Bg Link 2.0

Service Interface

2.0.12

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Contents

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Revision history

Version	Date	Author	Comment
p2.0.1	2014-05-14		Started on content
P2.0.5	2014-08-18		Filedata must be Base64 encoded.
P2.0.9	2016-02-03		Added Progress status for mobile BankID and property Civic Number for Logon request
2.0.11	2016-05-02	Kenneth Jansson	Revised version. Minor updates to description of Request-parameter for LogonRequest.
2.0.12	2017-10-10		UploadCompressedFile chapter added.

References

No	Document	Description
1	Bg Link 2.0 – Programmers guide	Guide for client application developers

1 Environments

1.1 Test environment
The Bg Link 2.0 test environment is published at:
https://www.bt.bglinkws.bgonline.se/WebService/BgLinkService.svc

1.2 Production environment
The Bg Link 2.0 production environment is published at:
https://www.bglinkws.bgonline.se/WebService/BgLinkService.svc

2 Message structure

2.1 Requests
All request types follows the same structure. The request contains 2 properties. The first one is a RequestContext object and the other one is an inner Request object of different type for each operation containing the input parameters for the operation.

Request
- Context : RequestContext
- Request: object

2.1.1 RequestContext

Property	Type	Description
MessageId	Guid	A unique id for each message.
ProgramId	string	An identification string for the client application. Used when searching logs.
SessionId	string	The sessionId received on Logon. Not mandatory when calling Logon.
Timestamp	DateTime	The time the request is made.

2.2 Responses
All response types follow the same structure. The response contains 2 properties. The first one is a ResponseContext object and the other one is an inner response object of different type for each operation containing the output parameters for the operation.

Response
- Context : ResponseContext
- Response: object

2.2.1   ResponseContext

Property	Type	Description
MessageId	Guid	A unique id for each message.
CorrelationId	string	The request message id.
RelatedSessionId	Guid	A GUID that is used for all calls within the same session and is used for logging in the service. Use this reference when reporting errors to Bankgirot.
StatusCode	Enum: StatusCodeType	ACK = the operation succeeded. NACK = the operation failed, see fault object.
Timestamp	DateTime	The time the request is made.
Fault	FaultType	A fault object describing the fault with an error code and a message. There may be more info in the PropertyBag of the fault. Time and ProgramId is present in all faults.

File validation and file content authorization errors is stored as sub error in the SubFaultBag. |
| **SessionId** | string | The sessionId for the session. |

2.2.1.1   ERROR CODES

Error Code	Description
BgLinkErr_General	A general error occurred.

The PropertyBag contains:
Time, ProgramId |
| BgLinkErr_NotAuthorized | The user does not have user rights for the requested operation or if the certificate policy of an involved Bank does not support the certificate issuer used.

The PropertyBag contains:
Time, ProgramId, UserCA, UserCivicNumber, Info |
| BgLinkErr_UnauthorizedPayment | The user does not have user rights for the payments in the file.

The PropertyBag contains:
Time, ProgramId, User, CustomerNumber/SBNumber, Product and **Info.**

The SubFaultBag contains one or several of these sub faults.

SubFaultUnauthorizedForCustomerNumber
SubFaultInvalidCustomerNumber |

	SubFaultUnauthorizedForBgNumber SubFaultInvalidBgNumber
BgLinkErr_FileErrorInvalidTransitF ile	The file is not recognized as a valid transit file. The PropertyBag contains: **Time**, **ProgramId**, **User**, **CustomerNumber/SBNumber**, **Product**, **Info**, **OriginalProduct**
BgLinkErr_FileErrorInvalidProduct	The specified product is not recognized. The PropertyBag contains: **Time**, **ProgramId**, **User**, **CustomerNumber/SBNumber**, **Product**, **Info**, **FileType**
BgLinkErr_FileErrorMismatchingProd ucts	The specified product is not the same as the actual product used. The PropertyBag contains: **Time**, **ProgramId**, **User**, **CustomerNumber/SBNumber**, **Product**, **Info**, **FileType**
BgLinkErr_FileErrorInvalidProductF orServiceBureau	The specified product cannot be used by a service bureau. The PropertyBag contains: **Time**, **ProgramId**, **User**, **CustomerNumber/SBNumber**, **Product**, **Info**
BgLinkErr_FileErrorNotBase64	The uploaded file is not in base64 format. The PropertyBag contains: **Time**, **ProgramId**, **User**, **CustomerNumber/SBNumber**, **Product**, **Info**
BgLinkErr_FileErrorInvalidSize	The file is larger than the allowed maximum size. The PropertyBag contains: **Time**, **ProgramId**, **User**, **CustomerNumber/SBNumber**, **Product**, **Info**, **MaxSize**, **Size**
BgLinkErr_FileValidationError	Validation of the file content failed at file level. The PropertyBag contains: **Time**, **ProgramId**, **User**, **CustomerNumber/SBNumber**, **Product**, **Info** The SubFaultBag contains one of these sub faults. **BGNumberError** **CountError** **DateError** **EmptyFile** **EmptyRecord** **EndRecError** **LayoutError1_2**

