T-Mail (from **Tools → Transport → Start T-Mail**), start **mail.bat** that must be supplied within your system installation disc.

mail.bat will contain:

```
@Echo off
cd ..\Subsys\t-mail\
t-mailnt -t
```

TCP Gate Addresses Options (TCPGate)

- Pop up the Address Options window from the **Abonents and addresses** tab. To pop it up, press **Enter** or double-click on the address.

For a correspondent's address the window will have a similar layout.

You can set up the following options in the appeared window:

Max. package length	longest possible outgoing package (by default, 10,000 bytes);
Global timeout	maximum period to wait for transmission of a next data packet. With the period expired, the connection is dropped. (5 min by default);
Int. delay	longest possible period to wait for between sending a part of a package to a correspondent and receiving acknowledgement of the package part receipt from the correspondent (30,000 ms by default);
Ext. delay	longest possible period to wait for between sending a package to a correspondent and receiving a package from the correspondent (60,000 ms by default);
IP	IP address of the workstation to receive TCP packets at the bank (used for correspondent address only);
Host	net-name of the workstation to receive TCP packets at the bank (used for correspondent address only);
Note:	input one of the two parameters: either Host or IP
Port	number of the port to use for exchange;
License	number of the transport license;
Number of connections	highest possible number of simultaneous TCP clients (from the client part).

By default **Use established connection** is checked. Un-check it only if you connect to the bank through a connection not default for your operating system. Set up the connection before un-checking the option (see DialUp Connection Setup).

□ Go to **Abonents and addresses** to customize the above options for each abonent as follows:

- for the input address:

Operation mode

IP

Port

Send

Priority

Receive / Send;

Blank;

number of the port to use for exchange;

immediately;

the more the value, the higher the priority of a given address over the other addresses.

- for a correspondent's address:

Operation mode

IP

Host

Port

Send

Priority

Receive / Send;

IP address of your correspondent;

net-name of the workstation to receive TCP packets at the bank;

number of the port to use for exchange;

immediately;

the more the value, the higher the priority of a given address over the other addresses;

Notes: The present manual describes the situation where a client doesn't have a fixed IP address.

Input one of the two parameters: either **Host** or **IP**;

It should be emphasized that you must check **Send only** in the **Operation mode** group for TCPGATE from the **Gates** tab.

MAIL Gate Address Options (MailGate)

□ Pop up the Address Options window from the **Abonents and addresses** tab. To pop it up, press **Enter** or double-click on the address.

⇒ The following window will appear for the input address:

Set up the parameters as follows:

Operation mode

Send

Priority

Host

Receive only;

immediately;

the more the value, the higher the priority of a given address over the other addresses;

net-name or IP address of the mail server;

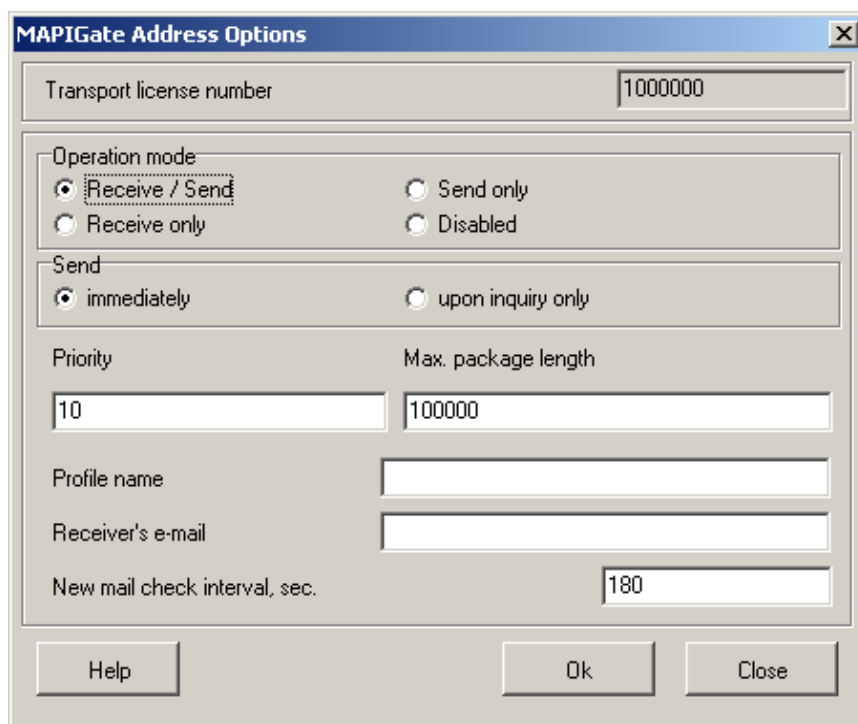
Server interrogation period	period for the gate to interrogate email box on the server (s);
Tip:	The shortest possible period can be prescribed by the mail server. Thus, some public mail servers define several minutes as the minimal period of interrogating them. However, even if the mail server does not restrict it, it is hardly worthwhile to check for e-mail oftener than once a minute. It should be considered that if you choose to save events log to file, each mailbox call will add at least 10 lines to it. So the oftener the calls, the faster log growth.
Port	Mail server port number for POP3 (110 by default);
Login	user name for the mail server;
Password	password of the user to the mail server.
Socket reply timeout, sec.	time in seconds to wait for socket to respond; should there be no response within the time, the connection is dropped;
Enable authentication	the option must be checked should the mail server require authentication; otherwise, the system will not be able to connect to the mail server, whereas a proper record will appear in the transport log.

