

Installation and Configuration Manual

XML Applications (R2)

03.53.30

11.08.2021



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This document is intended for Way4™ system administrators, bank or processing center employees who are responsible for the operation of the Advanced Applications R2 module and batch processing of applications in the issuing and acquiring modules. The document contains information about applications XML format, pipe parameters for application processing, and the basic rules for entering and processing applications.

When working with this document, it is recommended to use the following resources from the OpenWay documentation series:

- "DB Manager Manual".
- "Products and Contract Subtypes".
- "DB Manager. Form Builder".
- "Way4 Dictionaries".
- "Issuing Module".
- "Acquiring Module".
- "Way4 Advanced Tariff Management".
- "Way4 Client and Contract Classifiers".

The following notation can be used in the document:

- Field labels in screen forms are shown in italics.
- Key combinations are shown in angular brackets, for example, <Ctrl>+<F3>.
- Names of screen form buttons and tabs are shown in square brackets, for example, [Approve].
- Sequences for selecting user menu items or context menu items are shown using arrows as follows: "Issuing → Contracts Input & Update".
- Sequences for selecting system menu items are shown using arrows as follows: Database => Change password.
- Variables that differ for each local instance, such as directory and file names, as well as file paths are shown in angular brackets, as in <OWS_HOME>.

Warnings and information are marked as follows:



Warnings about potentially hazardous situations or actions.



Messages with information about important features, additional options, or the best use of certain system functions.



1 Overview

The Advanced Applications module supports the following:

- Importing XML format applications for creating new clients and contracts (issuing and acquiring), issuing new cards, and editing contract properties and client records in the database.
- Importing XML files with an update on issuing module applications that have been already loaded.
- Exporting XML report on processing applications that were loaded in XML format.
- Exporting XML report on processing applications that were loaded in XML format, and applications that were created by manually entering data in DB Manager.
- Exporting issuing module XML applications.

In the Advanced Applications module, the following menu groups are used to work with XML applications:

- "Advanced Applications R2 → Application Processing" for "workflow" mode.
- "Advanced Applications R2 → Applications No Workflow" for "no workflow" mode.

A description of "workflow" and "no workflow" modes is given in the section "Application Workflow Modes".



The Advanced Applications module is not included in the basic configuration of Way4 and is provided according to an additional agreement with OpenWay.

Certain features for working with XML applications are available in the Way4 basic configuration.

The issuing and acquiring modules support the following features:

- Importing XML format applications for creating new clients and contracts (issuing and acquiring), issuing new cards, and editing contract properties and client records in the database.
- Exporting XML report on processing applications that were loaded in XML format.



In the issuing module, the "Issuing → Applications Batch Interface" menu group is used to work with XML applications.

In the acquiring module, the "Acquiring → Applications Batch Interface" menu group is used to work with XML applications.

XML applications and XML reports are imported and exported using pipes:

- The "XML Applications Import" pipe is used to import applications. Pipe parameters are described in the section "XML Applications Import" Pipe Parameters (329950878)", for a description of application import, see "Importing Applications".
- The "XML Applications Response" pipe is used to export a report on processing applications and errors in their processing. Pipe parameters are described in the section "XML Applications Response" Pipe Parameters (329950882)", for a description of report export, see "Exporting XML Response Files".
- The "XML Applications Overall Response" pipe is used to export information about applications that were imported by the "XML Applications Import" pipe and applications that were created by manually entering data in DB Manager. Pipe parameters are described in the section "XML Applications Overall Response" Pipe Parameters", for a description of report export, see "Exporting XML Response Files".
- The "XML Applications Renew" pipe is used to update issuing module applications when the system receives a newer version of an application already existing in the system. Pipe parameters are described in the section "XML Applications Renew" Pipe Parameters (329950892)", for a description of updating the issuing module applications, see the section "Updating Issuing Module Applications" of the document "Advanced Applications R2".
- The "XML Applications Export" pipe is used to export issuing module XML applications. Pipe parameters are described in the section "XML Applications Export" Pipe Parameters (329950886)", for a description of exporting the issuing module applications, see the section "Exporting Applications" of the document "Advanced Applications R2".



The "XML Applications Overall Response", "XML Applications Renew", and "XML Applications Export" pipes are only available when the Advanced Applications module is used.

When setting up interaction between the Advanced Applications module, or issuing module, or acquiring module and an external system, it is recommended to check the incoming files for correspondence with the XML schema.

To do so it is possible to use XmlPad (https://xmlpad-mobile.com/), for example.

When making a check, specify the XSD file containing the schema from the appropriate HOME directory:

• For XML application format version 1.0 – \client\shared\pipes\dtd\Appl_lib.xsd.



• For XML application format version 2.0 – \client\shared\pipes\xsd\offline\WAY4ApplFile.xsd.



2 Pipe Parameters

Pipe parameters set how the pipe operates. Parameters are specified in settings of the menu subitem for the client application used to call the pipe.

2.1 "XML Applications Import" Pipe Parameters

| Parameter | Values | Description |
|------------------|------------------------|---|
| INPUT_FORMAT | UFX/ Application | Makes it possible to define the format of an incoming file. Files in the wrong format will be rejected and put in the corresponding directory. The associated record will be added to the Process Log. No response file is created for files in the wrong format. |
| BRANCH_ID_TYPE | BRANCH/ BANK/ CB | Default method for identifying the financial institution. When the "BRANCH" value is specified, identification is made according to the value of the Branch Code field (this is the default value), "BANK" – identification is made according to the value of the Bank_Code field, "CB" – according to the CB_Code value. |
| PRODUCT_GROUP | | Product group code. Codes are set in the <i>Code</i> field of the "Full \rightarrow Configuration Setup \rightarrow Products \rightarrow Product Definition \rightarrow Product Groups" table. |
| FILE_NAME_PREFIX | Character | Prefix in an incoming file name. The prefix must contain 7 characters (i.e. comply with the length of the standard "xadvapl" prefix). The default value is "xadvapl". |



| Parameter | Values | Description |
|---------------------|-----------|---|
| FILE_CODING | | File encoding allowed for XML files, for example: "utf-8" (default value) "windows-1251". |
| RESP_NAME_PREFIX | Character | Prefix in the name of the outgoing response file. The default value is "R". |
| DEFERRED_RESPONSE | Y/N | Deferred generation of a response file. The default value is "N". |
| DEFERRED_PROCESSING | Y/N | Deferred processing mode. When the parameter is set to "Y", during import applications are only loaded, any application workflow activities, including application checking, are not performed. The default value is "N". |
| ERROR_DIR | String | Specifies the name of the directory for error files. The default value is "@RBS_INTERCHANGE_DIR@/Err". |
| OUTPUT_DIR | String | Specifies the response file directory name. The default value is "@RBS_INTERCHANGE_DIR@/Out". |
| PROCESSED_DIR | String | Specifies the name of the directory for processed files. The default value is "@RBS_INTERCHANGE_DIR@/Arch". |



| Parameter | Values | Description |
|----------------------------|---------|---|
| SOURCE_DIR | String | Specifies the incoming file directory name. The default value is "@RBS_INTERCHANGE_DIR@/In". |
| GEN_POSIT_RESP | NO/WARN | Depending on the result of application processing, determines whether to generate a response file. If the value of this parameter is "N", a response file will only be generated if an error occurs. When the parameter value is "WARN", a response file will be generated if an error or warning occurs. |
| RESP_FOR_DUPL_FILES | Y/N | If this parameter is set to "Y" when an attempt is made to import an already imported file, a response file will be created with a message that the file is already imported. The file being imported will be put in the error file directory. The default value is "N". In this case, a response file is not generated, the file being imported remains in the incoming file directory and an error message is generated when import is repeated. |
| RESPONSE_FOR_HEADER_ERRORS | Y/N | If this parameter is set to "Y", a response file will be generated even when formatting errors occur. The default value is "N". |
| SOURCE_SYSTEM | String | This parameter is optional. The value of this parameter is used to determine the workflow strategy. |
| SILENT | Y/N | This parameter determines whether parameter values will be requested from the user during pipe operation and whether a final window with a report on pipe operation results will be opened. The default value is "N". |



| Parameter | Values | Description |
|-------------------------|--------|---|
| OLD_FILE_NAME | Y/N | If this parameter is set to "Y", simple file name format will be used. The "N" value is used for working with expanded file name format. The default value is "N". |
| NO_WF_SUPPORT | Y/N | Enables the "no workflow" mode. The default value is "N".If this parameter is set to "Y", the "no workflow" mode is enabled. Processed applications are moved to the "NO_WF" stage. |
| APPL_ERROR_NOT_FATAL | Y/N | If this parameter is set to "Y", the import procedure will not be aborted if an application containing an error is found. Otherwise (when the parameter value is "N") the import procedure is aborted. The parameter's default value is "N". |
| USE_ORIGINAL_REG_NUMBER | Y/N | When this parameter is set to "Y", a response file's OrigAppNumber field will contain the number of the original application. The default value of the parameter is "N" (the number of the original application is not used). |



The contents of information being exported can be additionally specified for the Balance and ClientAddInfo/ContractAddInfo parameters. If it is necessary to do so, please contact OpenWay.



2.2 "XML Applications Response" Pipe Parameters

| Parameter | Values | Description |
|------------------|------------|--|
| ADVAPPL2 | Y/N | If this parameter is set to "Y", the pipe will be switched to "Advanced Applications R2" mode. |
| FILE_TYPE | String | Response file type. By default, "ADV Applications". |
| FILTER | Expression | Additional filter in the FILE_INFO table. Examples: "ID=1650" – filter application files by ID "RECEIVED_BY = 22" – filter application files imported by a specific user "PARMS LIKE '0001%'" – filter application files by file sender code "REC_FILE_NAME LIKE '000100/A%'" – filter application files by file name. |
| FILE_CODING | | File encoding allowed for XML files, for example: "utf-8" (default value) "windows-1251". |
| RESP_NAME_PREFIX | Character | Prefix in the response file name. The default value is "R". |
| ADD_XML_HEADER | Y/N | If this parameter is set to "Y", the XML prefix will be added before the FileHeader aggregate of the response file. The parameter's default value is "Y". |



| Parameter | Values | Description |
|------------------------|---------|---|
| PRETTY_PRINTED | Y/N | If this parameter is set to "Y", the file is formatted according to XML structure. The default value is "N". |
| EXTENDED_CLIENT_INFO | Y/N | If this parameter is set to "Y", the response file will contain extended client information if the incoming file contained this information. The default value of the parameter is "N" (only for XML format version 1.0. For XML format version 2.0, the RESULT_DTLS parameter is used). |
| EXTENDED_CONTRACT_INFO | Y/N | If this parameter is set to "Y", the response file will contain extended contract information if the incoming file contained this information. The default value of the parameter is "N" (only for XML format version 1.0. For XML format version 2.0, the RESULT_DTLS parameter is used). |
| OLD_RESPONSE_CODES | Y/N | If this parameter is set to "Y", the old numeric error codes will be used. The default value is "N". |
| VALIDATE_FILE | Y/N | If this parameter is set to "Y" (default value), the file will be checked for compliance with the XSD schema. |
| OUTPUT_FORMAT | UFX/IFX | The value of this parameter determines the version of the XML application format for the file being exported. "UFX" – version 2.0 (default value) "IFX" – version 1.0. |



| Parameter | Values | Description |
|--------------------------|-------------------------------------|---|
| RESULT_DTLS | | This parameter determines the volume of additional information provided in the file being exported. For example, if the parameter is set to "RESULT_DTLS=Client=IDT;Contract=IDT;", only information on client and contract identifiers will be exported in the outgoing file. More detailed information about this parameter is provided at the end of the current section. |
| GEN_POSIT_RESP | ALL/WARN/NO | This parameter determines what information will be included in the response file. If the "ALL" value is specified, all information will be included. If the "NO" value is specified, for a successfully processed application only application status will be included. If the "WARN" value is specified, all information about an application processed with warnings will be included. The default value is "ALL". |
| SHORT_DEFERRED_ RESPONSE | Y/N | The parameter determines if application data will be included in the response file or if only ErrorText/ ErrorCode will be included for the application. The default value is "N". |
| APPL_INFO_IF_DECLINED | STATUS_INFO/ OBJECT_INFO/ FULL_INFO | This parameter determines what information will be included in the response file if the application is declined. |
| MASK_CONTRACT_NUMBER | Y/N | This parameter determines whether contract numbers will be masked in the response file. The default value is "N". |
| UFX_VERSION | String | Parameter that specifies the UFX version used. The value is set in "X.X.XX" format. The default value corresponds to the newest version. |



| Parameter | Values | Description |
|-------------------------|--------|--|
| USE_ORIGINAL_REG_NUMBER | Y/N | When this parameter is set to "Y", a response file's OrigAppNumber field will contain the number of the original application. The default value is "N" (the number of the original application is not used). |
| EXPORT_DATA_DIRECTORY | | This parameter specifies the path to the directory for storing response files. |
| EXCLUDE_CARD_APPLETS | Y/N | This parameter determines whether card applet information should be included in a response file. For card applet information to be added, the parameter value must be "N" and the RESULT_DTLS parameter must contain "Children=Y;". |

For the "XML Applications Response" pipe, it is possible to specify which information about objects related to a client/contract (for which the application is intended) should be included in a report. The RESULT_DTLS parameter is used to do so. This parameter's values are specified in the properties of the menu item used to start the "XML Applications Response" pipe.

For applications to work with client records, information can be exported about the following linked objects:

- Address related addresses.
- ClientAddInfo additional custom information for a client record.
- AffiliationClientInfo information about related clients.
- ClientAuthMethod authentication scheme parameters.
- · ClientClassifier client classifiers.
- AmndInfo information about the user who made the last changes to the client record and the date on which they were made.
- FinancialInst financial institution in which the client is registered.
- ClientCounterparty payment participants related to the client.

For applications to work with contract, information can be exported about the following parameters or related objects:

• Client – client for which the contract is registered.



- · Status contract status.
- Usage contract usage limiters.
- Order standing payment orders for the contract.
- · Address related addresses.
- ContractAddInfo additional information for a client record.
- AffiliationClientInfo information about related clients.
- Balance contract balance.
- Billing contract billing cycles.
- TariffDomains active tariff domain for a contract.
- ContractAuthMethod authentication scheme parameters.
- ContractClassifier contract classifiers.
- · Card cards issued for a card contract.
- · AccessInfo information about the number of unsuccessful PIN attempts (maximum and current).
- AmndInfo information about the user who made the last changes to the contract and the date on which they were made.
- FinancialInst financial institution in which the contract is registered.
- BIC BIC (Bank Identification Code) of the financial institution in which the contract is registered.
- ServiceProfile information about contract Services.
- Preferred preferred counterparties for a contract.
- ContractDeviceInfo device information; includes information about DeviceRecord and DeviceDocParms application objects.
- ContractCounterparty information about the contracts related to a client of payment participants.

The mode for exporting a particular type of additional information can be enabled by defining the RESULT_DTLS parameter value as a list of objects and parameters for which information should be exported in the following format: "<Object/parameter name>=Y" (the ";" character is used as a delimiter).



The contents of information being exported can be additionally specified for the Balance and ClientAddInfo/ContractAddInfo parameters. If it is necessary to do so, please contact OpenWay.