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	LayoutError2_1 MaxCountReached Mod10Error NumError CivicNrError RangeError RecordLengthError StartStopError StringError SumError UnknownFileType UnknownRecordType UpperCaseError ZeroValueError UnknownError
BgLinkErr_FileFieldValidationError	Validation of the file content failed at field level. The PropertyBag contains: **Time**, **ProgramId**, **User**, **CustomerNumber/SBNumber**, **Product**, **Info** The SubFaultBag contains one of these sub faults. **BGNumberError** **CountError** **DateError** **EmptyFile** **EmptyRecord** **EndRecError** **LayoutError1_2** **LayoutError2_1** **MaxCountReached** **Mod10Error** **NumError** **CivicNrError** **RangeError** **RecordLengthError** **StartStopError** **StringError** **SumError** **UnknownFileType** **UnknownRecordType** **UpperCaseError** **ZeroValueError** **UnknownError**
BgLinkErr_FileSummaryError	The file validation failed with unspecified reason. The PropertyBag contains: **Time**, **ProgramId**, **User**, **CustomerNumber/SBNumber**, **Product**, **Info**
BgLinkErr_SignatureError	The digital signature could not be verified. The PropertyBag contains:

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	Time, **ProgramId**, **User**, **CustomerNumber/SBNumber**, **Product**, **Info**
`BgLinkErr_CivicNumberMismatch`	The civic number of the logged in user and the signing user does not match. The PropertyBag contains: **Time**, **ProgramId**, **User**, **SigningUserCivicNumber**, **Info**
`BgLinkErr_InvalidCA`	The involved Bank for a payment row does not support the used certificate. The PropertyBag contains: **Time**, **ProgramId**, **User**, **CustomerNumber/SBNumber**, **Product**, **Info** The SubFaultBag contains one or several of these sub faults. **SubFaultNoHclnrForCustomerNumber** **SubFaultNoHclnrForBgNumber** **SubFaultCANotInPolicyRegister**
BgLinkErr_AllocatingFileError	A technical error occurred when downloading file. The PropertyBag contains: **Time**, **ProgramId**, **FileId**
BgLinkErr_TapeFileError	A technical error occurred when downloading file, the file is archived and will be available in some minutes. The PropertyBag contains: **Time**, **ProgramId**, **FileId**
BgLinkErr_NotExpectedStatus	A technical error occurred when downloading file, the file cannot be downloaded due to its status. The PropertyBag contains: **Time**, **ProgramId**, **FileId**
`BgLinkErr_InvalidNumberOfSigners`	The given number of signers is not valid. The PropertyBag contains: **Time, ProgramId, User, CustomerNumber/SBNumber, Product, Info, MinNoSigners, MaxNoSigners, NoSigners**
`BgLinkErr_FileNotFound`	The file id specified was not found. The PropertyBag contains:

	Time, **ProgramId**, **FileId**
BgLinkErr_AuthenticateError	The Auth-call to BankID's central server failed. The PropertyBag contains: **Time**, **ProgramId**, **FaultCode, Error**
BgLinkErr_SignError	The Sign-call to BankID's central server failed. The PropertyBag contains: **Time**, **ProgramId**, **FaultCode, Error**
BgLinkErr_CollectError	The Collect-call to BankID's central server failed. The PropertyBag contains: **Time**, **ProgramId**, **FaultCode, Error**
BgLinkErr_InternalError	An internal error has occurred. The PropertyBag contains: **Time**, **ProgramId**
BgLinkErr_InvalidSessionId	The given Session ID the request context is not valid. The PropertyBag contains: **Time**, **ProgramId**
BgLinkErr_UserRightsNotLoaded	The user is not logged on. The PropertyBag contains: **Time**, **ProgramId**, **SessionId**
BgLinkErr_InvalidProgramId	The given Program ID the request context is not valid. The PropertyBag contains: **Time**, **ProgramId**, **MaxLength**
BgLinkErr_InvalidMessageId	The given Message ID the request context is not valid. The PropertyBag contains: **Time**, **ProgramId**, **Value**
BgLinkErr_UnknownUser	The given civic number does not have any user rights. The PropertyBag contains: **Time**, **ProgramId**, **CivicNumber**