Set the following options for the correspondent's address:

Operation mode	Send only;
Send	immediately;
Priority	the more the value, the higher the priority of a given address over the other addresses;
Host	net-name or IP address of the mail server;
Server interrogation period	period for the gate to interrogate email box on the server (s);
Port	Mail server port number for POP3 (110 by default);
Login	user name for the mail server;
Password	password of the user to the mail server.
Note:	Check Receive / Send in the Operation mode group from the Gates tab.
Tip:	It is not recommended to use addresses provided by free mail servers for the client's MailGate as there are no guarantees of their being operable.

MAPI Gate Addresses Setup (MapiGate)

- Go to **Abonents and addresses** to pop up MAPIGATE Options window by pressing **Enter** or double clicking of the gate name.



The image shows a Windows-style dialog box titled "MAPIGate Address Options". It contains several input fields and radio button groups. At the top, there is a text box for "Transport license number" with the value "1000000". Below this is a group box for "Operation mode" containing three radio buttons: "Receive / Send" (selected), "Receive only", and "Send only". Another radio button "Disabled" is also present. Below the "Operation mode" group is a "Send" group with two radio buttons: "immediately" (selected) and "upon inquiry only". There are two text boxes for "Priority" (value "10") and "Max. package length" (value "100000"). Below these are two empty text boxes for "Profile name" and "Receiver's e-mail". At the bottom, there is a text box for "New mail check interval, sec." with the value "180". The dialog box has "Help", "Ok", and "Close" buttons at the bottom.

- Set up the options in the appeared window as follows:
- for the input address:

Operation mode	Receive / Send;
Send	immediately;
Profile name	the client's mailbox (profile) name.
Receiver's e-mail	the client's e-mail address;
New mail check interval, sec.	period to check for new mail in the receiver's mailbox.

Note: Check **Receive / Send** in the **Operation mode** group for MapiGate from the **Gates** tab.

- for the correspondent's address:

Operation mode	Receive / Send;
Send	immediately;
Profile name	the client's mailbox (profile) name.
Receiver's e-mail	the correspondent's e-mail address;
New mail check interval, sec.	period to check for new mail in the receiver's mailbox.


MODEM Gate Address Options (MODEMGT)

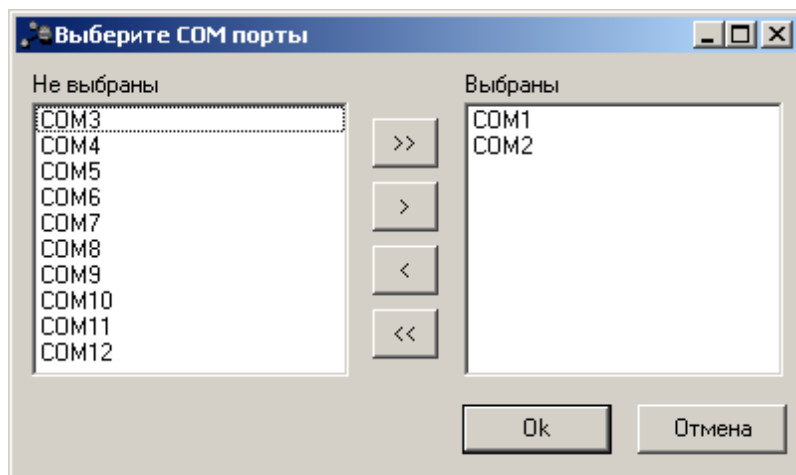
- Go to **Abonents and addresses** to pop up MODEMGT Address Options window by pressing **Enter** or double-clicking of the address.





- Set up the options in the appeared window as follows:

Operation mode	Receive / Send;
Send	immediately;
Data waiting timeout	maximum period to wait before sending a package to the correspondent (bank) and receiving a package from it;
Connection keeping timeout	maximum period to wait for transmission of a next data packet. With the period expired, the connection is dropped. To hold a connection continuously, specify zero;

Delivery ports

ports which modems are connected to and which are used to establish connection (if one is busy, another is used); select them by .

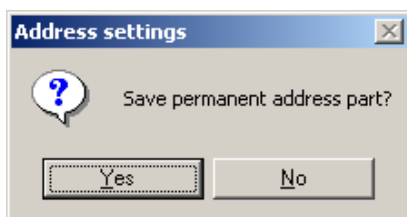


□ Use , ,  and  to compile a list of COM ports in the **Selected** column (here: **Выбраны**) and click **Ok**.

Note: Check the **Receive / Send** option in the **Operation mode** group for MODEMGT from the **Gates** tab.