The "XML Applications Response" pipe also allows export of information about contracts related (main/sub, related contract, liability) to the contract for which the application is being processed. To do so, the following values are used:

- Parent=Y enables export of higher-ranking contracts.
- ParentDepth=m restriction on the depth shown for the tree of higher-ranking contracts, where "m" is a number.
- Children=Y enables export of subcontracts.
- ChildrenDepth=m restriction on the depth shown for the subcontract tree.
- RelatedContract=Y enables export of related contracts (Related Cards).

It is possible to additionally manage export of information for related contracts. To do so, a combination of the names of related objects or parameters (Client, Status, Usage, etc.) is used with the prefixes of the related contract types:

- ParentContract (higher-ranking in the contract hierarchy). This prefix is considered if the "ExtendedContractInfo=Y" value is additionally set.
- SubContract (subcontracts)
- RelatedContract (related contracts, Related Cards).

The "Original Application = Y" value makes it possible to include data from the original application in the response file created.

For clients and contracts it is possible to specify the values of "Client=IDT" and "Contract=IDT", allowing only information for client and contract identifiers to be included in an outgoing file.

2.3 "XML Applications Export" Pipe Parameters

| Parameter | Values | Description |
|-------------|------------|---|
| FILTER | Expression | Additional filter. Filtering is according to the ADV_APPL table. |
| FILE_CODING | | File encoding allowed for XML files, for example: "utf-8" (default value) "windows-1251". |



| Parameter | Values | Description |
|-----------------------|------------|--|
| STAGE | | Code of the workflow stage after which an application is exported. After application export, the "Export Application" activity (exists in the standard configuration) will be performed. Applications are moved to the next workflow step according to a rule specified in the settings of this activity in a strategy. The default value – 'EXPORT' (must be specified in single quotes) enables application export from the "Export" step. |
| SORT_BY | | List of the ADV_APPL table column headings by which applications will be sorted in the file. Headings are comma-delimited. The default value is "APPL_REG_NUMBER". |
| APPL_IN_FILE | Number | Maximum number of applications in one file. The default value is "10". |
| MASK_CONTRACT_NUMBER | Y/N | This parameter determines whether contract numbers will be masked in the response file. The default value is "N". |
| POSTING_STATUS_FILTER | Expression | Additional filtering by the POSTING_STATUS field. Filtering is according to the ADV_APPL table. |
| RESP_FILE_PREFIX | Character | Prefix in the response file name. The prefix must contain 7 characters (i.e. correspond to the length of the standard prefix "XADVAPL"). The default value is "XADVAPL". |
| PRETTY_PRINTED | Y/N | The parameter determines whether the file will be formatted according to XML structure. The default value is "Y". |



| Parameter | Values | Description |
|-----------------------|------------|--|
| VALIDATE_FILE | Y/N | The parameter determines whether the file will be checked for compliance with the XSD schema. The default value is "Y". |
| FI_CODE | | Mandatory parameter. Branch Code of the financial institution whose applications are being exported. Specified in single quotes, for example '0001'. |
| SENDER_CODE | | Mandatory parameter. Sender code value, which is specified in the file name, in the Sender field of the FileHeader aggregate, and in the name of the subdirectory "Data/Rbs/Out/<>" where exported files are placed. |
| FILE_TYPE | Expression | Value specified for exported files in the FILE_TYPE field of the FILE_INFO table. The default value of the parameter is "ADV Applications". |
| NO_WF_SUPPORT | Y/N | Enables the "no workflow" mode. The default value is "N" (export of applications from a specific Advanced Applications workflow step that is set using the STAGE parameter). The "Y" value of the parameter is used when it is necessary to export an application in "no workflow" mode. |
| EXPORT_DATA_DIRECTORY | | Mandatory parameter. This parameter specifies the path to the directory used to store exported files. |
| XML_SCHEMA_URL | | This parameter determines the path to the XSD schema's WAY4ApplFile.xsd file. |



| Parameter | Values | Description |
|----------------|--------|--|
| SILENT | Y/N | This parameter determines whether the final screen of a report on pipe operation results will open. The default value is "N". |
| TRANSFORM_FILE | | This parameter is used to specify xslt-transformation of an exported file. |



The "XML Applications Export" pipe only supports the extended filename format.

2.4 "XML Applications Overall Response" Pipe Parameters

| Parameter | Values | Description |
|----------------|------------|--|
| FILTER | Expression | Additional filter for the ADV_APPL table. Example: "ACTION_TYPE='ADD'" – filter all applications to add objects. |
| ADD_XML_HEADER | Y/N | If this parameter is set to "Y", the XML prefix will be added before the FileHeader aggregate of the response file. The parameter's default value is "Y". |
| FILE_CODING | | File encoding allowed for XML files, for example: "utf-8" (default value) "windows-1251". |



| Parameter | Values | Description |
|-----------------------|-------------------------------------|---|
| PRETTY_PRINTED | Y/N | If this parameter is set to "Y", the file is formatted according to XML structure. The default value is "N". |
| RESP_NAME_PREFIX | String | Prefix in the name of the outgoing response file; the default value is "RBD". On filename format, see "Format of outgoing files". |
| RESULT_DTLS | String | This parameter determines the volume of additional information provided in the file being exported. For example, if the parameter is set to "RESULT_DTLS=Client=IDT;Contract=IDT;", only information on client and contract identifiers will be exported in the outgoing file. This is the default value. More detailed information about this parameter is provided at the end of the section "XML Applications Response" Pipe Parameters". |
| MODE | RESPONSE/ RESPONSEWITHEXPOR T | This parameter determines the pipe operation mode. If the "RESPONSE" value is specified, the pipe will export only information about created objects; when the "RESPONSEWITHEXPORT" value is specified, the original application's data will be additionally exported. The default value is "RESPONSE". |
| APPL_INFO_IF_DECLINED | STSTUS_INFO/ OBJECT_INFO/ FULL_INFO | This parameter determines what information will be included in the response file if the application is declined. |
| GEN_POSIT_RESP | ALL/WARN/NO | This parameter determines what information will be included in the response file. If the "ALL" value is specified, all information will be included. If the "NO" value is specified, for a successfully processed application only application status will be included. If the "WARN" value is specified, all information about an application processed with warnings will be included. The default value is "ALL". |



| Parameter | Values | Description |
|-------------------------|--------|--|
| SHORT_DEFERRED_RESPONSE | Y/N | This parameter determines if application data will be included in the response file or if only ErrorText/ ErrorCode will be included for the application. The default value is "N". |
| SILENT | Y/N | This parameter determines whether the final screen of a report on pipe operation results will open. The default value is "N". |
| MASK_CONTRACT_NUMBER | Y/N | This parameter determines whether contract numbers will be masked in the response file. The default value is "N". |
| CARD_EXPIRE_OLD_MODE | Y/N | This parameter determines if information about the card term of validity will be exported in old format. The default value is "N". |
| EXPORT_DATA_DIRECTORY | | Mandatory parameter. This parameter specifies the path to the directory for storing response files. |
| SENDER_CODE | | Mandatory parameter. Sender code value specified in the filename in the Sender field of the FileHeader aggregate. |
| APPL_IN_FILE | Number | Maximum number of applications in one file. The default value is "10". |
| VALIDATE_FILE | Y/N | If this parameter is set to "Y" (default value), the file will be checked for compliance with the XSD schema. |



| Parameter | Values | Description |
|----------------------|--------|--|
| TRANSFORM_FILE | | This parameter is used to specify xslt-transformation of an exported file. |
| EXCLUDE_CARD_APPLETS | Y/N | This parameter determines whether card applet information should be included in a response file. For card applet information to be added, the parameter value must be "N" and the RESULT_DTLS parameter must contain "Children=Y;". |



The "XML Applications Overall Response" pipe exports information about applications with the "Posted" or "Declined" posting statuses and with the "Processed" outward status. For a description of application statuses, see the section "Monitoring Application Workflow".

2.5 "XML Applications Renew" Pipe Parameters

| Parameter | Values | Description |
|----------------|------------------------|---|
| INPUT_FORMAT | UFX/ Application | Makes it possible to define the format of an incoming file. Files in the wrong format will be rejected and put in the corresponding directory. The associated record will be added to the Process Log. No response file is created for files in the wrong format. |
| BRANCH_ID_TYPE | BRANCH/ BANK/ CB | Default method for identifying the financial institution. When the "BRANCH" value is specified, identification is made according to the value of the Branch Code field (this is the default value), "BANK" – identification is made according to the value of the Bank_Code field, "CB" – according to the CB_Code value. |



| Parameter | Values | Description |
|------------------|-----------|--|
| PRODUCT_GROUP | | Product group code. Codes are set in the <i>Code</i> field of the "Full \rightarrow Configuration Setup \rightarrow Products \rightarrow Product Definition \rightarrow Product Groups" table. |
| FILE_NAME_PREFIX | Character | Prefix in the name of the incoming file; the default value is "xadvapl". The prefix must contain 7 characters (i.e. comply with the length of the standard "xadvapl" prefix). |
| FILE_CODING | | File encoding allowed for XML files, for example: "utf-8" (default value) "windows-1251". |
| RESP_NAME_PREFIX | Character | Prefix in the name of the outgoing response file. The default value is "R". |
| ERROR_DIR | String | Specifies the name of the directory for error files. The default value is "@RBS_INTERCHANGE_DIR@/Err". |
| OUTPUT_DIR | String | Specifies the response file directory name. The default value is "@RBS_INTERCHANGE_DIR@/Out". |
| PROCESSED_DIR | String | Specifies the name of the directory for processed files. The default value is "@RBS_INTERCHANGE_DIR@/Arch". |
| SOURCE_DIR | String | Specifies the incoming file directory name. The default value is "@RBS_INTERCHANGE_DIR@/In". |



| Parameter | Values | Description |
|----------------------------|---------|--|
| GEN_POSIT_RESP | NO/WARN | Depending on the result of application processing, determines whether to generate a response file. If the value of this parameter is "N", a response file will only be generated if an error occurs. When the parameter value is "WARN", a response file will be generated if an error or warning occurs. |
| RESP_FOR_DUPL_FILES | Y/N | When the value of this parameter is "Y", when an attempt is made to import a file that has already been imported a response file will be generated with a message that the file has already been imported. The file being imported will be put in the error file directory. The parameter's default value is "N". In this case, a response file is not generated, the file being imported remains in the incoming file directory and an error message is generated when import is repeated. |
| RESPONSE_FOR_HEADER_ERRORS | Y/N | When this parameter is set to "Y", a response file will be generated even when format errors occur in the file header. The default value is "N". |
| SILENT | Y/N | This parameter determines whether parameter values will be requested from the user during pipe operation and whether a final window with a report on pipe operation results will be opened. The default value is "N". |
| OLD_FILE_NAME | Y/N | If this parameter is set to "Y", simple file name format will be used. The "N" value is used for working with expanded file name format. The default value is "N". |
| APPL_ERROR_NOT_FATAL | Y/N | If this parameter is set to "Y", the import procedure will not be aborted if an application containing an error is found. Otherwise (when the parameter value is "N") the import procedure is aborted. The parameter's default value is "N". |



| Parameter | Values | Description |
|-------------------------|--------|--|
| USE_ORIGINAL_REG_NUMBER | Y/N | When this parameter is set to "Y", a response file's OrigAppNumber field will contain the number of the original application. The default value of the parameter is "N" (the number of the original application is not used). |



The parameter RESULTDTLS with the "UpdateRq=Yes;" value must be specified in settings of the menu item used to start the "XML Applications Renew" pipe.



3 Response File Error Messages

A response file may contain error messages found when processing application files. All error messages as well as warnings and information messages are given a prefix containing the registration number (RegNumber) of the application whose processing caused the error.

The error codes 90000 – 99999 are reserved for use in custom procedures.

Information about errors that may occur when loading applications with device contracts data is provided in the section "Entering Client and Contract Data Manually" of the document "Acquiring Module User Manual".

3.1 General Errors

| Error code | Message text | Comments |
|------------|-------------------------------|--|
| 0 | Success | The request was processed successfully. |
| 100 | General Error | An error occurred when processing the request. Additional information is not provided. |
| 1005 | Validation error | Xml message checking error |
| 1020 | Required Element Not Included | One or several required elements are missing from the request text. |
| 1050 | Invalid Enum Value | The request contains invalid values. |
| 1122 | File broken | File structure broken. |



| Error code | Message text | Comments |
|------------|--|--|
| 1152 | File name error | File name error. |
| 1172 | Fatal error | Fatal error. |
| 1220 | Invalid Identifier | Incorrect identifier of relation between objects. |
| 2195 | Invalid Order Department code | Financial institution branch code incorrectly specified for the application. |
| 2220 | Client is not ready | Client record not approved. |
| 2226 | Invalid Contract Branch | Financial institution branch code incorrectly specified for the application. |
| 2300 | Financial institution not found | Financial institution not found. |
| 2400 | Contract not found | Contract not found. |
| 2420 | Contract does not pass Search Check | Found contract does not meet conditions for validating the search. |
| 2430 | Prohibited by Check Available scenario in Contracts hierarchy / Main and Subordinated Contracts have different Clients | No main contract was found. |
| 2440 | Contract is not ready | Contract is not approved. |
| 2450 | Contract with such number already exists | Contract with this number already exists. |
| 2460 | Invalid Contract Status | Invalid contract status. |



| Error code | Message text | Comments |
|------------|--|---|
| 2461 | Multiple Contract Statuses exists for specified code | Several contract statuses for the specified code. |
| 2470 | Internal Oracle error | Internal Oracle error. |
| 2500 | Application not found | Application not found. |
| 2510 | Multiple applications found by specified criteria | Several applications found according to the specified criteria. |
| 2520 | Reserved | Reserved. |