BgLinkErr_MultipleSignAttempt	The user tries to sign the same file multiple times. The PropertyBag contains: **Time**, **ProgramId**, **FileId, Name, CivicNumber**

2.2.1.2 SUB FAULT CODES

Error Code	Description
SubFaultUnauthorizedForCustomerNumber	The user is not authorized for customer number in file. The sub fault property bag contains: **Row, CustomerNumber**
SubFaultInvalidCustomerNumber	Invalid customer number in file. The sub fault property bag contains: **Row, CustomerNumber**
SubFaultUnauthorizedForBgNumber	The user is not authorized for Bankgiro number in file. The sub fault property bag contains: **Row, BgNumber**
SubFaultInvalidBgNumber	Invalid Bankgiro number in file. The sub fault property bag contains: **Row, BgNumber**
SubFaultNoHclnrForCustomerNumber	Hclnr for customer number is missing. The sub fault property bag contains: **Row, CustomerNumber**
SubFaultNoHclnrForBgNumber	Hclnr for Bankgiro number is missing. The sub fault property bag contains: **Row, BgNumber**
SubFaultCANotInPolicyRegister	The certificate is not in the policy register. The sub fault property bag contains: **Row, CA, Hclnr**
BGNumberError	File content validation error. Bankgiro number is missing. The sub fault property bag contains: **Row, Field (If FileFieldValidationError)**
CountError	File content validation error. The number of records is incorrect.

	The sub fault property bag contains: **Row, Field (If FileFieldValidationError)**
DateError	File content validation error. The field does not contain a valid date. The sub fault property bag contains: **Row, Field (If FileFieldValidationError)**
EmptyFile	File content validation error. The file is empty. The sub fault property bag contains: **Row, Field (If FileFieldValidationError)**
EmptyRecord	File content validation error. Found an empty row. Empty rows are not allowed. The sub fault property bag contains: **Row, Field (If FileFieldValidationError)**
EndRecError	File content validation error. The file lacks a closing record. The sub fault property bag contains: **Row, Field (If FileFieldValidationError)**
LayoutError1_2	File content validation error. Invalid Bankgiro number. Check that the closing record has layout code 1 (for seven digit Bankgiro numbers). The sub fault property bag contains: **Row, Field (If FileFieldValidationError)**
LayoutError2_1	File content validation error. Invalid Bankgiro number. Check that the closing record has layout code 2 (for eight digit Bankgiro numbers). The sub fault property bag contains: **Row, Field (If FileFieldValidationError)**
MaxCountReached	File content validation error. There are too many occurrences of a record type. The sub fault property bag contains: **Row, Field (If FileFieldValidationError)**
Mod10Error	File content validation error. The control digit is incorrect. The sub fault property bag contains: **Row, Field (If FileFieldValidationError)**
NumError	File content validation error. The field may only contain numbers. The sub fault property bag contains: **Row, Field (If FileFieldValidationError)**

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CivicNrError	File content validation error. The civic number is not valid. The sub fault property bag contains: **Row, Field (If FileFieldValidationError)**
RangeError	File content validation error. The fields value is outside the valid range The sub fault property bag contains: **Row, Field (If FileFieldValidationError)**
RecordLengthError	File content validation error. Row is too long. It contains more characters than s allowed. The sub fault property bag contains: **Row, Field (If FileFieldValidationError)**
StartStopError	File content validation error. The number of open records does not match the number of closing records. The sub fault property bag contains: **Row, Field (If FileFieldValidationError)**
StringError	File content validation error. The field does not contain a valid string. The sub fault property bag contains: **Row, Field (If FileFieldValidationError)**
SumError	File content validation error. The summary is not correct. The sub fault property bag contains: **Row, Field (If FileFieldValidationError)**
UnknownFileType	File content validation error. Unknown file type. The sub fault property bag contains: **Row, Field (If FileFieldValidationError)**
UnknownRecordType	File content validation error. Unknown record. The sub fault property bag contains: **Row, Field (If FileFieldValidationError)**
UpperCaseError	File content validation error. The field may only contain uppercase letters. The sub fault property bag contains: **Row, Field (If FileFieldValidationError)**
ZeroValueError	File content validation error. The field contains value null or zero, this is not allowed. The sub fault property bag contains:

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	Row, Field (If FileFieldValidationError)
UnknownError	File content validation error. Unexpected error. The sub fault property bag contains: **Row, Field (If FileFieldValidationError)**

2.2.1.3 PROGRESSSTATUS
During Logon, UploadFile, UploadCompressedFile and SignFile a progress status is returned when calling the collect operations. The possible progress status values are:

ProgressStatus	Description
ProgressStatusType.OUTSTANDING_TRANSACTION	ok, login/sign is ongoing with BankID on file, keep calling Collect.
ProgressStatusType.OUTSTANDING_TRANSACTION_MOBILE	ok, login/sign is ongoing with mobile BankdID, keep calling Collect.
ProgressStatusType.NO_CLIENT	Error: no BankID application on the machine
ProgressStatusType.STARTED	ok, login/sign is ongoing with BankID, keep calling Collect.
ProgressStatusType.USER_SIGN	ok, login/sign is ongoing (client application is started), keep calling Collect.
ProgressStatusType.USER_REQ	not used
ProgressStatusType.COMPLETE	ok, the logon/sign is complete
ProgressStatusType.UNKNOWN	The status received from BankID is not known by Bg Link.

3 Operations

3.1 Logon
The logon operation shall be called before any other operation is called in one session. The operation starts the logon process and returns a session id that shall be used in all other operation calls. The logon is not complete until CollectLogon operation returns status COMPLETE. See CollectLogon operation below.

3.1.1 Logon request

Note: LogonRequest should have the Request-parameter initialized even if CivicNo is left empty.

Property	Type	Description
CivicNo	string	**Optional**. Civic number needed for mobile BankID logon.

3.1.2 Logon response

Property	Type	Description
AutoStartToken	string	The autostartToken needed for starting the BankID application.
OrderReference	string	A reference for the ongoing BankID operation. Used when polling for status. See (CollectLogon operation).

Except for the response parameters the session id property in the response context shall be fetched to be used in all other calls to Bg Link Web Service.

3.2 CollectLogon

After the logon operation is called and the BankID application is started with the AutoStartToken received in the Logon response, the collect logon operation shall be called every 2 seconds until it returns status COMPLETE. When status COMPLETE is returned the session is started and the user is logged on.

3.2.1 CollectLogon request

Property	Type	Description
OrderReference	string	A reference for the ongoing BankID operation. Use the value returned by the Logon operation.

3.2.2 CollectLogon response

Property	Type	Description
ProgressStatus	string	The status received from the BankID's central server. See ProgressStatus section above.

3.3 Logout

The logout operation shall be called when the user of the client application ends a session.

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3.3.1   Logout request

The request does not contain any other input parameters than the ones in the request context.

3.3.2   Logout response

The response does not contain any other output parameters than the ones in the response context.

3.4   GetUserRights

GetUserRights returns all user rights for the user that is logged on in the session.

3.4.1   GetUserRights request

The request does not contain any other input parameters than the ones in the request context.

3.4.2   GetUserRights response

Property	Type	Description
UserRights	UserRights	An object containing all user rights. See description below.

UserRights
    UserName : string
    CivicNumber : string
    Roles : **Role**[]
        Id : string   (d | u | s)
        Name : string
        Products : **Product**[]
            Id : string
            Type : ProductType   (LB | AGN | KI | ...)
            Name : string
            Customers : **Customer**[]
                Id : string   Customer number or Service bureau number
                Name : string
                Info : string   Customer number if Id is a service bureau number
                BgNumbers : **BgNumber**[]
                    Id : string   The bg number
                    Name : string
                    Hclnr : string   The bank. For example 6000
                    IsDefault : bool
                    IsServiceBureauAttest : bool

3.5   UploadFile

The UploadFile operation starts a file upload process. The file upload process is not complete until status COMPLETE is returned when calling CollectUpload operation (see below).

3.5.1   UploadFile request

Property	Type	Description
File	FileUpload	An object containing the file upload details.

FileUpload object

Property	Type	Description
Data	byte[]	Base-64 encoded file data.
SignFlag	bool	The file is to be signed together with the upload.
TestFlag	bool	The file is a test file.
Product	ProductType	The product type of the file. LB | KI | AGN | SUS | FHO…
CustomerNumber	string	The customer number for the customer sending the file.
NumberOfRequestedSigners	int	The number of signers needed for the file to be approved.
Filename	string	The name of the file.

3.5.2   UploadFile response

Property	Type	Description
AutoStartToken	string	The autostartToken needed for starting the BankID application.
OrderReference	string	A reference for the ongoing BankID operation. Used when polling for status. See (CollectUpload operation).