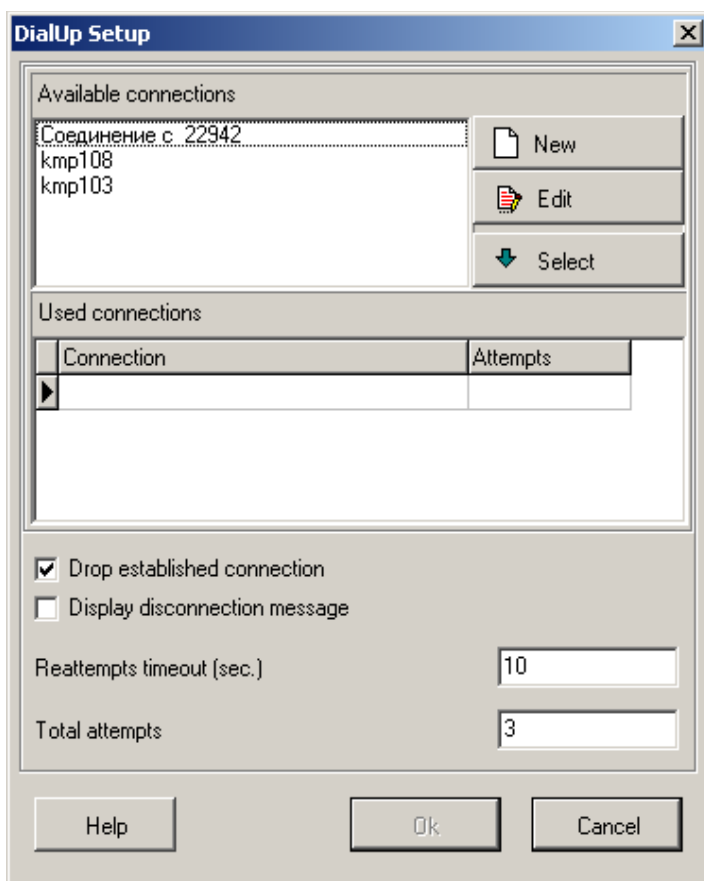
DialUp Connection Setup

- If your system uses a non-default connection to the bank via modem (**DialUp** connection), go to the **Input (TCP or MAIL) Address Options** and de-select **Use established connection**.
 - ⇒ The **Address Settings** window appears.



Tip: The **Address Settings** dialog box will only appear for a new and yet unregistered address during DialUp Connection Setup. Preserve the invariable part of the address. The **Address Settings** dialog box will not appear for a registered address during DialUp Connection Setup.

- Click on **Yes**.
 - ⇒ The **DialUp Setup** window appears.



- **Available connections** will display the registered remote connections. To view and modify registered connections, select one in the list and click on **Edit**. To create a new remote connection, click **New**.

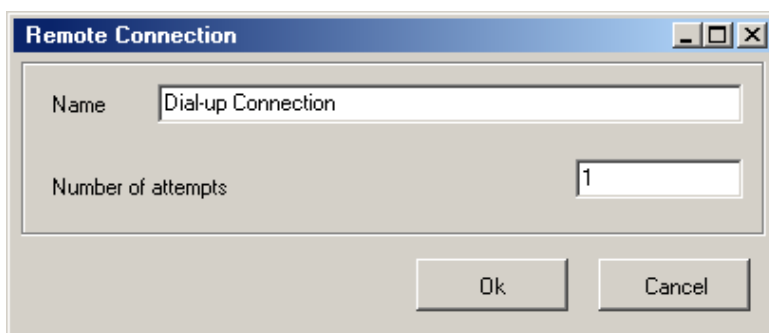
Note: remote connections are created and modified by standard tools of your operating system.

- To add a registered remote connection to the list of those used by the transport subsystem, select a row and click on **Select**.

The Used connections list contains two columns:

Connection name of the used connection;
Attempts number of attempts to connect.

- By default, the number of connecting attempts is 1. To change the value, select a row in the table and press **Enter**.



- Change the value in **Number of attempts** and click **Ok**.

The other parameters are used to customized the connection:

Drop established connection will drop established connection at the gate's attempt to establish connection.

	Registered connections are used not only by the transport gate, but also by other applications, so the selected connection may appear busy. When there is no free connection in the list of connections selected for a given address, this option, if checked, will make the system drop a connection and capture it for the gate's needs. Otherwise, the address will be blocked until a connection is freed.
Display disconnection message	the check-box is active should you check Drop established connection . With the option checked, a confirmation window appears when disconnection proves necessary;
Reattempts timeout (sec.)	period between attempts to establish connection (in seconds);
Total attempts	number of attempts to connect.
<input type="checkbox"/> Click Ok to save the settings.	
Tip:	After you save the DialUp connection settings, Input (TCP or MAIL) Address Options will have Options activated. Click this button to pop up the DialUp Setup window for viewing or modifying.

System Tools

BS-Client StartUp Options

By default, the system only has the Administrator's workplace set up.

To add a system user, set up the options in **Setlogin.exe**, stored in **%BSSRoot%\EXE**.

Tip: If you have a few BS-Client's client parts installed on your workstation, you will need to create a .bat file (like cbank.bat but with setlogin.exe instead of cbank.bat) and specify the path to the required system to be able to start it.

On the upper pane there is an icon toolbar with the following buttons:



- create a new startup configuration file;
- open a configuration file;
- save the current configuration file;
- save the current configuration file under a new name.