3.2 Application Processing Errors

| Error code | Message text | Comments |
|------------|--|---|
| 2003 | Stop list channel specified incorrectly | Stop list channel specified incorrectly. |
| 2004 | Stop list Action Type specified incorrectly | Action for the record in the payment system exception list specified incorrectly. |
| 2005 | Stop list Area specified incorrectly | Geographical area for the record in the stop list specified incorrectly. |
| 2006 | Stop list Request Code specified incorrectly | Stop list request code specified incorrectly. |
| 2007 | Stop list Expiry Date specified incorrectly | Stop list expiry date is specified incorrectly. |
| 2008 | Action type was not specified for StopList | No action set for the record in the payment system exception list. |



| Error code | Message text | Comments |
|------------|--|--|
| 2009 | Stop list Card sequence number specified incorrectly | Stop list plastic sequence number specified incorrectly. |
| 2010 | Stop list Card Expiry specified incorrectly | Stop list card expiry date specified incorrectly. |
| 2011 | Unable to check StopList | Unable to check the stop list. |
| 2012 | Unable to update StopList | Unable to update the stop list. |
| 2013 | Unable to post StopList | Unable to send the stop list. |
| 2014 | Adv Application was not found by id | Application not found for this number. |
| 2015 | Action is not allowed for a sub-Application | Action cannot be executed for a subordinate application. |
| 2016 | <errmsg></errmsg> | Contract checking errors at application acceptance stage. |
| 2017 | Invalid ChangeClient Tag value | Incorrect tag value for changing client. |
| 2019 | Branch code was not specified | Financial institution code not specified. |
| 2020 | Incorrect branch ID type | Unknown search type specified for financial institution. |
| 2021 | Financial institution not found by code | Financial institution not found for this code. |
| 2022 | Multiple financial institutions found for the code specified | Several financial institutions found for this code. |
| 2023 | Unknown Object Type for change Institution | Object (client/contract) for which financial institution should be changed is not specified. |



| Error code | Message text | Comments |
|------------|---|--|
| 2024 | Unable to change Institution in the Application for New Object | Unable to change financial institution when creating a new object. |
| 2025 | <errmsg></errmsg> | Errors when checking client data. |
| 2026 | Credit limit reason is too long, 255 characters maximum | The reason for changing the credit limit contains too many characters. The maximum size is 255 characters. |
| 2027 | <errmsg></errmsg> | Errors related to an invalid contract status. |
| 2028 | Multiple Contract Statuses exists for specified code | Several contract statuses found for this code. |
| 2029 | Contract Status Comment Missing | Contract status change reason missing. |
| 2030 | Credit limit reason missing | Credit limit change reason missing. |
| 2031 | Product is not Ready | Contract product is not approved, credit limit cannot be changed. |
| 2032 | Product is not Active | Product is not active, credit limit cannot be changed. |
| 2033 | Credit limit is too low | Credit limit value specified is too low. |
| 2034 | Credit limit is too high | Credit limit value specified is too high. |
| 2035 | Event not found by codes | No Event found for the specified codes. |
| 2036 | Event Date To is less than Date From | "Date To" field value less than that in the "Date From" field. |



| Error code | Message text | Comments |
|------------|--|--|
| 2037 | Unable to define reference object: both Client and Contract are presented in Application for CustomerClassifier Modification | Unable to define the object for which a classifier must be created: client or contract. |
| 2038 | Load classifier error | Errors when setting a classifier during the application acceptance stage. |
| 2039 | Customer identifier should not be null | Client identifier must not contain a null value. |
| 2040 | There is no Application Client Data in Adv Application for Client | No client data in application to work with the client record. |
| 2041 | There are many Application Client Data in Adv Application for Client | Application to work with the client record contains several data sets for the client. |
| 2042 | There is no reference to a Client in Adv Application for Client | No reference to client record in the application to change client record properties. |
| 2043 | Configuration error: Classifier value <%%> for CONTR_STATUS is not configured yet | Configuration error: CONTR_STATUS value for the status code specified in an application to change the contract status is missing. The contract status with the code <%%>, added to the Contract Statuses Reference (Full \rightarrow Configuration Setup \rightarrow Contract Types \rightarrow Contract Statuses) is missed in the system classifier CONTR_STATUS (values are not synchronized). |
| 2044 | There is a reference to a Client in Application | Reference to client record in application to add a client. |
| 2045 | Incorrect Action in Adv Application for Client | Incorrect action in the application to change client record properties. |



| Error code | Message text | Comments |
|------------|--|---|
| 2046 | There are many Application Address Data in Adv Application | Application contains several address data sets. |
| 2047 | Address cannot be processed in Application for Client modification | Additional address data cannot be processed when processing the application to work with the client record. |
| 2048 | Invalid time format | Invalid time format. |
| 2049 | Wrong time format | Invalid time format. |
| 2050 | There are many Application Device Record Data in Adv Application for Contract | Application to work with a contract contains several device data sets. |
| 2051 | Additional Address conflicts with existing addresses | Additional addresses conflict with existing ones. |
| 2052 | There is no reference to an Address in application for Address modification | No reference to address record in the application to change an address. |
| 2053 | Client not found for an Address | No client record found for the address. |
| 2054 | Contract not found for an Address | No contract found for this address. |
| 2055 | Multiple device parms found by the code | Several device parameter records found for the code. |
| 2056 | Product is not ready | Product specified for contract creation not approved. |
| 2057 | Product not found by codes | No Product found for the codes. |



| Error code | Message text | Comments |
|------------|---|---|
| 2058 | Invalid Contract Subtype: | Invalid contract subtype. |
| 2059 | Multiple Contract Subtypes exists for specified code | Several contract subtypes found for the specified code. |
| 2060 | Contract Subtype is not active | Contract subtype not approved. |
| 2061 | Invalid Accounting Scheme | Invalid Account Scheme. |
| 2062 | Multiple Accounting Schemes exists for specified code | Several Account Schemes found for the specified code. |
| 2063 | Accounting Scheme is not ready | Account Scheme not approved. |
| 2064 | Invalid Service Pack | Invalid Service Package. |
| 2065 | Multiple Service Packs exists for specified code | Several Service Packages found for the specified code. |
| 2066 | Service Pack is not ready | Service Package not approved. |
| 2067 | There is no Relation Contract Data in Adv Application | No related contract information data in the application. |
| 2068 | There are many Application Contract Data in Adv Application for Contract | Application contains several data sets containing related contract information. |
| 2069 | Incorrect relation tag | Invalid value of contract relation tag. |
| 2070 | Incorrect Action in Adv Application for Contract Relation | Incorrect action specified in application to work with contract relation. |



| Error code | Message text | Comments |
|------------|---|---|
| 2071 | There is no Application Contract Data in Adv Application for Contract | No contract information data for the application to work with a contract. |
| 2072 | There are many Application Contract Data in Adv Application for Contract | Several data sets containing contract information in the application to work with a contract. |
| 2073 | There is no reference to a Contract in Adv Application for Contract | No reference to contract record in the application to work with a contract. |
| 2074 | Incorrect Action in Adv Application for Contract' | Incorrect action in the application to work with a contract. |
| 2075 | Risk Scheme not found by ID | No Risk Control Scheme found for the specified identifier. |
| 2076 | Chip Scheme not found by ID | No Chip Scheme found for the specified identifier. |
| 2077 | Invalid ChangeMain tag value | Invalid value of tag to change main contract. |
| 2078 | Embossing name missing | Name for embossing is missing. |
| 2079 | There is no Application Address Data in Adv Application | No address information data in the application. |
| 2080 | There are many Application Address Data in Adv Application | Application contains several data sets with address information. |
| 2081 | There is no reference to a Client or Contract in application for Address modification | No reference to client or contract record in the application to modify an address. |
| 2083 | Inconsistent Appl Info for Client | Incorrect additional information for client record. |



| Error code | Message text | Comments |
|------------|---|---|
| 2085 | Inconsistent Appl Info for Contract | Incorrect additional information for client record. |
| 2087 | Action Type AddOrUpdate is supported only for single Appl Info | "AddOrUpdate" or "Update" action is only supported for single additional information data set. |
| 2088 | Appl Info not found | Additional information not found in the application. |
| 2089 | Appl Info should be empty for Delete Action Type | Application to delete data from the additional information table cannot contain other data. |
| 2090 | Count of Appl Info is more than Max Count | Maximum permissible number of records for one application in the additional information table has been exceeded for this classifier type. |
| 2091 | Action Type AddOrUpdate is supported only for single Appl Info. Multiple found | "AddOrUpdate" action is supported for only one additional information data set, and several sets were found. |
| 2094 | Applinfo not found for Update | During update, no record related to the client or contract was found in the additional information table. |
| 2095 | Transaction currency cannot be empty | A currency must be specified for the transaction. |
| 2096 | Incorrect transaction currency specified | Incorrect transaction currency specified. |
| 2097 | Multiple currencies exists for specified code | Several currency records found for the specified code. |
| 2098 | Client not found for Appl Info modification | No client record for modifying additional information. |
| 2099 | Contract not found for Appl Info modification | No contract found for modifying additional information. |



| Error code | Message text | Comments |
|------------|---|---|
| 2100 | Multiple Appl Info Types found by code | Several application additional information classifiers were found for this code. |
| 2101 | Appl Info Types not found by code | No additional information classifier was found for the specified code. |
| 2102 | Appl Info not found for Application | No record found in the additional information table. |
| 2103 | There is no Application Usage Data in Adv Application | No usage limiter data in application. |
| 2104 | There are many Application Usage Data in Adv Application | Several data sets containing usage limiter data in application. |
| 2105 | Invalid Usage modification type specified | Incorrect action for usage limiter specified. |
| 2107 | Contract not found for Usage modification | No contract found to modify usage limiter. |
| 2108 | Limit parameters must be empty for this modification type | Application to execute this action for the usage limiter cannot contain usage limiter data. |
| 2109 | Usage Currency Missing | Currency must be specified for usage limiter. |
| 2110 | Contract service pack not set | Service Package not set for contract. |
| 2111 | Invalid Usage Switch Dates | Invalid data about usage limiter modification effective date. |
| 2112 | Usage not found by id | No usage limiter found for this identifier. |
| 2113 | Usage not found by code | No usage limiter found for this code. |
| 2114 | There is no Application Card Data in Adv Application | The application does not contain card data. |



| Error code | Message text | Comments |
|------------|--|--|
| 2115 | There are many Application Card Data in Adv Application | Several data sets containing card information in the application. |
| 2116 | Invalid Card modification type specified | Incorrect action for card specified. |
| 2117 | Contract not found for Card modification | No contract was found for card modification. |
| 2118 | Card production/replacement permitted only for Card Contracts | Card production/replacement only possible for card contracts. |
| 2119 | Unable to redefine card expire, because previous card does not exist | Unable to redefine card expiry date, as previous card was not found. |
| 2120 | Production parameters should be empty for action type | For this action, the application may not contain card production parameters. |
| 2121 | Appl Info Type with ForWhom <%%> is not supported | Classifier of additional information (Application Info Type) is not supported for this object/process. • "C" – Client • "A" – Contract • "M" – Merchant Management • "D" – Device Parm to Doc (device parameters (tags) that must be saved in a document's Add_Info field) • "S" – Device Parm Ctrl (device parameters that affect document posting). |
| 2122 | <errmsg></errmsg> | Errors when unmarking cards. |
| 2123 | Initial lock operation is not supported with production type | For this card production reason, it is not possible to set a marker locking the card before initial use. |



| Error code | Message text | Comments |
|------------|---|---|
| 2124 | Card expire not declared for production type | Card expiry date not set for updating card data. |
| 2125 | There is no active plastic for production type | No active plastic for updating card data. |
| 2126 | This is no active plastic for the Lock action under Contract | No active plastic to lock a card for this contract. |
| 2127 | There is no Application Standing Order Data in Adv Application | No standing payment order data in the application. |
| 2128 | There are many Application Standing Order Data in Adv Application | Application contains several data sets containing standing payment order data. |
| 2129 | Contract not defined in Application for a Standing Order | No contract found in the application to modify a standing payment order. |
| 2130 | Order parameters must be empty for this modification type | This application may not contain standing payment order parameters. |
| 2131 | Extended Order parameters are supported only in Applications with ActionType | Additional standing payment order parameters can only be changed using an application with the ActivateIndividual action. |
| 2132 | Order Code or Payment Type must be specified in an Application for Standing Order | Payment order code or payment type must be specified in the application to work with a standing payment order. |
| 2133 | Amount Percent is too big | The value in the "Amount Percent" field of the standing payment order is too large. |
| 2134 | Amount Percent must be positive | The "Amount Percent" field of the standing payment order must contain a positive value. |



| Error code | Message text | Comments |
|------------|---|---|
| 2135 | Target Amount should be positive | The "Target Amount" field of the standing payment order must contain a positive value. |
| 2136 | Amount Event should be positive | The "Amount Event" field of the standing payment order must contain a positive value. |
| 2137 | Both Amount Percent and Target Amount are filled | A value may be specified either in the "Amount Percent" field or in the "Target Amount" field for a standing payment order. |
| 2138 | Order not found by code | No standing payment order found for this code. |
| 2139 | An Individual Order can be Activated and Deactivated Only. | An individual standing payment order cannot be activated by the ActivateStandard action. |
| 2140 | Support of an Individual Order is turned off | Support of individual standing payment orders is disabled. |
| 2141 | Invalid Order Receiver Code | Invalid receiver code specified for standing payment order. |
| 2144 | Multiple 3D Auth values exist | Several authentication scheme parameter values exist. |
| 2145 | 3D Auth value already exists | Authentication scheme parameter value is already set. |
| 2146 | There is no Application Auth Method Data in Adv Application | No authentication scheme data in the application. |
| 2147 | There are many Application Auth Method Data in Adv Application | Several authentication scheme data sets in the application. |



| Error code | Message text | Comments |
|------------|---|--|
| 2148 | Action type is not supported in Applications for Auth Method | This action not supported by applications to modify authentication schemes. |
| 2149 | Auth type or Auth Scheme ID is not defined | Authentication type or scheme ID not defined. |
| 2150 | Contract not found in Application for %% modification | No contract found for application to modify an authentication scheme. |
| 2151 | Client not found in Application for %% modification | No client found for application to modify an application scheme. |
| 2152 | Multiple 3D Auth schemes exist for the type: %% | Several authentication schemes founds for the authentication type specified in the application. |
| 2153 | <errmsg></errmsg> | Authentication scheme not approved. Errors when searching for an authentication scheme for a client or contract (TD Schemes). |
| 2154 | 3D Auth scheme already exists for the type: %% | Authentication scheme already exists for this type. |
| 2155 | Unable to find Auth scheme for Action | Unable to find authentication scheme for this action. |
| 2156 | There is no reference to a Contract in Adv Application for Contract | No reference to contract in application to change contract. |
| 2157 | There is no reference to a Client in Adv Application for Client | No reference to client record in application to change client record. |
| 2158 | Incorrect Action in Adv Application | Incorrect action specified in application to update client identifier in external systems (CustomerIdentifier). |



| Error code | Message text | Comments |
|------------|--|---|
| 2159 | Incorrect Action in Adv Application | Incorrect action specified in application. |
| 2160 | There are too many Application Action Data in Adv Application | The application contains several data sets with action data. |
| 2161 | There is no Application Action Data in Adv Application | No action data in the application. |
| 2162 | Multiple Affiliated Clients found for Type | Several records about affiliated clients found for this type. |
| 2163 | No Affiliation Type defined in Application | No client affiliation type specified. |
| 2164 | No Affiliated Client defined in Application | No affiliated client defined in the application |
| 2165 | No reference to a Client or to a Contract in Application for Affiliation | No reference to a client or contract in the application to change affiliated client parameters. |
| 2166 | No Application Affiliation data in Application for Affiliation | No client affiliation data in the application to change affiliated client parameters. |
| 2167 | Multiple Preferreds found for the code or Preferred Type specified | Several records found for this counterparty code or category. |
| 2168 | Preferred data not found in Application | No data on preferred counterparty modification found in application. |
| 2169 | Multiple Preferred records found in Application | Several preferred counterparty configuration records found in application. |
| 2170 | Preferred modification type RestoreStandard is not supported | The "RestoreStandard" action for preferred counterparty configurations is not supported. |



| Error code | Message text | Comments |
|------------|---|---|
| 2172 | Preferred parameters must be empty for this modification type | For this action, the application may not contain preferred counterparty data. |
| 2173 | Invalid Preferred modification type | Invalid action for preferred counterparty record. |
| 2174 | Contract not found for Preferred modification | No contract found for preferred counterparty configuration. |
| 2175 | Contract should exist for Preferred deactivation | To deactivate the preferred counterparty, a contract must be specified. |
| 2177 | Invalid preference type | Invalid preferred counterparty category. |
| 2178 | Invalid SIC | Invalid SIC. |
| 2179 | Preferred already exists | Preferred counterparty record already exists. |
| 2180 | Preferred was not found by Code or Preferred Type ID | Preferred counterparty not found for preferred counterparty code or ID. |
| 2181 | Invalid Tariff modification type | Invalid action for tariff. |
| 2182 | Contract not found for Tariff modification | No contract found for tariff modification. |
| 2183 | Adv Applications Financial Institution Missing | Financial institution information missing. |
| 2184 | Application Action Type is empty | No action specified in the application. |
| 2185 | Application Object Type is empty | No object specified in the application. |
| 2186 | Adv Application registration number is not defined for ID | No registration number specified for the application. |