The data must be stored in Default.cfg in the system startup folder. One such file will store settings for one user. Therefore, you should start the system from different folders for different users.

Setlogin window will contain the tabs **Options** and **Window**.

Go to **Options** to set up:

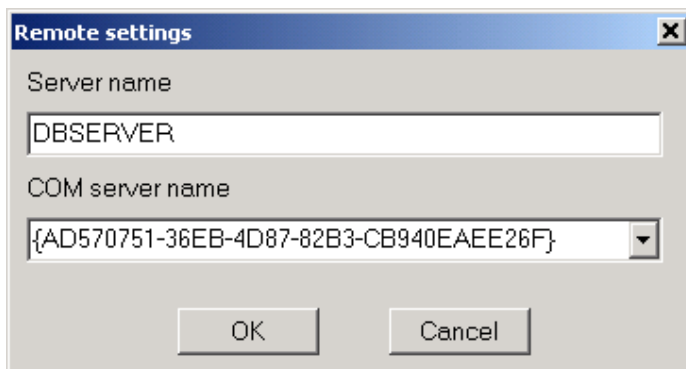
User Name	name of the user used to log in;
Password	password associated with the name;
Default Database Name	alias of BS-Client's default database to connect to at startup;
Database login	login to use to connect to the database should it differ from the user login.
Database password	password to the database.

Note: If you need to make user's and database logins and passwords different, de-select **Equal user and database logins and passwords** and specify database login and password in **Database login** and **Database password**, respectively. With the option checked, the fields are inactive.

Equal user and database logins and passwords	will make the system use the same logins and passwords to log in and to connect to the database.
Remote Authentication	if it's checked, database log-in will be followed by remote user authentication; the field activates the Remote Settings button;

Allow change default database	will allow you to connect to the database with Default Database Name as well as to databases specified on the right pane;
Allow save changes in CfgFile	will save modifications to the file of system startup settings after startup;
Allow connect if any logins are incorrect	if you cannot connect to an additional database; the option will allow login anyway by connecting to the DefaultDatabase;
Show login window	will display the Login window; if it's checked, the system will require the user name at startup;
Show default database params	will display database parameters at startup in the Login window;
Show logins list	will pop up a list of databases to connect to;
Save user password in CfgFile	will save the user password to the file; so that you will not have to enter the password each time you log in; however, this feature will lessen protection from unauthorized access as the login and password will be specified automatically at log-in;
Save default DB password in CfgFile	will save the database password to the file;
Language	default language;
Allow change default language	will enable change of the default language;
Protection server location	netname of the workstation where BS-Client's Guardant e-key is installed; if the key and BS-Client are installed on the same workstation, leave the field blank;
Protection server alias	license name: 'default' by default, 'DemoClient' for a demo version;
Kernel server location	leave blank.

With **Remote Authentication** checked, database log-in will be followed by remote user authentication. The **Remote Settings** button becomes active. Having clicked on it, the **Remote Settings** window appears where you can set up remote user authentication.



Specify the following:

Server name	name of the workstation with the remote COM server;
COM server name	name of the COM server; you can select it from the value list or enter manually, if the standard name is not used; You can also specify your PROGID server name.

If the system operation requires several databases, you need to create additional database aliases and input their connection parameters.

- Click  to pop up the new alias description dialog box.

Add alias to aliases list

Alias: BSS_C11

Alias type: Auto

Table prefix: Max sessions: 0

User name: Password:

☐ Allow user change login and password

☐ Save password in CFGFile

OK Cancel

- Select an **Alias** from the value list. Is it not recommended to change **Alias type**, **Max sessions**, and **Table prefix**. Enter a database name and password in **User name** and **Password**. Click **Ok** to save the input.
 - ⇒ Presently, the list of aliases contains a description of a new database connection. To work with several databases at a time, you need to similarly describe connection to the other databases, available for the user.
- Go to **Window** to set up the startup layout:

default.cfg

Options Window

Window header: Login

Label for user name: Пользователь

Label for password: Пароль

Label for default database name: База данных системы

Label for default alias: Основной алиас

Label for database user name: Login к базе данных

Label for database password: Пароль к базе данных

Message: "Cannot connect to alias": Ошибка подключения к базе

Font: MS Sans Serif

Label for language: Язык

Label for Ok button: OK

Label for Cancel button: Отмена

Label for alias column: База данных

Label for user name column: Пользователь

Label for password column: Пароль

Label for save changes control: Сохранить изменения

Список доступных языков: ENGLISH, RUSSIAN

Change logo

Window header
Label for user name
Label for password

name of the startup window;
 name of the login input field;
 name of the password input field;

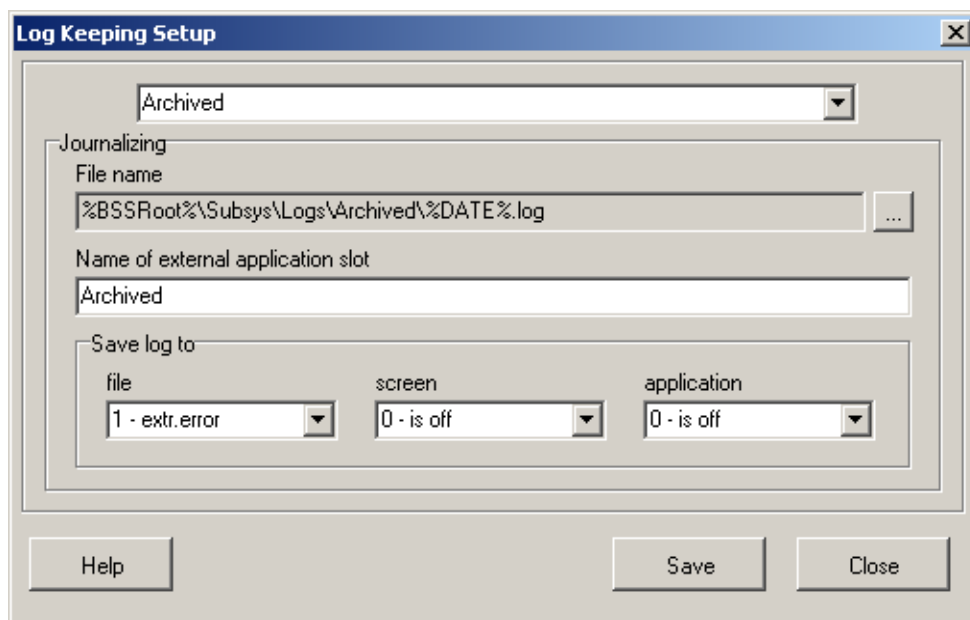
Label for default database name	name of the database input field;
Label for default alias	name of the default alias field;
Label for database user name	name of the database user field;
Label for database password	name of the database password field;
Label for language	name of the language selection field;
Label for OK button	name of the Ok button;
Label for Cancel button	name of the Cancel button;
Label for alias column	name of the alias field when connecting to additional databases;
Label for user name column	name of the user login field when connecting to additional databases;
Label for password column	name of the password field when connecting to additional databases;
Label for save changes control	name of the check-box for saving changes;
Message: "Cannot connect to alias"	header of the database connection error notification;
Font	font setup;
Список доступных языков	Russian for 'Listing of available languages.'
Use the Change logo button to change the startup window logo.	

Journalizing

The system keeps various logs. They store actions and operations that the system executes and runs. There are logs that are always kept, others can be created. Log keeping is essential when debugging data is required.

Journalizing Setup

- Select **Tools → Service → Journalizing and Tracing Setup**
- ⇒ The **Log Keeping Setup** window appears.



- Select a log type on the drop-down list.
- Specify the **path** to save the log to.
- Specify a **name of external application slot**. By default the field is populated and corresponds to the log type selected.
- Specify where to **save log to (file, screen, application)**.

- Click on **Save**.

Mail Statistics Setup

Mail statistics will store information about received and sent documents to show aggregate information in the **Received/Sent Documents Report** dialog box.

Report on sent and received documents
(was begun on 15.03.2005 in 13:24:05.3710)

Type of data	Quantity	Total amount
Received:		
-- No documents --		
Sent documents:		
-- No documents --		

Buttons: Clear, Help, Ok, Cancel

- Click on **Clear** to clear the list of messages.
- To set up the index of mail statistics, select **Tools → Service → Mail Statistics Setup**.
⇒ The **Mail Report Options** window appears.

General

☒ On/Off

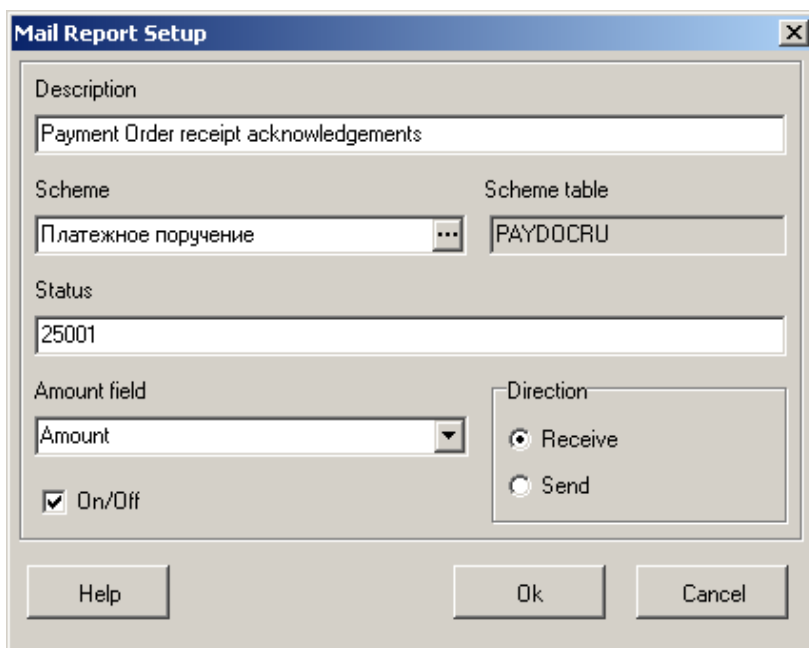
On/Off	Scheme	Statuses	Amount field	Description
Y	Платежное поручение	25001	Amount	Квитанций о приеме
Y	Поручение на перевод валюты	25001		Квитанций о приеме
Y	Поручение на покупку валюты	25001		Квитанций о приеме

Close

On/off

use it to switch on (checked) / off (un-checked) mail reporting; report contents are compiled following the documentary schemes options set up below.