| Error code | Message text | Comments |
|------------|--|---|
| 2187 | Adv Application with such number already exists | An application with this number already exists. |
| 2188 | Adv Application Order Department Missing | No financial institution branch is specified for the application. |
| | | A financial institution branch is only checked in the parent application. |
| 2189 | Adv Applications Duplicate Count is incorrect | Invalid number specified in "Duplicate Count" field. |
| 2190 | Count of an Application Duplicates cannot be more then 1000, found: %% | The value specified in the "Duplicate Count" field may not exceed 1000. |
| 2191 | Application processing is not implemented for this object | Application processing not supported for this object type. |
| 2192 | Client not found by id: | No client record found for this ID. |
| 2193 | Contract not found by id: | No contract record found for this ID. |
| 2194 | Application has non-checked load errors. The last one: %% | The application contains loading errors that have not been fixed. The last error: %%. |
| 2196 | Adv Application has inapplicable status | Incorrect application status. |
| 2197 | Adv Application is not captured | No officer specified for this application. |
| 2198 | Current officer is not defined | No officer specified for system entry. |



| Error code | Message text | Comments |
|------------|--|--|
| 2199 | Application captured by another officer | Another officer is specified for this application. |
| 2200 | <errmsg></errmsg> | Errors when closing a contract's temporary credit limits. |
| 2201 | Unexpected application status to capture application | Officer cannot be assigned for the application status. |
| 2203 | Unexpected application status to restore application | Application cannot be returned to workflow due to application status (i.e. cancellation of Declined status). |
| 2204 | Application already restored | Application already returned to workflow. |
| 2205 | WF Action cannot be processed: | This workflow action cannot be executed. |
| 2206 | Any WF Action cannot be processed | No workflow actions can be executed. |
| 2207 | Adv Application unknown action | Unknown action for application. |
| 2208 | Adv Application was not found by id | No application found for this ID. |
| 2209 | Application has been already captured | Officer already assigned for this application. |
| 2210 | <errmsg></errmsg> | Errors when moving a contract to another contract hierarchy with a change in financial institution. |
| 2211 | <errmsg></errmsg> | Errors when assigning another financial institution to a contract. |
| 2212 | <errmsg></errmsg> | Errors when moving a contract to another contract hierarchy in the same financial institution. |



| Error code | Message text | Comments |
|------------|---|--|
| 2213 | <errmsg></errmsg> | Errors when changing contract status. |
| 2214 | <errmsg></errmsg> | Errors when setting a fixed minimum credit limit for a contract (applicable if the global parameter FIXED_CREDIT_LIMIT="Y" is used). |
| 2215 | <errmsg></errmsg> | Errors when setting a contract credit limit. |
| 2216 | <errmsg></errmsg> | Errors when opening an Event for a contract. |
| 2219 | <errmsg></errmsg> | Errors when checking a client's e-mail address. |
| 2220 | Invalid Client Branch in Adv Application for Client | An incorrect financial institution branch number is specified for this application. |
| 2221 | Device Record not found for this Contract | Device parameter data not found for this contract. |
| 2223 | Invalid <%%> | Errors when checking device parameters. Message text contains information about the parameter whose checking terminated with an error: • SIC • Country • City • Merchant Name • Card Acceptor ID. |
| 2226 | Invalid Contract Branch: %% | A bank branch specified in the application's <i>Order Department</i> and <i>Delivery Department</i> fields is absent in the list of branches registered in the system (in the BRANCH table). |
| 2230 | Can not start "Lock Plastic" | Impossible to execute the "Lock Plastic" procedure. |



| Error code | Message text | Comments |
|------------|---|---|
| 2231 | Card do not honor | The transaction has been declined by the issuer without a reason. |
| 2232 | Order not found | Payment order not found. |
| 2233 | Multiple order found for the payment type specified: %% | Several payment orders found for this payment type. |
| 2234 | Multiple order found for the %% code specified | Several payment orders found for this code. |
| 2238 | %%: Tariff Start Date Missing | The date the tariff numeric values become effective is absent in the %% application for tariff personalization (no value is specified in the application's <i>Date From</i> field). |
| 2239 | Incorrect relation contract | Incorrect related contract. |
| 2253 | <errmsg></errmsg> | Errors when checking a contract at the application approval stage. |
| 2264 | <errmsg></errmsg> | Errors when approving a memo for a contract or client. |
| 2270 | Accept failed with internal error | Error when accepting an application. The application has not been accepted due to an internal error. |
| 2277 | <errmsg></errmsg> | Errors when checking a classifier at the application approval stage. |
| 2279 | <errmsg></errmsg> | Errors when setting a contract instalment limit. |
| 2281 | <errmsg></errmsg> | Errors when erasing a card's PIN. |
| 2283 | <errmsg></errmsg> | Errors of loading mandate for SEPA. |
| 2284 | <errmsg></errmsg> | Errors when checking a counterparty or mandate for SEPA. |



| Error code | Message text | Comments |
|------------|---|--|
| 2285 | <errmsg></errmsg> | Errors when checking counterparty data at the application approval stage. |
| 2295 | <errmsg></errmsg> | Errors when clearing PIN counter data. |
| 2298 | <errmsg></errmsg> | Errors when setting a client or contract parameter. |
| 2300 | There is no parameter < Parameter_Code > for < Object > | A client or contract doesn't have the parameter with the code specified in an application to delete the custom parameter. |
| 2316 | <errmsg></errmsg> | Errors when creating and processing an instalment plan. |
| 2317 | Instalment scheme code or Instalment code should be specified for: %% | An Instalment scheme code or Instalment scheme service code (Instalment code) must be specified for the application to edit or create an Instalment plan accordingly. |
| 2324 | GL has not been exported for previous working day | Application to create an instalment plan for a transaction in a closed billing cycle cannot be processed since the "Close GL" or "GL export" process has not been completed. Applications that have not been processed will be rejected. If necessary, error code "2324" can be used like error code "2265" when configuring workflow. For more information, see the section "Working with Applications in an HA Secondary Node" of the document "Advanced Applications R2". The "workflow" mode is only available in the Advanced Applications R2 module. |



| Error code | Message text | Comments |
|------------|---|---|
| 2403 | Contract currency not defined to choose Account Scheme / Invalid currency for product | The application specifies a Product whose settings allow working with Account Schemes in different currencies (the Product settings contain the SCHEME_BY_CUR tag specified in the <i>Apply Rules</i> field), but the contract currency is not specified in the application or the contract currency that is absent in the Product settings is specified. |

3.3 Errors Processing Applications for Managing Way4 Users

| Error code | Message text | Comments |
|------------|--|--|
| 2240 | Invalid ActionType | Invalid action for user record. |
| 2241 | There is no Application Officer Data in Adv Application for Officer | No user data in the application to modify a user record. |
| 2242 | There are many Application Officer Data in Adv Application for Officer | Several data sets with user data in the application to modify a user record. |
| 2243 | UserID is not declared | User ID not specified. |
| 2244 | Invalid symbol in Officer ID | Invalid symbol in user ID. |
| 2245 | Invalid Working Date: %%. Supported format: W;12:00-15:00 | Working time specified incorrectly. Supported format: W;12:00-15:00. |



| Error code | Message text | Comments |
|------------|---|--|
| 2248 | <errmsg></errmsg> | Error when processing a user record. |
| 2249 | Invalid Action Type | Invalid action for user group record. |
| 2250 | There is no Application Officer Group Data in Adv Application for Officer Group | No group data in the application to modify a user group record. |
| 2251 | There are many Application Officer Group Data in Adv Application for Officer Group | Several data sets with group data in the application to modify a user group. |
| 2252 | <errmsg></errmsg> | Error when processing a user group. |
| 2256 | Status is empty | User record Status field not filled in. |

3.4 Errors Importing Applications

| Error code | Message text | Comments |
|------------|---|--|
| 2254 | Too many payment receiver party data were found for Payment Receiver | The application to modify payment recipient data contains several data sets with transaction participant data. |
| 2255 | Too many payment receiver data were found for order | The application to modify a standing payment order contains several data sets with payment recipient data. |
| 2257 | Too many payment receiver data were found in application | An application to change Payee parameters contains several sets of Payee data. |



| Error code | Message text | Comments |
|------------|---|---|
| 2258 | Code and Payment Type should be specified for Payment Receiver | The payment code and type must be specified for the Payee. |
| 2259 | Client is not specified for personal Payment Receiver | A reference to a client record is not specified for a personal Payee. |
| 2260 | Credit amount missing | Amount for changing credit limit is missing. |
| 2261 | Credit limit currency missing | Currency for changing credit limit is missing. |
| 2266 | Instalment limit reason missing | The reason for setting the instalment limit is missing. |
| 2267 | Instalment limit amount missing | The instalment limit amount is missing. |
| 2270 | Device status is not supported in Adv Applications | An application cannot be used to set this status for the device. |
| 2271 | Device status "NotConfigured" is supported only in Add Contract Applications | The "NotConfigured" status for the device can only be set using an application to add a contract. |
| 2272 | Payment Receiver is not found for Update action | When updating, no payment recipient record was found. |
| 2273 | Payment Receiver with code already exists for client | A payment recipient with the specified code already exists for this client. |
| 2274 | No Payment Receiver data was found in application | No payment recipient data was found in the application. |
| 2275 | Event is not allowed for contract | This Event cannot be set for the contract. |
| 2276 | Classifier value should not be set for Disable classifier application (new) | When deleting a classifier value, a new value is specified in error. |



| Error code | Message text | Comments |
|------------|---|---|
| 2277 | Classifier does not exist | This classifier does not exist. |
| 2278 | Classifier value does not exist | This classifier value does not exist. |
| 2279 | Instalment limit processing errors | Errors occurred when setting the instalment limit. |
| 2286 | Invalid Client Type | Invalid client type specified. |
| 2287 | Invalid Service Group | Invalid service group specified. |
| 2288 | Application is skipped: The service <service_name> is not active on this node "Node_Name".</service_name> | Application skipped: the Service is not active in this HA node. When processing an application in the primary node (contract authorization performed in a secondary node), the application gets the "Waiting" status when an attempt is made to accept it. The application acceptance process will only be successful after contract authorization is performed in the primary node again. |
| 2290 | Invalid Contract Category | Incorrect category specified in application to update contract status. |
| 2291 | Invalid Liability category | Incorrect "Liability" hierarchy category specified for this contract. |
| 2301 | Product group not found by code | Product group not found for this code. |
| 2292 | Application for contract financial institution change should contain "ChangeInstitution" tag. | The "ChangeInstitution" tag is missing in the application to change a contract's financial institution. |
| 2305 | Multiple product groups found by code | Several Product groups found for this code. |
| 2315 | Officer not found by IDT %% | User record not found. |



| Error code | Message text | Comments |
|------------|--|---|
| 2321 | Unknown ID type for Officer search | Incorrect user record ID type. |
| 2325 | Search check is required | Search check value must be specified. |
| 2331 | Loading of @ObjectType@ is not supported | Importing data on this object type is not supported. |
| 2260 | No Original Application found for Update | No application for updating (Renew) was found. |
| 2261 | Multiple Original Applications found for Update | Several applications for updating (Renew) were found. |
| 2262 | More than one application with identical Reg Number and Parent Application | In updating (Renew) a subordinate application, several subordinate applications with the same numbers were found. |
| 2333 | Client no found by id | No client record found for this ID. |
| 2337 | Contract no found by id | No contract record found for this ID. |
| 2339 | AuthMethodID is empty in Application for AuthMethod Delete | Method ID not set in the application to delete an authentication method. |
| 2343 | AuthMethod not found by ID | Authentication scheme parameters not found for this ID. |
| 2344 | Usage Template ID is empty in Application for Usage Modification | No limiter template ID specified in the application to modify usage limiter parameters. |
| 2348 | Usage Template ID is empty in Application for Usage Modification | No limiter template ID specified in the application to modify usage limiter parameters. |



| Error code | Message text | Comments |
|------------|---|---|
| 2352 | Neither Contract nor Client ID specified in Application for Customer Classifier Modification | No client or contract ID specified in the application to modify client classifier. |
| 2357 | Neither client nor contract not found | No client or contract record found. |
| 2362 | Applinfo not found by id | No additional information record found for this ID. |
| 2401 | To update Due Date, specify only this field | In an application to change an instalment plan, in addition to the <i>Due Date</i> field, other fields are filled in. If <i>Due Date</i> must be changed for an instalment plan, only the <i>Due Date</i> field must specified in the application. The date can be shifted for an instalment plan with the "Extra Fee from Principal" attribute (i.e. when the entire principal amount is due without division into portions). |

3.5 Workflow Errors

| Error code | Message text | Comments |
|------------|---|---|
| 2700 | WF Action cannot be processed: | This workflow action cannot be executed. |
| 2701 | Any WF Action cannot be processed | No workflow actions can be executed. |
| 2702 | Unsupported status for Application Remove Action. The Application already processed | Action to delete application is not possible. The application has already been processed. |



The "workflow" mode is only available in the Advanced Applications R2 module.

3.6 Errors in Checking the Uniqueness of Applications being Imported

| Error code | Message text | Comments |
|------------|--|---|
| 2265 | Accept application for <object_type> is prohibited in the secondary database</object_type> | In a secondary node of the HA platform, it is not permitted to accept applications for working with this object type. |
| 2387 | There is another approval application <%%> for Add Client with the same Individual Number (ITN). | An application to add a client with this "Individual Number" field value already exists. |
| 2388 | There is another approval application <%%> for Add Client with the same Client Social Number. | An application to add a client with this "Client Social Number" field value already exists. |
| 2389 | There is another approval application <%%> for Add Contract with the same custom identifier | An application to add a contract value with this custom identifier value already exists. |
| 2390 | There is another approval application <%%> for Add Client with the same custom identifier | An application to add a client with this custom identifier value already exists. |
| 2391 | There is another approval application <%%> for Add Client with the same Client Number | An application to add a client with this "Client Number" field value already exists. |
| 2392 | There is another approval application <%%> for Add Client with the same Client Registration Number | An application to add a client with this "Client Reg Number" field value already exists. |



| Error code | Message text | Comments |
|------------|--|---|
| 2393 | There is another approval application <%%> for Add Contract with the same Contract Number | An application to add a contract with this "Contract Number" field value already exists. |
| 2394 | There is another approval application <%%> for Add Officer with the same User_ID | An application to add a Way4 user with this User ID field value already exists. |
| 2395 | There is another approval application <%%> for Add Officer Group with the same name | An application to add a WAY4 user group with this name already exists. |
| 2396 | There is another approval application <%%> for Add Auth Method with the same Type | An application to add an authentication scheme with this "Type" value already exists. |
| 2397 | There is another approval application <%%> for Add Preferred with the same Code or Type | An application to add a preferred counterparty with this "Code" or "Type" field value already exists. |
| 2398 | There is another approval application <%%> for Add Payment Receiver with the same Code or Type | An application to add a payment recipient with this "Code" or "Type" field value already exists. |
| 2399 | There is another approval application <%%> for Add Address with the same Type | An application to add an address with this "Type" field value effective for the dates specified already exists. |



4 File Formats

The section describes file formats of incoming and outgoing files (XML application format).

4.1 Incoming File Format

An incoming file contains data on applications for creating new clients and contracts and for editing their properties, as well as on applications for issuing new cards.

Files are generated in XML format. All aggregates and simple fields are XML elements. The main file element must be named "ApplicationFile".

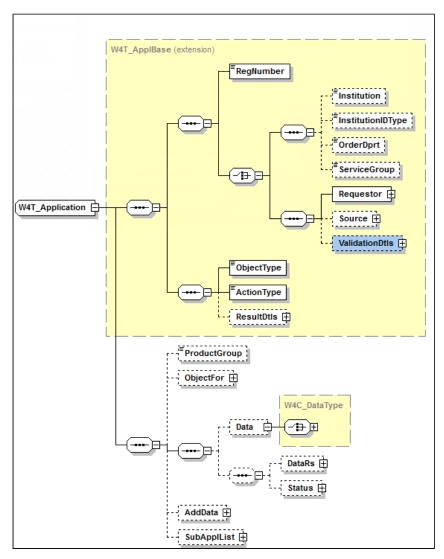
Data types:

- C-xx text field, may contain any printable symbols. xx is the maximum field length.
- Integer an integer
- Date (JJJ) the date in JJJ format, where JJJ is the number of days in the year (from 001 to 366)



Note that alphabetical currency codes must be used in files being imported.

The incoming file format is described using an XML schema. An example of this graphical representation is shown in figure.



Graphical representation of file format



This graphic representation uses the following format:

- Mandatory structure elements are shown as solid line rectangles
 ObjectType
- Optional elements are shown as dashed line rectangles ProductGroup
- Elements reserved for future use are shown as crossed out rectangles DeviceInfo

The symbol indicates that all elements it connects must be included into the higher-ranking element in the same order they are shown in the schema.

The symbol indicates that a higher-ranking element contains one of the elements connected with the use of this character.

Every element in the schema contains a hyperlink to its description.

An element of the "Any" type contains an XML structure whose format is undefined.

Letters X...Y next to an element mean that it may contain X to Y sub-elements, where "__" means that the number of sub-elements is unlimited.

The structure of a simple filename (supported for compatibility with earlier versions):

| N | Field | Туре | Usage | Comments |
|----|------------------|----------------------------|-------|---|
| 1. | File Name Prefix | C-1 | М | "A" |
| 2. | File Sender | C-4 | М | Sender code is the last (right) four digits in the Sender field of the FileHeader aggregate or, if it contains less than 6 characters, the value of the field padded from the right with zero characters. |
| 3. | Delimiter | C-1 | М | "_" (underscore) |
| 4. | File Number | Integer (2 decimal places) | М | File serial number. |



| N | Field | Туре | Usage | Comments |
|----|-----------|------------|-------|-------------------------|
| 5. | Delimiter | C-1 | М | Delimiter character "." |
| 6. | File Date | Date (JJJ) | М | File creation date |

The structure of an extended filename:

| N | Field | Туре | Usage | Comments |
|----|------------------|----------------------------|-------|---|
| 1. | File Name Prefix | C7 | М | "XADVAPL" |
| 2. | File Sender | C-6 | М | Sender code from the "Sender" field of the "FileHeader" aggregate. If the code contains less than six characters, it is right-padded with zeroes to 6 characters. |
| 3. | Delimiter | C-1 | М | "_" (underscore) |
| 4. | File Number | Integer (5 decimal places) | М | File serial number. |
| 5. | Delimiter | C-1 | М | Delimiter character "." |
| 6. | File Date | Date (JJJ) | М | File creation date |

To register a new application source, add a record with the following parameters in the "BIN Table for RBS" table (Full \rightarrow Configuration Setup \rightarrow Routing \rightarrow BIN Groups \rightarrow [BIN Table]) for the "RBS" BIN group:

- Data Source = "Own"
- Channel = "RBS"



• *Member* = <code of application source being added with the prefix "APP", for example, "APP0001">.

An incoming file schema is shown in the xml_appl_schema.html file.

4.1.1 Possible Combinations of Object Types of the Parent and Subordinate Applications

An incoming file can contain an application tree that consists of the parent and subordinate applications.

The application tree can only be created when the parent application is intended to work with the "Client" or "Contract" object types.

The table below shows possible combinations of object types of the parent and subordinate applications.

Possible combinations of object types of the parent and subordinate applications.

| Parent application's object type | Possible object types of a subordinate application | Key aggregate of the UFX subordinate application | Issuing | Acquiring |
|----------------------------------|--|---|---------|-----------|
| Client | ClientAddInfo | <data>/<appinfo></appinfo></data> | + | + |
| | ClientAddress | <data>/<address></address></data> | + | + |
| | ClientAffiliation | <data>/<affiliationclient></affiliationclient></data> | + | |
| | ClientAuthMethod | <data>/<authmethod></authmethod></data> | + | |
| | ClientClassifier | <data>/<customerclassifiers></customerclassifiers></data> | + | + |
| | Contract | <data>/<contract></contract></data> | + | + |
| | ClientCounterparty | <data>/<counterparty></counterparty></data> | + | |
| Contract | AddInfo | <data>/<appinfo></appinfo></data> | + | + |



| Parent application's object type | Possible object types of a subordinate application | Key aggregate of the UFX subordinate application | Issuing | Acquiring |
|----------------------------------|--|---|---------|-----------|
| | Address | <data>/<address></address></data> | + | + |
| | ClientAffiliation | <data>/<affiliationclient></affiliationclient></data> | + | + |
| | ContractAuthMethod | <data>/<authmethod></authmethod></data> | + | |
| | ContractClassifier | <data>/<customerclassifiers></customerclassifiers></data> | + | + |
| | Preferred | <data>/<preferred></preferred></data> | + | |
| | Client | <data>/<client></client></data> | + | |
| | Card | <data>/<producecard></producecard></data> | + | + |
| | Contract | <data>/<contract></contract></data> | + | + |
| | Limit | <data>/<setlimit></setlimit></data> | + | |
| | Instalment | <data>/<instalment> <data>/<instalmentearlyrepayment> <data>/<instalmentpaymentholidays></instalmentpaymentholidays></data></instalmentearlyrepayment></data></instalment></data> | + | |
| | InstalmentLimit | <data>/<setinstalmentlimit></setinstalmentlimit></data> | + | |
| | CustomerIdentifier | <data>/<customeridentifiers></customeridentifiers></data> | + | |
| | DeviceParms | <data>/<contract></contract></data> | | + |



| Parent application's object type | Possible object types of a subordinate application | Key aggregate of the UFX subordinate application | Issuing | Acquiring |
|----------------------------------|--|--|---------|-----------|
| | Event | <data>/<queevent></queevent></data> | + | + |
| | Order | <data>/<standorder></standorder></data> | + | + |
| | ContractCounterparty | <data>/<counterparty></counterparty></data> | + | + |
| | Relation | <data>/<cardrelation></cardrelation></data> | + | + |
| | Status | <data>/<setstatus></setstatus></data> | + | + |
| | StopList | <data>/<stoplist></stoplist></data> | + | |
| | Tariff | <data>/<tariffs></tariffs></data> | + | + |
| | Usage | <data>/<usage></usage></data> | + | + |



If it is necessary to create an application tree with a combination of object types of the parent and subordinate applications that is not present in table, contact OpenWay.

4.1.2 Clearing Fields Using Applications

To clear a field using an application, it is necessary to transmit a set of three specific symbols in this field: "*#N". An example of clearing data in the CompanyName field for a plastic card:



```
<PlasticInfo>
<FirstName>IVAN</FirstName>
<LastName>IVANOFFFFF</LastName>
<CompanyName>*#N</CompanyName>
</PlasticInfo>
```



Note that there are limits on clearing fields using an application:

- Fields with the "varchar2" data type can only be cleared.
- Fields with a length of fewer than 3 symbols cannot be cleared.
- Clearing of fields with the "date" data type using an application is not supported.

4.1.3 Resetting Values of Numeric Fields to Default Values

Numeric field values are reset to default values as an update (Action Type = "Update"): specify a new value for this field in a UFX request.

An example of an application for changing a contract's RiskFactor field value to "1":



```
<?xml version="1.0" encoding="UTF-8"?>
<ApplicationFile>
    <FileHeader>
        <FormatVersion>2.0</FormatVersion>
        <Sender>000100</Sender>
        <CreationDate>2017-09-14</CreationDate>
        <CreationTime>01:02:22</CreationTime>
        <Number>109</Number>
        <Institution>0001</Institution>
    </FileHeader>
    <ApplicationsList>
        <Application>
<RegNumber>C862894-060925_2017-CONTRACT-109/RegNumber>
<OrderDprt>0101</OrderDprt>
<ObjectType>Contract</ObjectType>
<actionType>Update</actionType>
<ObjectFor>
<ContractIDT>
<ContractNumber>5413330116231417
<Client>
<ClientInfo>
   <ShortName>Test Client 34960
</ClientInfo>
</Client>
</ContractIDT>
</ObjectFor>
<Data>
<Contract>
<CommentText/>
<RiskFactor>1</RiskFactor>
</Contract>
</Data>
</Application>
   </ApplicationsList>
</ApplicationFile>
```



4.2 Format of outgoing files

Outgoing Advanced Applications files can be separated into two types: response files after importing incoming files and report files generated after the applications in the incoming files or entered using DB Manager are processed.

Response and report files are created in the outgoing mail directory of the corresponding financial institution (see the section "The RBS Interchange Directory Tree" of the document "CBS Interface").

Files are generated in XML format. All aggregates and simple fields are XML elements. The main file element must be named "ApplicationResponseFile". The following elements must always start with the first row position: "ApplicationResponseFile". The next elements (together with their sub-elements) must take up exactly one row in the file: "FileHeader", "Notification", "File Trailer".

Data types:

- C-xx text field, may contain any printable symbols. xx is the maximum field length.
- Integer an integer
- Date (JJJ) the date in JJJ format, where JJJ is the number of days in the year (from 001 to 366)

The outgoing file format is described using an XML schema.

The following notation is used in the graphical representation:

- Elements reserved for future use are shown as crossed out rectangles DeviceInfo

The symbol indicates that all elements it connects must be included into the higher-ranking element in the same order they are shown in the schema.

The symbol indicates that a higher-ranking element contains one of the elements connected with the use of this character.

Every element in the schema contains a hyperlink to its description.



An element of the "Any" type contains an XML structure whose format is undefined.

Letters X...Y next to an element mean that it may contain X to Y sub-elements, where "__" means that the number of sub-elements is unlimited.

The structure of a simple filename (only supported for the XML Applications Response pipe (see "XML Applications Response" Pipe Parameters")):

| N | Field | Туре | Usage | Comments |
|----|--------------------|----------------------------|-------|--|
| 1. | File Name Prefix | C-1 | М | Defined by the RESP_NAME_PREFIX pipe parameter (see "XML Applications Response" Pipe Parameters"). The default value is "R". |
| 2. | Inward File Sender | C-4 | M | Incoming file sender code. Left justified, and padded to the right with spaces. The field has the same value as the incoming file's File Sender field. |
| 3. | Delimiter | C-1 | М | "_" (underscore) |
| 4. | Inward File Number | Integer (2 decimal places) | М | Serial number of the incoming file for the day. The field has the same value as the File Number field of the incoming file. |
| 5. | Delimiter | C-1 | М | Delimiter character "." |
| 6. | Inward File Date | Date (JJJ) | М | Incoming file creation date. The field has the same value as the File Date field of the incoming file. |

The structure of an extended filename:



| N | Field | Туре | Usage | Comments |
|----|---------------------------|----------------------------|-------|---|
| 1. | File Name Response Prefix | C-1 | M | Defined by the RESP_NAME_PREFIX pipe parameter (see "XML Applications Response" Pipe Parameters, "XML Applications Overall Response" Pipe Parameters"). |
| 2. | Inward File Name Prefix | C-7 | М | "XADVAPL" |
| 3. | Inward File Sender | C-6 | M | Incoming file sender code. The field is left-justified. If the code is more than six characters long, the last six characters are used. If the code is less than six characters long, it is left-justified and right-padded with zeroes to six characters. The field has the same value as the incoming file's File Sender field. |
| 4. | Delimiter | C-1 | М | "_" (underscore) |
| 5. | Inward File Number | Integer (5 decimal places) | M | Sequential number of the incoming file during the current day. The field has the same value as the File Number field of the incoming file. |
| 6. | Delimiter | C-1 | М | Delimiter character "." |
| 7. | Inward File Date | Date (JJJ) | М | Incoming file creation date. The field has the same value as the File Date field of the incoming file. |

Outgoing file schema is shown in the xml_appl_schema.html file.



5 Operations with Application Objects

The table shows permitted operations with application objects. Operations whose names are marked with the "*" symbol are only supported by pipes and are not accessible in the module's screen forms.

The "CustomerClassifier" and "PaymentReceiver" object types are obsolete and are used for backward compatibility.

The "Migrate" action is only used for first migration before starting to use Way4.

File samples a located in the following directories:

- <OWS_HOME>\manuals\<language>\Application_management\file_samples\issuing for the issuing module.
- <OWS_HOME>\manuals\<language>\Application_management\file_samples\acquiring for the acquiring module.

Table of permitted operations with application objects

| Object Type | Action types permitted for this type object | Key aggregate of the UFX application | File examples |
|-------------|---|--------------------------------------|--|
| Client | Add AddOrUpdate Update | <data>/<client></client></data> | Issuing: xadvapl000100_00001.001 – Add Client xadvapl000100_00002.001 – Update Client added by xadvapl000100_00001.001 xadvapl000100_00003.001 – AddOrUpdate Client |



| Object Type | Action types permitted for this type object | Key aggregate of the UFX application | File examples |
|-------------------|---|--|--|
| ClientAddInfo | Add AddOrUpdate | <data>/<appinfo></appinfo></data> | Issuing: xadvapl000100_00004.001 – Add ClientAddInfo for client added by xadvapl000100_00001.001 xadvapl000100_00005.001 – AddOrUpdate ClientAddInfo |
| ClientAddress | Add AddOrUpdate Update Enable Disable | <data>/<address></address></data> | Issuing: xadvapl000100_00006.001 – Add ClientAddress for client added by xadvapl000100_00001.001 xadvapl000100_00007.001 – Update ClientAddress added by xadvapl000100_00006.001 xadvapl000100_00008.001 – AddOrUpdate ClientAddress xadvapl000100_00020.001 – Enable ClientAddress xadvapl000100_00009.001 – Disable ClientAddress |
| ClientAffiliation | AddOrUpdate Disable | <data>/ <affiliationclient></affiliationclient></data> | Issuing: xadvapl000100_00010.001 – Add Client xadvapl000100_00011.001 – AddOrUpdate linked client added by xadvapl000100_00010.001 to client from xadvapl000100_00001.001 xadvapl000100_00012.001 – Disable ClientAffiliation xadvapl000100_00016.001 – Add ClientAffiliation with new client xadvapl000100_00017.001 – Add two clients and affiliation link between them |
| ClientContract | Add | <data>/<clientcontract></clientcontract></data> | Acquiring: • xadvapl000100_00001.003 – Add ClientContract |



| Object Type | Action types permitted for this type object | Key aggregate of the UFX application | File examples |
|------------------|---|--|--|
| ClientAuthMethod | Add AddOrUpdate Disable | <data>/<authmethod></authmethod></data> | Issuing: xadvapl000100_00013.001 – Add ClientAuthMethod for client added by xadvapl000100_00001.001 xadvapl000100_00014.001 – AddOrUpdate ClientAuthMethod xadvapl000100_00018.001 – Disable ClientAuthMethod |
| ClientClassifier | AddOrUpdate Disable | <data>/ <customerclassifiers></customerclassifiers></data> | |
| ClientParameter | AddOrUpdate Disable | <data>/ <customerparameters></customerparameters></data> | Issuing: • xadvapl000100_00019.001 – Set ClientParameter • xadvapl000100_00021.001 – Disable ClientParameter Acquiring: • xadvapl000100_00021.001 – Disable ClientParameter |