- To set up the report form, select a row in the list of documentary schemes and press **Enter**. Click **Ins** to insert a new record.
⇒ The **Mail Report Setup** window appears.



Mail Report Setup

Description
Payment Order receipt acknowledgements

Scheme
Платежное поручение

Scheme table
PAYDOCRU

Status
25001

Amount field
Amount

Direction
☒ Receive
☐ Send

☒ On/Off

Help Ok Cancel

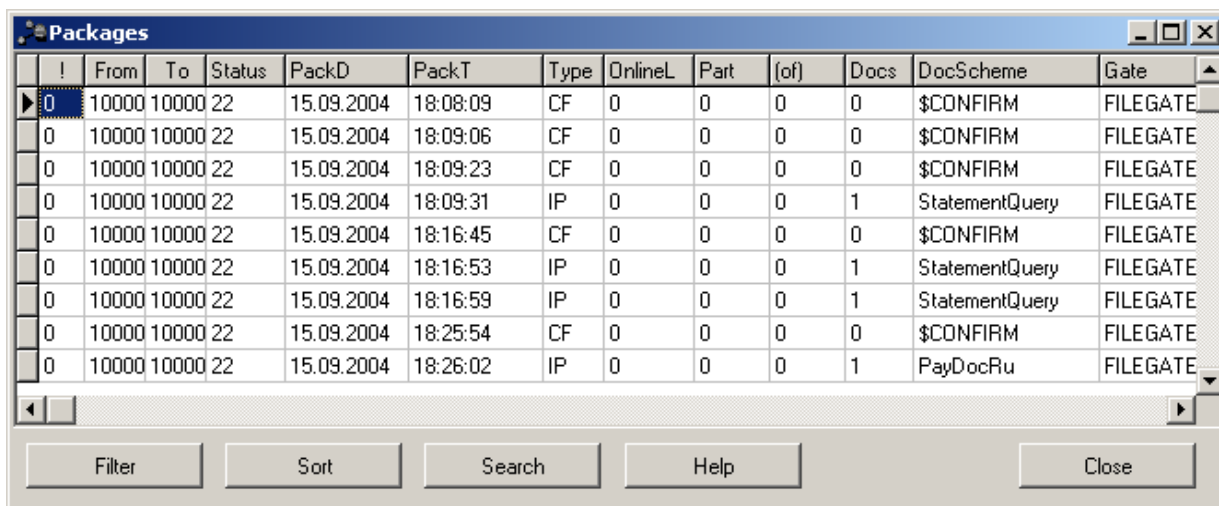
Each setup consists of the following parameters:

Description	a short description; this information will appear in the report.
Scheme	choose a documentary scheme in the directory.
Scheme table	name of the documentary scheme table; it's auto-populated;
Status	a 'shortened' status of a document for the setup to identify and act;
Amount field	if specified, the field's value will be added to appear in the report;
On/Off	Use it to switch on (checked) / off (un-checked) the setup.
Direction	Specify a type of documents to apply the setup to (Receive/Send): each section will display statistics of received and sent documents.

Appendices

Data Packages Table Fields

Below are fields of the **Packages** table (**Tools**→**Transport**→**Communication Log**).



	!	From	To	Status	PackD	PackT	Type	OnlineL	Part	(of)	Docs	DocScheme	Gate
▶	0	10000	10000	22	15.09.2004	18:08:09	CF	0	0	0	0	\$CONFIRM	FILEGATE
	0	10000	10000	22	15.09.2004	18:09:06	CF	0	0	0	0	\$CONFIRM	FILEGATE
	0	10000	10000	22	15.09.2004	18:09:23	CF	0	0	0	0	\$CONFIRM	FILEGATE
	0	10000	10000	22	15.09.2004	18:09:31	IP	0	0	0	1	StatementQuery	FILEGATE
	0	10000	10000	22	15.09.2004	18:16:45	CF	0	0	0	0	\$CONFIRM	FILEGATE
	0	10000	10000	22	15.09.2004	18:16:53	IP	0	0	0	1	StatementQuery	FILEGATE
	0	10000	10000	22	15.09.2004	18:16:59	IP	0	0	0	1	StatementQuery	FILEGATE
	0	10000	10000	22	15.09.2004	18:25:54	CF	0	0	0	0	\$CONFIRM	FILEGATE
	0	10000	10000	22	15.09.2004	18:26:02	IP	0	0	0	1	PayDocRu	FILEGATE

Filter Sort Search Help Close

From	package sender code;
To	package recipient code;
Status	package status;
PackD	package creation date;
PackT	package creation time;
Kind	package type;
OnlineL	processing stage number;
Part	packages part number;
(of)	total constituent parts;
Docs	number of documents in a package;
DocScheme	documentary scheme;
Gate	gate type;
FSendD	For incoming: date of recording the package to table; For outgoing: date of transmitting the package to gate (for split packages - transmission of all the constituents);
FSendT	For incoming: time of recording the package to table; For outgoing: time of transmitting the package to gate (for split packages - transmission of all the constituents);
FDelivD	Zero implies that there is no transport acknowledgement; For incoming: date of sending a transport acknowledgement; For outgoing: date of receiving a transport acknowledgement;
FDelivT	Zero implies that there is no transport acknowledgement; For incoming: time of sending a transport acknowledgement; For outgoing: time of receiving a transport acknowledgement;
RelID	Associated reference;
ReID	Associated reference;
RelT	Associated reference.