| Object Type | Action types permitted for this type object | Key aggregate of the UFX application | File examples |
|-------------|---|---|---|
| Card | Add Update Lock Unlock Migrate* Renewal* | <data>/<producecard></producecard></data> | Issuing: xadvapl000100_00003.002 - Migrate Card - contract&plastic - for contract added by xadvapl000100_00001.002 xadvapl000100_00004.002 - Add Card - contract&plastic - for contract added by xadvapl000100_00001.002 xadvapl000100_00005.002 - Lock Card xadvapl000100_00006.002 - Unlock Card xadvapl000100_00007.002 - Renewal Card (update existing card_info record) xadvapl000100_00008.002 - Reissue Card - instead lost xadvapl000100_00009.002 - Erase PIN xadvapl000100_00052.002 - Reissue Card, plastic only |



| Object Type | Action types permitted for this type object | Key aggregate of the UFX application | File examples |
|-------------|---|--------------------------------------|---|
| Contract | Add Update ClearPINAttempts * Migrate* | <data>/<contract></contract></data> | Issuing: xadvapl000100_00001.002 - Add Contract for client added by xadvapl000100_00001.001 xadvapl000100_00002.002 - Update Contract xadvapl000100_00043.002 - Add sub-contract for client xadvapl000100_00047.002 - Move one contract to another existing client xadvapl000100_00048.002 - Move whole contract tree (including parents) to another existing client xadvapl000100_00049.002 - Move contract and its sub-contracts to another existing client xadvapl000100_00050.002 - Create client and move one existing contract to created client xadvapl000100_00054.002 - Update contract with changing financial institution xadvapl000100_00046.002 - Clear PIN Attempts xadvapl000100_00045.032 - Create client and add contract tree with ContractParameters xadvapl000100_00045.036 - Add contract for existing client and link instant issue card to contract xadvapl000100_00044.036 - Create client, add contract for created client and link instant issue card to contract xadvapl000100_00044.036 - Create client, add contract for created client and link instant issue card to contract xadvapl000100_00044.036 - For product with SCHEME_BY_CURR tag create client and issuing contract (RUR by default) passing EUR currency as parameter and card under it, create sub issuing contract, create liability contract passing USD currency, create liability contract using product without SCHEME_BY_CURR tag |



| Object Type | Action types permitted for this type object | Key aggregate of the UFX application | File examples |
|-----------------|---|--------------------------------------|---|
| | | | xadvapl000100_00002.042 - Add card contract for issuing contract added by xadvapl000100_00001.042 (created in EUR) and liability contract passing USD currency Acquiring: xadvapl000100_00002.003 - Add Imprinter contract for acquiring contract added by xadvapl000100_00001.003 xadvapl000100_00003.003 - Add POS contract xadvapl000100_00004.003 - Add ATM contract xadvapl000100_00005.003 - Add override device parms to ATM added by xadvapl000100_00004.003 xadvapl000100_00006.003 - Add ATM Retail contract for client added by xadvapl000100_00006.003 - Add ATM added by xadvapl000100_00004.003 xadvapl000100_00007.003 - Add Acquirung contract with DeviceDocParms xadvapl000100_00008.003 - Update DeviceDocParms in Acquirung contract xadvapl000100_00009.003 - Add Acquirung contract and Device with DeviceDocParms |
| ContractAddInfo | Add AddOrUpdate | <data>/<appinfo></appinfo></data> | Issuing: xadvapl000100_00030.002 - Add ContractAddInfo for contract added by xadvapl000100_00001.002 xadvapl000100_00031.002 - Update ContractAddInfo |



| Object Type | Action types permitted for this type object | Key aggregate of the UFX application | File examples |
|---------------------|---|--|---|
| ContractAddress | Add AddOrUpdate Update Enable Disable | <data>/<address></address></data> | Issuing: xadvapl000100_00010.002 - Add ContractAddress for contract added by xadvapl000100_00003.002 xadvapl000100_00011.002 - AddOrUpdate ContractAddress xadvapl000100_00012.002 - Update ContractAddress xadvapl000100_00013.002 - Disable ContractAddress xadvapl000100_00056.002 - Enable ContractAddress |
| ContractAffiliation | AddOrUpdate Disable | <data>/ <affiliationclient></affiliationclient></data> | xadvapl000100_00014.002 - AddOrUpdate ContractAffiliation - Add linked client from application xadvapl000100_00014.002 for contract from xadvapl000100_00003.002 xadvapl000100_00015.002 - Disable ContractAffiliation xadvapl000100_00044.002 - Add ContractAffiliation with new client |
| ContractAuthMethod | Add AddOrUpdate Disable | <data>/<authmethod></authmethod></data> | xadvapl000100_00016.002 - Add ContractAuthMethod for contract added by xadvapl000100_00003.002 xadvapl000100_00017.002 - AddOrUpdate ContractAuthMethod xadvapl000100_00053.002 - Disable ContractAuthMethod |
| ContractClassifier | AddOrUpdate Disable | <data>/ <customerclassifiers></customerclassifiers></data> | Issuing: xadvapl000100_00011.015 – Disable ContractClassifier value set for the future period specified in the application |



| Object Type | Action types permitted for this type object | Key aggregate of the UFX application | File examples |
|--------------------|---|--|---|
| ContractParameter | AddOrUpdate Disable | <data>/ <customerparameters></customerparameters></data> | Issuing: • xadvapl000100_00055.002 – Set ContractParameter • xadvapl000100_00058.002 – Disable ContractParameter Acquiring: • xadvapl000100_00058.002 – Disable ContractParameter |
| CustomerAuthMethod | Add AddOrUpdate Disable | <data>/<authmethod></authmethod></data> | |
| Order | ActivatePersonal ActivateIndividual ActivateStandard Disable | <data>/<standorder></standorder></data> | Issuing: xadvapl000100_00018.002 – Activate Personal Order for contract added by xadvapl000100_00001.002 xadvapl000100_00019.002 – Disable Order |
| Preferred | Add AddOrUpdate Disable | <data>/<preferred></preferred></data> | Issuing: xadvapl000100_00020.002 – Add Preferred for contract added by xadvapl000100_00003.002 xadvapl000100_00021.002 – AddOrUpdate Preferred xadvapl000100_00022.002 – Disable Preferred |



| Object Type | Action types permitted for this type object | Key aggregate of the UFX application | File examples |
|----------------------|---|--|--|
| PaymentReceiver | Add AddOrUpdate Update | <data>/ <paymentreceiver></paymentreceiver></data> | Issuing: • xadvapl000100_00006.027 – AddOrUpdate individual payment receiver for client • xadvapl000100_00007.027 – Add individual payment receiver for client • xadvapl000100_00008.027 – Update individual payment receiver for client |
| ClientCounterparty | Add AddOrUpdate Update | <data>/<counterparty></counterparty></data> | Issuing: • xadvapl000100_00007.031 – Add ClientCounterparty |
| ContractCounterparty | Add AddOrUpdate Update | <data>/<counterparty></counterparty></data> | Issuing: • xadvapl000100_00005.031 – Add ContractCounterparty |
| Relation | Update | <data>/<cardrelation></cardrelation></data> | Issuing: xadvapl000100_00006.004 – Add client and issuing contract to use it as base contract in relation xadvapl000100_00007.004 – Add Related Card added by xadvapl000100_00004.002 to base contract added by xadvapl000100_00006.004 xadvapl000100_00008.004 – Update Relation |



| Object Type Instalment | Action types permitted for this type object Add Update Activate EarlyRepayment | Key aggregate of the UFX application <pre></pre> | Issuing: • xadvapl000100_00005.033 – Add instalment by transaction • xadvapl000100_00006.033 – Update instalment • xadvapl000100_00007.033 – Add instalment |
|-------------------------|---|--|--|
| | CancelEarlyRepay ment PaymentHolidays Close | <data>/ <instalmentpaymentholi days=""></instalmentpaymentholi></data> | xadvapl000100_00008.033 – Partial EarlyRepayment instalment with KeepInstalmentNumber recalculation xadvapl000100_00010.033 – Partial EarlyRepayment instalment with KeepInstalmentAmount recalculation xadvapl000100_00012.033 – Full EarlyRepayment instalment xadvapl000100_00014.033 – PaymentHolidays instalment xadvapl000100_00015.033 – Close instalment |



| Object Type | Action types permitted for this type object | Key aggregate of the UFX application | File examples |
|-------------|---|--------------------------------------|--|
| Tariff | Add | <data>/<tariffs></tariffs></data> | Issuing: • xadvapl000100_00032.002 – Add Billing Tariff for contract added by xadvapl000100_00003.002 • xadvapl000100_00033.002 – Add Instalment Fee Tariff • xadvapl000100_00034.002 – Add Instalment Tariff • xadvapl000100_00035.002 – Add Interest Tariff • xadvapl000100_00036.002 – Add Interest Tax Tariff • xadvapl000100_00037.002 – Add Service Limit Tariff • xadvapl000100_00038.002 – Add Service Tariff • xadvapl000100_00038.002 – Add Service VD Tariff • xadvapl000100_00039.002 – Add Usage Limit Tariff • xadvapl000100_00041.002 – Add Ageing Tariff |
| Usage | ActivatePersonal ActivateStandard Enable Disable AddIndividual Delete | <data>/<usage></usage></data> | Issuing: • xadvapl000100_00023.002 – ActivatePersonal Usage for contract added by xadvapl000100_00003.002 • xadvapl000100_00024.002 – ActivatePersonal Usage set maxnumber=99999999 to imitate setting max usage value • xadvapl000100_00025.002 – ActivateStandard Usage with parm ResetCurrentCounters=Y • xadvapl000100_00026.002 – Disable Usage • xadvapl000100_00051.002 – AddIndividual Usage overriding template parameters |



| Object Type | Action types permitted for this type object | Key aggregate of the UFX application | File examples |
|--------------------|---|--|---|
| CustomerClassifier | AddOrUpdate Disable | <data>/ <customerclassifiers></customerclassifiers></data> | Issuing: xadvapl000100_00015.001 – AddOrUpdate CustomerClassifier for client added by xadvapl000100_00001.001 xadvapl000100_00057.001 – Disable CustomerClassifier with code INS_ASSIST for contract added by xadvapl000100_00001.001 |
| CustomerIdentifier | AddOrUpdate Disable | <data>/ <customeridentifiers></customeridentifiers></data> | Reserved for system use. |
| Event | Add Disable | <data>/<queevent></queevent></data> | Issuing: • xadvapl000100_00027.002 – Add Event for contract added by xadvapl000100_00003.002 |
| Limit | Update Disable | <data>/<setlimit></setlimit></data> | Issuing: • xadvapl000100_00028.002 – Update Limit for contract added by xadvapl000100_00003.002 • xadvapl000100_00045.002 – Set temporary Limit for contract • xadvapl000100_00019.030 – Disable temporary Limit in future |
| InstalmentLimit | Update | <data>/ <setinstalmentlimit></setinstalmentlimit></data> | Issuing: • xadvapl000100_00001.033 – Update InstalmentLimit |



| Object Type | Action types permitted for this type object | Key aggregate of the UFX application | File examples |
|------------------------------|---|---|--|
| Status | Update | <data>/<setstatus></setstatus></data> | Issuing: • xadvapl000100_00029.002 – Update Status for contract added by xadvapl000100_00003.002 |
| StopList | Add Delete | <data>/<stoplist></stoplist></data> | Issuing: • xadvapl000100_00057.002 – Delete Card from Stop List with RequestGroup |
| ContractGroup | Add Update Lock Unlock Close | <data>/<contractgroup></contractgroup></data> | Issuing: xadvapl000100_00001.035 - Add ContractGroup with owner contract from xadvapl000100_00001.002 xadvapl000100_00002.035 - Update ContractGroup xadvapl000100_00003.035 - Lock ContractGroup xadvapl000100_00004.035 - Close ContractGroup |
| ContractGroupAffiliatio n | Add Update Close Delete | <data>/ <contractgroupaffiliatio n=""></contractgroupaffiliatio></data> | Issuing: • xadvapl000100_00005.035 – Add ContractGroupAffiliation for contract group added by xadvapl000100_00001.002 • xadvapl000100_00006.035 – Update ContractGroupAffiliation • xadvapl000100_00007.035 – Close ContractGroupAffiliation • xadvapl000100_00008.035 – Delete ContractGroupAffiliation |
| DeviceParms | Delete | <data>/<contract></contract></data> | |



| Object Type | Action types permitted for this type object | Key aggregate of the UFX application | File examples |
|-------------------|---|--|---|
| VolumeBasedTariff | Add Disable CancelFutureChan ges | <data>/ <volumebasedtariff></volumebasedtariff></data> | Acquiring: • xadvapl000100_00006.037 – Add one volume-based tariff • xadvapl000100_00032.037 – Add two volume-based tariffs • xadvapl000100_00009.037 – CancelFutureChanges for volume-based tariff • xadvapl000100_00010.037 – Disable volume-based tariff |
| Fee | Charge | <data>/<fees></fees></data> | Issuing: • xadvapl000100_00006.042 - Add Fee Charge |



6 Application Workflow Modes

In the Advanced Applications module, the following application workflow modes are possible:

- "Workflow" Applications are processed through stages according to the selected workflow strategy.
- "No workflow" Work in this mode is performed according to a scenario providing for only two stages: import and subsequent acceptance (or decline) of an application.



Work with "workflow" and "no workflow" modes in the Advanced Applications module is described in the document "Advanced Applications R2"

Without the Advanced Applications module, in the issuing and acquiring modules "no workflow" is only available for processing applications.

Applications in the issuing module is processed in the "Issuing → Applications Batch Interface" menu group that contains the following menu items:

- "Issuing Application Import (No WF)" import issuing module applications.
- "Issuing Applications Accept (No WF)" accept issuing module applications.
- "Issuing Applications Accept Parallel (No WF)" accept issuing module applications in parallel.
- "Applications Response" (No WF) export files with a report on application processing results.
- "Applications Monitoring (No WF)" monitoring application processing is performed by a user with administrator privileges.

Applications in the acquiring module is processed in the "Acquiring → Applications Batch Interface" menu group that contains the following menu items:

- "Acquiring Application Import (No WF)" import acquiring module applications.
- "Acquiring Applications Accept (No WF)" accept acquiring module applications.
- "Acquiring Applications Accept Parallel (No WF)" accept acquiring module applications in parallel.
- "Applications Response" (No WF) export files with a report on application processing results.
- "Applications Monitoring (No WF)" monitoring application processing is performed by a user with administrator privileges.



The "no workflow" mode is used to solve the following tasks:

- · Card migration.
- Automatic processing of a large number of the same type of applications according to a template that provides for export and subsequent acceptance of applications.



The "no workflow" mode has the following limitations:

- Not possible to manually edit applications.
- No application approval stage.
- All applications regardless of processing results end up at the "Close" stage of processing.
- No issuing application update mode.
- No journal of the current application's workflow history.
- No verification of system user rights to execute actions to process applications.
- No possibility to work with applications to manage system users.



7 Application Workflow

In "workflow" mode, application workflow is separated into stages and includes the entry of necessary data, the checking of data and execution of actions for sending the application to the required stage of the workflow strategy.



The "workflow" mode is only available in the Advanced Applications R2 module.

In "no workflow" mode, application workflow only includes approving or declining an application after it has been imported. When an application is accepted, the corresponding changes are enter in the database: new clients and new contracts are registered, contract and client parameters are changed, etc.

After processing of an application is completed, it is assigned the closed status (*Posting Status* = Posted"), after which it is filtered from the list of applications to be processed.

7.1 Accepting Applications

To accept applications in the issuing module, use the menu item "Issuing → Applications Batch Interface → Issuing Applications – Accept (No WF)".

To accept applications in the acquiring module, use the menu item "Acquiring → Applications Batch Interface → Acquiring Applications – Accept (No WF)".



Menu items that are used to accept applications in the Advanced Applications R2 module are described in the document "Advanced Applications R2".

Before starting the procedure to accept a processed application, the system generates a request for the user to confirm execution of the procedure.



Request to confirm execution of the procedure to accept processed applications

The system will run the procedure after user confirmation.

The results of the procedure are available for analysis by selecting the menu item "Full \rightarrow Process Log \rightarrow Process Log".

- (i)
- At the application acceptance stage, the Way4 checks the status of Products, Account Schemes and Service Packages.

(1)

A subordinate application can be accepted separately. To do so, in the ADD_DATA field of the subordinate application, specify the SPLIT tag in the following format:

SPLIT=Y;

As a result, when the procedure to accept the parent and subordinate application is executed, only the contract for the higher-ranking application is registered in the database, and the subordinate application as a separate application gets a link to the registered contract. To register a contract according to the subordinate application, accept the subordinate application.



The process for accepting applications can be executed in parallel. This functionality is used when a large number of applications must be accepted. Menu items "Issuing \rightarrow Applications Batch Interface \rightarrow Issuing Applications – Accept Parallel (No WF)" (for the issuing module) and "Acquiring \rightarrow Applications Batch Interface \rightarrow Acquiring Applications – Accept Parallel (No WF)" (for the acquiring module) allow issuing and acquiring applications to be accepted in parallel.

Configuration of parallel execution must be set up in advance (Full \rightarrow Configuration Setup \rightarrow Main Tables \rightarrow Process Parameters), see the document "Running Processes in Parallel".

When menu items that are used to accept applications are run in parallel, it is possible to select a financial institution for which the applications will be accepted. If a financial institution is not selected or the "For All Institutions" parameter's value is "Yes" or empty, applications will be accepted for all financial institutions.

7.2 Monitoring Application Workflow

Users with administrator privileges monitor Issuing application workflow by selecting the user menu item "Issuing \rightarrow Applications Batch Interface \rightarrow Applications Monitoring (No WF)".

Users with administrator privileges monitor Acquiring application workflow by selecting the user menu item "Acquiring \rightarrow Applications Batch Interface \rightarrow Applications Monitoring (No WF)".



Menu items that are used to monitor application workflow in the Advanced Applications R2 module are described in the document "Advanced Applications R2".



Note that the form for monitoring application workflow that is opened using the "Issuing \rightarrow Applications Batch Interface \rightarrow Applications Monitoring (No WF)" and "Acquiring \rightarrow Applications Batch Interface \rightarrow Applications Monitoring (No WF)" menu items only contains applications imported by the import pipe.

To monitor applications imported via online interfaces for interaction with external systems, use the following menu items:

- "Way4 UFX Online → Applications Monitoring" for applications imported via UFX interface using the Way4 Gate component (see the
 document "WAY4 Gate Specification") or TS SOA UFX solution based on the Way4 Transaction Switch platform (see the document
 "Transaction Switch Platform Overview").
- "Web Services → Applications Monitoring" for applications imported using web services.

The form for monitoring issuing application workflow contains information on application parameters of all financial institutions in Way4(see figure).





For for monitoring application workflow

Form's fields indicating the current application state:

- Posting Status workflow stage status:
 - "Loaded" the application is registered in the Advanced Applications module but no actions have been taken to process it.
 - "Posted" the application has been successfully processed and posted.
 - "Declined" the application has been declined by the user or the system at a workflow stage.
- Posting Date date, when the application status has been changed to "Posted" or "Declined.
- Officer officer responsible for the application at the given workflow stage.
- Outward Status status of exporting the application.
 - "Waiting" the application was imported from a file and is not intended for export.
 - "Processed" the application passed the Accept procedure and is ready to be exported.
 - "Rejected" the application was rejected by a user or Way4 at a workflow stage.

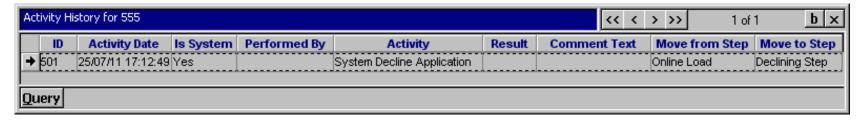


Fields in the form for monitoring application workflow in the Advanced Applications R2 module are described in the document "Advanced Applications R2".

The set of buttons in the applications monitoring form depends on the type of application selected from the list. The form may contain the following buttons to open subordinate forms:

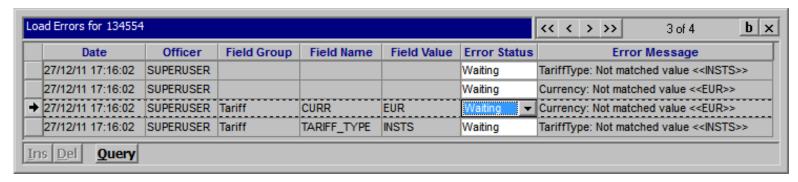
• [History] – opens a form with the history of this application's workflow stages.





History of actions with the application

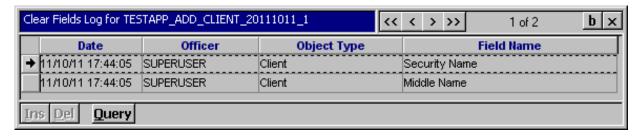
- [Load Errors] opens a form with information about errors that occurred when importing this application. The value in the *Error Status* field of this form can be edited. This field may contain the following values:
 - "Waiting" an error occurred when importing the application from the file. An application with this value in the *Error Status* field is not processed further. For its further processing to be possible, the "Checked" or "Skipped" value must be set in the *Error Status* field.
 - "Checked" the error that occurred when loading the application has been eliminated.
 - "Skipped" the error that occurred when loading the application should be skipped.



Information about errors when loading this application

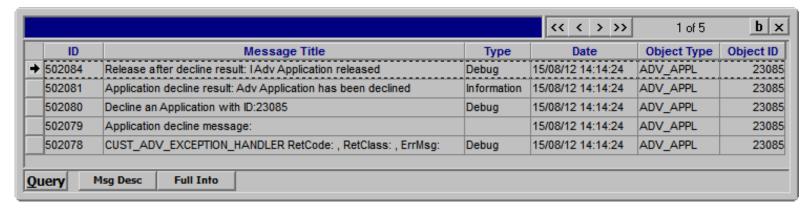
• [Clear Fields] – opens a form with information about the object fields whose values will be set to null using this application.





List of fields to be cleared

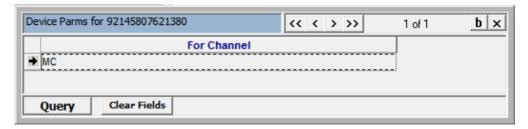
• [Proc Mess] – opens the form for viewing the list of all system messages generated when processing this application.



List of system messages for an application

• [Device Parms] – opens the form with a list of channels for which records about redefinition of device parameters must be deleted (available for applications with Application Type = "DeviceParms" only).





List of channels for which records about redefinition of device parameters must be deleted



8 Importing and Exporting Applications

In the Advanced Applications module, applications can be imported and exported. This is possible in two modes:

- "workflow"
- · "no workflow".

In the issuing and acquiring modules, applications in "no workflow" mode can only be imported.

8.1 Importing Applications

Information about applications can be imported from XML format files in the following modules:

- Advanced Applications R2.
- · Issuing Module.
- Acquiring Module.

XML files can be created by an external system according to client applications and by the Advanced Applications R2 module operating in another Way4 instance.

Imported files must be put in standard file exchange directories (see the section "Structure of File Exchange Directories" of the document "CBS Interface").

To import files in the issuing module, use the menu item "Issuing → Applications Batch Interface → Issuing Application Import (No WF)".

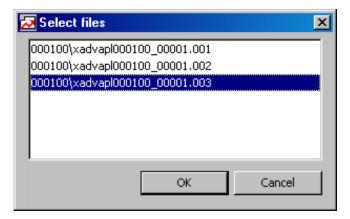
To import files in the acquiring module, use the menu item "Acquiring \rightarrow Applications Batch Interface \rightarrow Acquiring Application Import (No WF)".



Menu items that are used to import files in the Advanced Applications R2 module are described in the document "Advanced Applications R2".



After these menu items are started, a dialogue window for selecting files to be imported will be displayed.



Dialogue window to select imported files

Files may be selected for import from this list by holding the <Ctrl> key and clicking on the desired files.

After the required files have been selected, click the [OK] button.

If the selected file has already been imported, an error message will be displayed.



A message about an attempt to import a file that has been already imported

According to the results of importing the file, the issuing or acquiring module generates a response file that is placed by the system in the standard outgoing file directory (see the section "Structure of File Exchange Directories" in the document "CBS Interface"). This file contains information about applications that were not imported for any reasons. A response file format is described in the section "File Formats".



Note that application can be imported in deferred response generation mode using the "DEFERRED_RESPONSE = Y" parameter of the "XML Applications Import" pipe (for more information, see the section "XML Applications Import" Pipe Parameters").

8.2 Exporting XML Response Files

When importing applications from XML files, the issuing and acquiring modules allow the creation of response files containing results of application processing for sending to the systems that sent the files.

To export response files from the issuing module, use the menu item "Issuing \rightarrow Applications Batch Interface \rightarrow Applications Response (No WF)".

To export response files from the acquiring module, use the menu item "Acquiring \rightarrow Applications Batch Interface \rightarrow Applications Response (No WF)".



Menu items that are used to export response files from the Advanced Applications module is described in the document "Advanced Applications R2".

A response file is generated if the import pipe is run in deferred response generation mode (parameter "DEFERRED_RESPONSE = Y" of the "XML Applications Import" pipe, for more information, see the section "XML Applications Import" Pipe Parameters").

If a formatting error is found or an error occurs when importing the application to the ADV_APPL table, the entire file is rejected, and the importing pipe generates a response file regardless of the value of the DEFERRED_RESPONSE parameter.



9 Working with Applications in an HA Secondary Node

It is possible to work with applications in an HA secondary node in two modes:

- "workflow"
- "no workflow".



The "workflow" mode is only available in the Advanced Applications R2 module.

When importing applications in an HA secondary node: In "no workflow" mode instead of being accepted) applications are approved). After synchronization in the primary node, the application will have the "Waiting" status and can be accepted. The user will get the message "'Application is approved successfully and will be processed later". For correct operation, the global parameter APPL_NON_SAFE_ON_SECONDARY must be set to "APPROVE" (default value). Otherwise (when the global parameter APPL_NON_SAFE_ON_SECONDARY is set to "DECLINE"), applications will be declined (*Posting Status* = "Declined").

When processing applications in the primary node (the contract was authorized in a secondary node), applications will get the "Waiting" status during an attempt to accept them. Moreover:

- When a user manually accepts a single application, Way4 shows the warning with code 2288: "Application is skipped: The service <Service_Name> is not active on this node "Node Name".
- In batch accept of applications, Way4 checks the number of unprocessed applications remaining and if there are any, the following message will be added to the Process Log:

"<NotProcessedCount> from <SummaryCount> approval applications were not processed.

Application contracts can be not active on **this** node,

check "OpenWay → Distributed Processing → Configuration Setup → Primary Node Routing Check"



If working in the "no workflow" mode, unprocessed applications can be reaccepted. The application acceptance process will only be successful after contract authorization is performed in the primary node again. Before accepting applications, it is recommended to make sure that at the present time all contracts are being processed in the current node. To perform the check, use the menu item "Distributed Processing \rightarrow Configuration Setup \rightarrow Primary Node Routing Check".



Settings that must be made when working in "workflow" mode are described in the section "Working with Applications in an HA Secondary Node" of the document "Advanced Applications R2".

If applications imported by web services in "no workflow" mode cannot be accepted immediately (contracts in the current node are unavailable, or accepting applications in a secondary HA node is not permitted):

- Applications for urgent operations (change status, process an Event, set a classifier, rest a PIN counter) will be declined (*Posting Status* = "Declined"). The appropriate error message (response code "2288" or "2270") will be added to the response file.
- Applications for non-urgent operations will get the "Waiting" status and will be processed during the next process for accepting applications.

For more information about the HA platform, see the document "WAY4™ HA Cluster. Functional Specification".



10 Tags used in application processing

Tags can be split into two groups:

- Standard application tags UFX tags used when processing applications in XML format to manage a certain process (for example, to enable the mode for deferred acceptance of a subordinate application, to change a parent contract). Rules for using standard tags in applications are given in the section "Use of Standard Application Tags (UFX Tags) when Processing Applications". UFX format offers a wide range of possibilities for managing application processing and for passing additional non-standard information about "Client" and "Contract" objects, that expand the standard set of fields and can be used in custom procedures.
- Custom tags these tags can be configured for several table fields according to business requirements.

It is recommended to enter and edit tags in the fields listed in the "List of fields that support tags, to which control structures are applicable when processing applications" table only with XML applications using the special control structures "TAG=Y;" and "TAGS_TO_REMOVE".

Examples of entering and editing tags are given in the section "Managing Custom Tags when Processing Applications".



Tagged data can be entered through screen forms only in the Advanced Applications module.

List of fields that support tags, to which control structures are applicable when processing applications.



| Table | Field that supports storing tagged data |
|----------------|---|
| CLIENT | ADD_INFO_01 ADD_INFO_02 ADD_INFO_03 ADD_INFO_04 |
| ACNT_CONTRACT | ADD_INFO_01 ADD_INFO_02 ADD_INFO_03 ADD_INFO_04 |
| PREFERRED | CUSTOM_PARMS |
| USAGE_TEMPL | USER_ADD_INFO |
| PAYM_REC_PARTY | ADD_DATA |
| APPL_INFO | ADD_INFO_01 ADD_INFO_02 ADD_INFO_03 ADD_INFO_04 |
| PAYM_REC | RECEIVER_DETAILS_1 RECEIVER_DETAILS_2 |



10.1 Use of Standard Application Tags (UFX Tags) when Processing Applications

This section describes rules for using standard tags in applications – UFX tags used when processing applications in XML format to manage a certain process.