Note: Reference stands for a unique package identifier.

Main BS-Client Icon Toolbars

Documents



open the payment orders scroller (or **Outgoing→Payment Orders**)



open the account statements scroller (or **Incoming→Account Statements**)

Directories



open the Russian banks directory (or **Directories→Corporate→Russian Banks**)



open the Currencies directory (or **Directories → Corporate → Currencies**)



open the Exchange Rates directory (or **Directories → Corporate → Exchange Rates**)



open the Correspondents directory (or **Directories → Internal → Correspondents**)

System Information



AutoStart indicator



Replications (or **Incoming** → **Replications**)

Send an inquiry to the bank

Start the BS-Client context help

Scroller Icon Toolbar



New

Delete

Search

Filter

Sort

Refresh

Select all

De-select all

View information about highlighted document(s) (quantity and total value)

Troubleshooting

BS-Client context help

Document Icon Toolbar



Print

View print form

View old-format print form

Save print form

Save

Save as template

Create on template base

Verify

Show system fields

Hot Keys

To Create, View, and Save Documents from Dialogs

Ctrl+A

AutoNumbering

Ctrl+N

Calculate VAT

Ctrl+K

Insert an inputted correspondent into the directory

Ctrl+S

Save (= Ok)

Ctrl+Alt+S

Save and close (a button + a floppy disk)

Alt+C

Quick correspondent search

Common for Forms and Scrollers

Alt+Enter

Open a list

Ctrl+Alt+P

Save a print form to file

Alt+P

View a print form

Ctrl+P

Print

Ctrl+S

Save

Ctrl+T
Ctrl+R
F7
Ctrl+H
Ctrl+K

Save as a template
Export template data
Verify a document
System fields and a history
Troubleshooting

For Scrollers

Ctrl+F9
Ctrl+I
Ctrl+K

Refresh
Information about highlighted documents
Troubleshooting

To Sort

F2
Ctrl+F2
Alt+F2

Open sort window
Current column sort
Clear sort settings (Sort over the first unique index)

To Filter

F5, +F25
Alt+F5
Alt++F5

Open filter window
Open current column filter window
Clear filters

To Search

F7, +F27
Ctrl+F
F3

Open search window
Open current column search window
Find next

To Select

Ctrl+Ins
Ctrl+"+"
Ctrl+"-"
Ctrl+"*"

Select (de-select) current entry
Select all
Deselect
Invert selection

To Open a Dialog Box

Ins
Enter
Ctrl+Enter
Del, Ctrl+Del

Open dialog box to insert entry
Open dialog box to edit entry
For selection mode: open dialog box to edit (if allowed)
Open dialog box to delete entry

To Edit

Ctrl+Enter

Populate linked fields according to key data without directory call

To Browse

Ctrl+PgUp
Ctrl+PgDn
Ctrl+Left
Ctrl+Right
Ctrl+Home
Ctrl+End
Left
Right
Up
Down
Home
End
PgUp
PgDn

Page top
Page bottom
First row field
Last row field
First row
Last row
Previous field
Next field
Row up
Row down
First row field
Last row field
Page up
Page down

Keys for Document Forms

Ctrl+F6
Ctrl+Shift+F6
Alt+0

Switch to next window
Switch to previous window
View windows list (not for MDI windows)

Keys for Text Boxes

Ctrl+Enter

Enter value into directory selection field, according to current value

Alt+Enter

Open directory

Alt+Up, Alt+0+Down

Open value list

Acronyms

EDS

Electronic Digital Signature,

ABS

Automated Banking System,

AS

Accounting System;

CBR

Central Bank of Russia,

Uninstalling the System

You can un-install the BS-Client system by one of the following two procedures:

- Using intrinsic BS-Client tools;
- Using routine procedures for installation/deleting of programs available from the **Start menu → Settings → Control Panel → Add/Remove programs**.

Let's follow both procedures.

Uninstalling With BS-Client Tools

- Start **setup.exe** from %BSSRoot%\EXE.