10.1.1 Parameters that affect processing applications for any object type

| Name | Value | Description | UFX element |
|-------|-------|---|--|
| Split | "Yes" | Used for deferred acceptance of a subordinate application. When the value is set to "Yes", the subordinate application will be processed as an independent one. | <application> <data></data> <adddata> <split>Yes</split> </adddata> </application> |



| Name | Value | Description | UFX element |
|----------------|---------------------------------------|---|--|
| DuplicateCount | <number duplicates="" of=""></number> | Used when an application (and child applications) is duplicated, for example, when several identical cards must be created. | <pre><application> <objecttype>Card</objecttype> <data></data> <adddata> <duplicatecount>10</duplicatecount> </adddata> </application></pre> |

10.1.2 Parameters that affect processing applications for a certain object type



| Name | Value | Description | UFX element |
|------------|------------|--|---|
| ChangeMain | "Yes" "No" | Used to allow a parent contract to be changed with an application. If the application is intended to create a parent contract and as a subcontract add another contract earlier belonging to a different contract tree, the value of the tag should be ChangeMain = "Yes". | <application> <data> <contract> <addcontractinfo> <changemain>Yes<changemain> </changemain></changemain></addcontractinfo> </contract> </data> <adddata></adddata> </application> |



| Name | Value | Description | UFX element |
|--------------|--|--|--|
| ChangeClient | "All" "This" "Down" "AllWithLiability" "DownWithLiability" | The tag is used to choose the mode for changing a client for a contract tree by using an application: • For contract hierarchy with the Main/Sub" relation type: • "This" – the client will be changed for entire contract tree. • "This" – the client will be changed for a contract to which the application belongs (starting from version 03.39.30). • "Down" – the client will be changed for all contracts in the hierarchy that are under the contract to which the application belongs. • For contract hierarchy with the Main/Sub" or "Liability" relation type: • "AllWithLiability" – the client will be changed for entire contract tree regardless of the relation type between contracts in the hierarchy. | <pre><application></application></pre> |



| Name | Value | Description | UFX element |
|-------------------|--|---|-----------------------------|
| | | "DownWithLiability" – the client will be changed for all contracts in the hierarchy that are under the contract to which the application belongs regardless of the relation types between contracts in the hierarchy. | |
| | | The tag is used in an application tree in which the parent application is used to create a client, and the subordinate application specifies the contract whose data are updated. The value of the tag ChangeClient = "All"/"This"/"Down"/"AllWithLiability"/"DownWithLiability" should be specified in the subordinate application used to work with the contract. | |
| ChangeInstitution | <financial identifier="" institution=""></financial> | The tag makes it possible to change the institution for a contract to which the application belongs. This tag is used together with the ChangeInstitutionType tag that sets how an institution will be identified. | <application></application> |
| | | A financial institution can be also changed for a Liability contract. When this application is processed, balances of main contracts in the source financial institution and target financial institution are recalculated automatically. | |



| Name | Value | Description | UFX element |
|-----------------------|-----------------|---|-----------------------------|
| ChangeInstitutionType | "B" "C" "N" "I" | The tag determines how the financial institution will be identified when changing the institution for a contract: • "B" – institution identified by branch_code field value (default). • "C" – institution identified by cb_code field value. • "N" – institution identified by bank_code field value. • "I" – institution identified by id field value. This tag is used together with the ChangeInstitution tag allowing a financial institution to be changed for a contract. | <application></application> |

| Name | Value | Description | UFX element |
|----------------------|------------|---|--|
| ResetCurrentCounters | "Yes" "No" | The tag makes it possible to reset the counter of the usage limiter to which the application belongs. | |
| | | | <pre><application></application></pre> |



| Name | Value | Description | UFX element |
|----------------------|---|---|---|
| ErasePIN | "Yes" "No" | The tag makes it possible to clear a card's PIN by using an application. | <producecard></producecard> |
| MOBILE_CONTRACT_ID T | <identification code="" scheme="" type=""></identification> | The MOBILE_CONTRACT_IDT tag is used to synchronise the identification scheme used to search for a contract if an application was used to change the client's phone number. The new identification scheme is created for the card contract that is currently active if an application to change the client's address with the corresponding address type was created. The code for the identification scheme type (Authentication Module →Identification Types) is set in the tag. If the tag value is not set, the default value "SMS" is used. | The tag is specified in the address type in the <i>Add Info</i> field of the Address Types table (Full → Configuration Setup → Client Classifiers → Address Types). The code for the identification scheme type (Authentication Module → Identification Types) is set in the tag. |



| Name | Value | Description | UFX element |
|-----------------|---------------------------------------|--|--|
| DuplicateCount | <number duplicates="" of=""></number> | Used when an application (and child applications) is duplicated, for example, when several identical cards must be created. | |
| | | | <application> <objecttype>Card</objecttype> <data></data> <adddata> <duplicatecount>10</duplicatecount> </adddata> </application> |
| CardinitialLock | "Yes" | When the value is "Yes", a plastic that has been created gets the "Locked" status. It is recommended to use this setting in card subtypes. | Use for applications with the "Card"or "Contract" object type ("Data/Contract/ProductionParms"). In UFX format this tag is sent as: |
| | | | <application> <objecttype>Card</objecttype> <data></data> <adddata> <cardinitiallock>Yes</cardinitiallock> </adddata> </application> |

| Name | Value | Description | UFX element |
|-------------------------|-------------|--|--|
| Name ChangeServiceGroup | Value "Yes" | Used to enable inheritance of a client's Service Group to all this client's contracts. Inheritance works to clear the Service Group field and to fill it in. | The Service Group field is filled in with: <pre></pre> |
| | | | <addinfo> <changeservicegroup>Yes </changeservicegroup> </addinfo> |
| | | | To clear the Service Group field: |



| Name | Value | Description | UFX element |
|----------------|------------|---|---|
| | | | <application> <objecttype>Client</objecttype> <actiontype>Update</actiontype> <data> <client> <servicegroup>*#N</servicegroup> <addinfo> <changeservicegroup>Yes<!-- ChangeServiceGroup--> </changeservicegroup></addinfo> </client> </data> </application> |
| EXPLICIT_PARMS | "Yes" "No" | When the value is "Y", device parameters (DeviceParms) will be saved for an acquiring contract in the device_parms table. Otherwise, the <devicedocparms> section without the <channel> element will be inherited by a contract without creating a record in the device_parms table. For device contracts, this section is always saved in the device_parms table.</channel></devicedocparms> | <contract></contract> |

| Name | Value | Description | UFX element |
|-----------------------------------|-------|---|---|
| Name ProhibitDevParmsInheri tance | "Yes" | Description When the value is "Y", all device parameters (DeviceParms) for an acquiring contract will be deleted. Possible messages when processing the application: • "Device Parameters overrides can only be deleted from acquiring contract" – this message appears if the tag to delete device parameters was added fora device contract, not an acquiring contract. • "Device Parameters can not be set and cancelled concurrently" – this message appears if the application contains both the tag and records for creating device parameters. | <pre> <application></application></pre> |

10.2 Managing Custom Tags when Processing Applications

Applications must be used to enter and modify tags in fields from the "List of fields that support tags, to which control structures are applicable when processing applications" table in the section "Tags used in application processing".

When importing applications, custom tags are edited using special control structures "TAG=Y;" and "TAGS_TO_REMOVE".

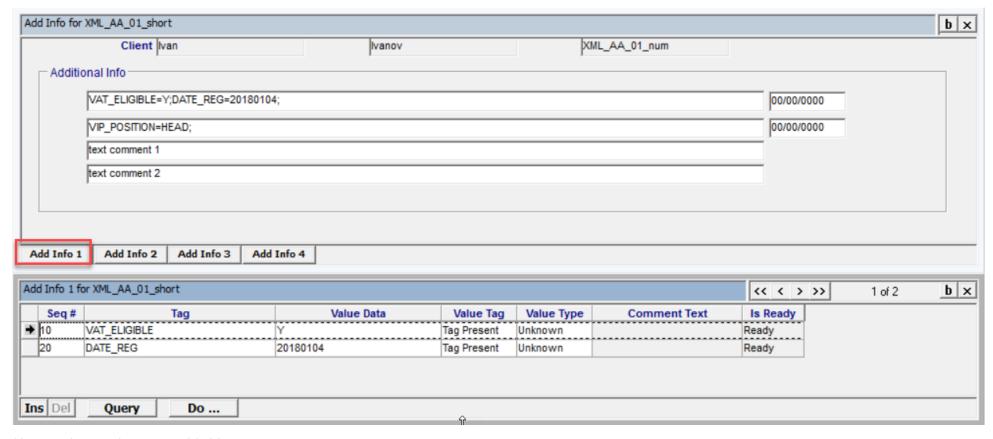
10.2.1 Example of adding tags using an application to create a client record

In this example, a new client record is created with tag fields that are filled in. Tags are specified without spaces, and a semicolon ";" is used after each tag name. If this syntax is not observed, the field will be interpreted as a text field.

```
<Application>
    <RegNumber>...</RegNumber>
    <ObjectType>Client</ObjectType>
    <ActionType>Add</ActionType>
    <Data>
        <Client>
            <ClientType>...</ClientType>
            <ClientInfo>
            </ClientInfo>
            <AddInfo>
                <addinfo01>TAG=Y; VAT_ELIGIBLE=Y; DATE_REG=20180104; </addinfo01>
                <AddInfo02>VIP_POSITION=HEAD;</AddInfo02>
                <AddInfo03>text comment 1</AddInfo03>
                <AddInfo04>text comment 2</AddInfo04>
            </AddInfo>
        </Client>
    </Data>
</Application>
```

When this application is imported, a client record will be created for which client tagged fields are filled in: the *AddInfo01* and *AddInfo02* fields will be shown as tagged fields, and the *AddInfo03* and *AddInfo04* fields will be represented as text fields (see figure).





Showing data in client tagged fields



When an application to add a new record is imported (*Action Type* = "Add"), it is not mandatory to use the control structure "TAG=Y;" when importing data to tagged fields. In the example above, tagged data are passed to the *AddInfo01* and *AddInfo02* fields and the structure "TAG=Y;" is only used for the *AddInfo01* field, even though data in both fields will be shown in the screen form as tags (see figure).



10.2.2 Example of using the "TAG=Y;" control structure

The "TAG=Y;" control structure is used to change tags in the fields from the "List of fields that support tags, to which control structures are applicable when processing applications" table in the section "Tags used in application processing". The structure can be used when importing an application to change a record (*Action Type* = "Update"/"AddOrUpdate").



When an application to add a new record is imported (*Action Type* = "Add"), it is not mandatory to use the control structure "TAG=Y;" when importing data to tagged fields.

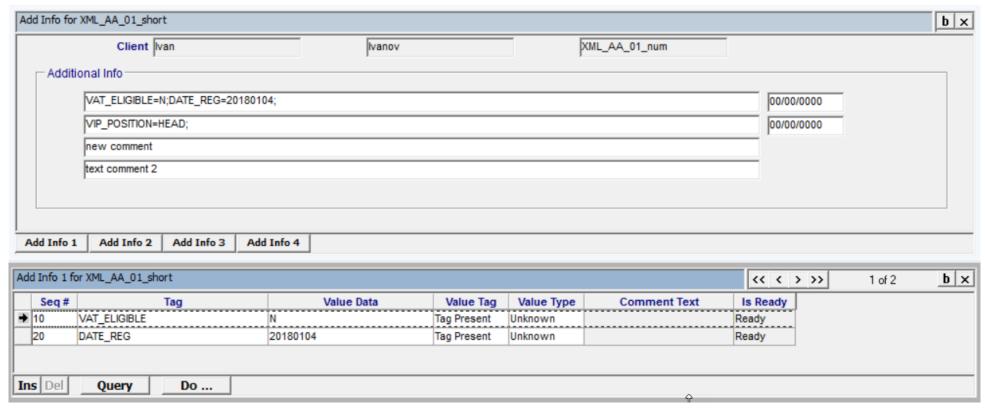
Tags are specified without spaces, and a semicolon ";" is used after each tag name. If this syntax is not observed, the field will be interpreted as a text field:

TAG=Y;Tag1=Value1;...;TagN=ValueN;

The example below shows changing of the client record created in the example described in the section "Example of adding tags using an application to create a client record":

```
<Application>
    <RegNumber>...</RegNumber>
    <OrderDprt>0101</OrderDprt>
    <ObjectType>Client</ObjectType>
    <ActionType>Update</ActionType>
    <ObjectFor>
        <ClientIDT>
            <ClientInfo>
                <ClientNumber>...</ClientNumber>
                <ShortName>XML_AA_01_short
            </ClientInfo>
        </ClientIDT>
    </ObjectFor>
    <Data>
        <Client>
            <AddInfo>
                 <AddInfo01>TAG=Y; VAT_ELIGIBLE=N</AddInfo01>
                 <AddInfo03>new comment</AddInfo03>
            </AddInfo>
        </Client>
    </Data>
</Application>
```

As a result of import, the client record's *AddInfo01* and *AddInfo03* tagged fields will be updated. In the *AddInfo01* field, the value of one tag will change ("VAT_ELIGIBLE=N;"). The text in the *AddInfo03* field will change (see figure).



Showing data in client tagged fields after a client record has changed



It is not recommended to change the format of data (text or tagged) that was first used when data were entered in a field that supports tags. For example, if the field was initially filled in as a text field, if data must be changed in this field, only text format can be used for data.



10.2.3 Example of using the "TAGS_TO_REMOVE" control structure

The "TAGS_TO_REMOVE" control structure is used to delete tags in the fields from the "List of fields that support tags, to which control structures are applicable when processing applications" table in the section "Tags used in application processing". This structure can be used when importing an application to change a record (*Action Type* = "Update"/"AddOrUpdate").

The "TAGS_TO_REMOVE" control structure is used in pair with the "TAG=Y;" control structure (indicator that the field contains tags). Tags are specified without spaces, and a semicolon ";" is used after each tag name. If this syntax is not observed, the field will be interpreted as a text field:

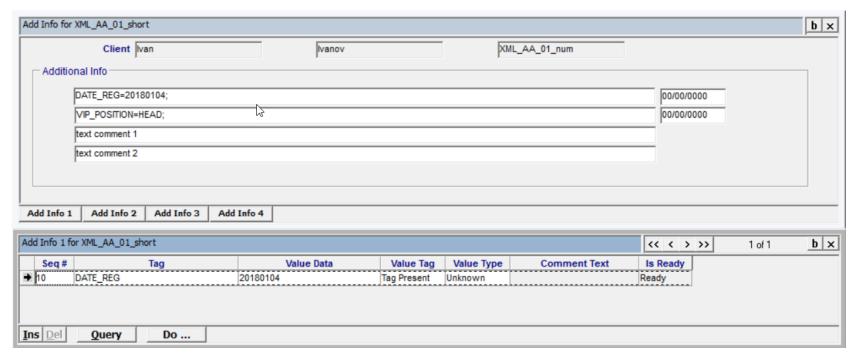
TAG=Y;TAGS_TO_REMOVE=Tag1;TagN;

This example shows changing of the client record created in the example described in the section "Example of adding tags using an application to create a client record". The "VAT_ELIGIBLE;" tag must be deleted from the *AddInfo01* tagged field:



```
<Application>
    <RegNumber>...</RegNumber>
   <OrderDprt>0101</OrderDprt>
    <ObjectType>Client</ObjectType>
   <ActionType>Update</ActionType>
    <ObjectFor>
        <ClientIDT>
            <ClientInfo>
               <ClientNumber>...</ClientNumber>
               <ShortName>XML_AA_01_short
           </ClientInfo>
        </ClientIDT>
   </ObjectFor>
    <Data>
        <Client>
            <AddInfo>
                 <AddInfo01>TAG=Y;TAGS_TO_REMOVE=VAT_ELIGIBLE;</AddInfo01>
            </AddInfo>
        </Client>
    </Data>
</Application>
```

When this application is imported, the client tagged field *AddInfo01* will be updated. The "VAT_ELIGIBLE=Y;" tag will be deleted from the list of tags in this field (see figure).



Showing data in client tagged fields after a client record has changed