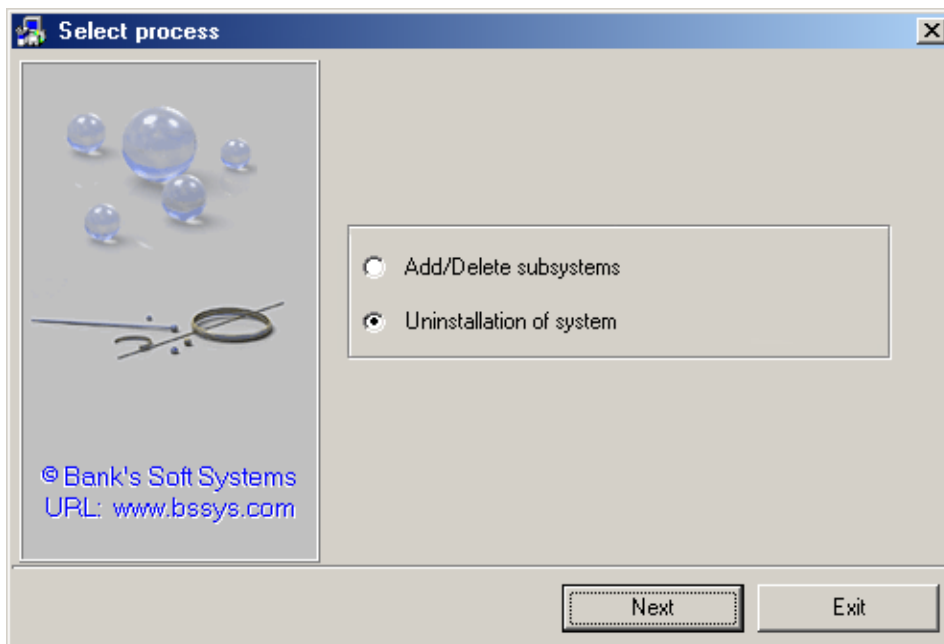
Tip: %BSSRoot% - is the system installation directory. This reference will be used to specify a path with regard to the system directory.

⇒ The **Installation of system BS-Client v.3 operator's RWS**.

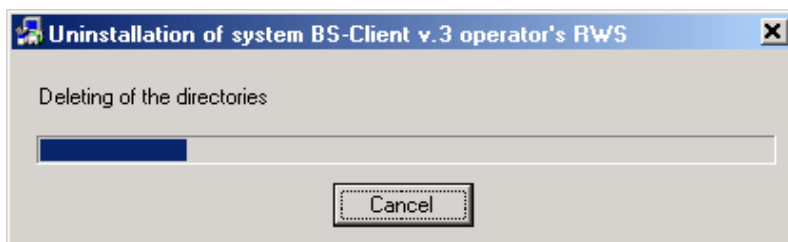


- Click on **Next**.

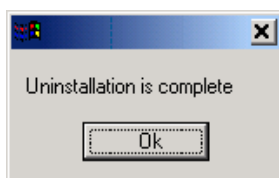
⇒ The **Select process** window appears.



- Check **Uninstallation of system** and click on **Next**.
- ⇒ The **Uninstallation of system BS-Client v.3 operator's RWS** window appears.



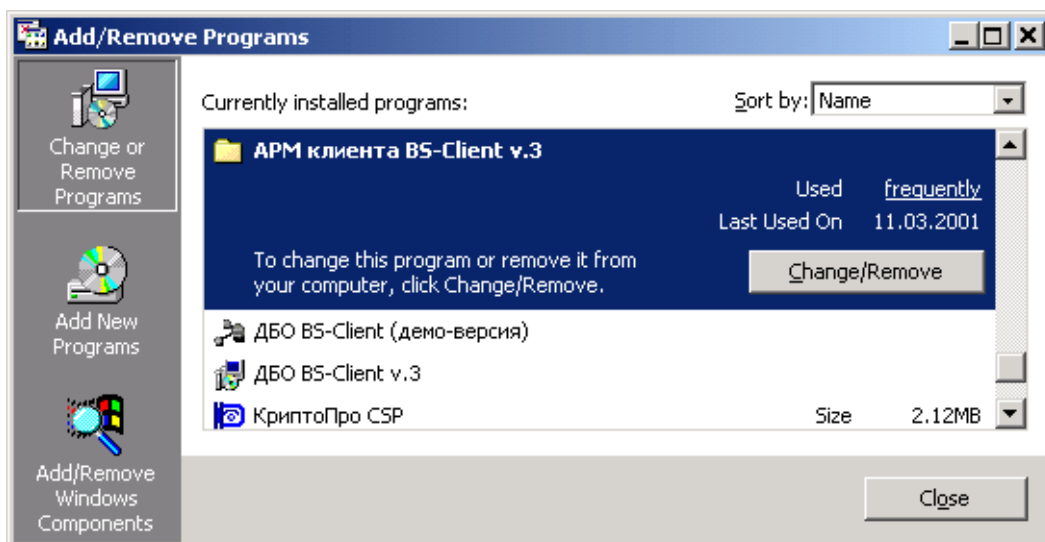
- ⇒ The system will notify of the its being uninstalled.



- Click **Ok**.

Uninstall by Routine Procedures

- Select **Start → Settings → Control Panel → Add/Remove programs**.
- ⇒ The **Add/Remove programs** window appears.



- Select **BS-Client v.3 operator's RWS** and click on **Change/Remove**.
 - ⇒ The **Installation of system BS-Client v.3 operator's RWS** window appears.
- Click on **Next**.
 - ⇒ The **Select process** window appears.
- Check **Uninstallation of system** and click on **Next**.
 - ⇒ The **Uninstallation of system BS-Client v.3 operator's RWS** window appears.
 - ⇒ The system will notify of its being uninstalled.
- Click **Ok**.