3.6   UploadCompressedFile
The UploadCompressedFile operation starts a file upload process. The file upload process is not complete until status COMPLETE is returned when calling CollectUpload operation (see below).

3.6.1   UploadFile request

Property	Type	Description
File	FileUpload	An object containing the file upload details.

FileUpload object

Property	Type	Description
Data	byte[]	Gzip compressed and base-64 encoded file data. Note that the data is required to be compressed before encoded.
SignFlag	bool	The file is to be signed together with the upload.
TestFlag	bool	The file is a test file.
Product	ProductType	The product type of the file. LB | KI | AGN | SUS | FHO…
CustomerNumber	string	The customer number for the

		customer sending the file.
NumberOfRequestedSigners	int	The number of signers needed for the file to be approved.
Filename	string	The name of the file.

3.6.2 UploadFile response

Property	Type	Description
AutoStartToken	string	The autostartToken needed for starting the BankID application.
OrderReference	string	A reference for the ongoing BankID operation. Used when polling for status. See (CollectUpload operation).

3.7 CollectUpload

After the UploadFile operation is called and the BankID application is started, the CollectUpload operation shall be called every 2 seconds until it returns status COMPLETE. When status COMPLETE is returned the file is uploaded.

3.7.1 CollectUpload request

Property	Type	Description
OrderReference	string	A reference for the ongoing BankID operation. Use the value returned by the UploadFile operation.

3.7.2 CollectUpload response

Property	Type	Description
ProgressStatus	string	The status received from the BankID's central server. See ProgressStatus section above.
FileId	long	The id of the uploaded file. This value is only set if ProgressStatus is COMPLETE.

3.8 SignFile

The SignFile operation starts a file signing process. The file sign process is not complete until status COMPLETE is returned when calling CollectSign operation (see below).

3.8.1 SignFile request

Property	Type	Description
FileId	long	The id of the file to sign.

3.8.2 SignFile response

Property	Type	Description
AutoStartToken	string	The autostartToken needed for starting the BankID application.
OrderReference	string	A reference for the ongoing BankID operation. Used when polling for status. See (CollectSign operation).

3.9 CollectSign

After the SignFile operation is called and the BankID application is started, the CollectSign operation shall be called every 2 seconds until it returns status COMPLETE. When status COMPLETE is returned the file is signed.

3.9.1 CollectSign request

Property	Type	Description
OrderReference	string	A reference for the ongoing BankID operation. Use the value returned by the SignFile operation.

3.9.2 CollectSign response

Property	Type	Description
ProgressStatus	string	The status received from the BankID's central server. See ProgressStatus section above.

3.10 GetUploadedFiles

The GetUploadedFiles operation returns info about all files which the user has user rights to upload or sign.

3.10.1 GetUploadedFiles request

The request does not contain any other input parameters than the ones in the request context.

3.10.2 GetUploadedFiles response

Property	Type	Description
Files	FileInfo[]	Array that contains files which have status set to Stopped, deleted, or in-process.
ProcessedFiles	FileInfoProcessed[]	Array that contains files which have status set to approved.
PendingFiles	FileInfoWaiting[]	Array that contains files which have status set to pending.

FileInfo

Property	Type	Description
FileId	long	The id of the file.
CustomerNumber	string	The customer number for the customer which earlier uploaded the file.
Product	Product	The product type of the file.
IsTestFile	bool	IsTestFile is set to true if the file is a test file.
StatusCode	StatusCode	File status.
DeliveryDateTime	DateTime	Time when file was uploaded.
IsDownloadable	bool	IsDownloadable is set to true if the file can be downloaded.

StatusCode

Property	Type	Description
FileStatus	StatusCategory	File status. Pending, InProcess, Approved, Stopped, or Deleted.
StatusType	StatusType	File status type, UploadedFiles or ResultFiles.

FileInfoProcessed : FileInfo

Property	Type	Description
TotalFileAmount	decimal	Total amount in file.

FileInfoWaiting : FileInfo

Property	Type	Description
SignatureRequested	int	Number of requested signatures.

SignaturePerformed	int	Number of performed signatures.
SignerInfo	SignatureInfo	File was uploaded and signed at the same time.
NonSignerInfo	SignatureInfo	File was uploaded and not signed at the same time. NonSignerInfo contains the uploader and the upload time.
SignersInfo	SignatureInfo[]	File signatures.
FileSummaryRows	FileSummaryRow[]	File summary records.

SignatureInfo

Property	Type	Description
SignedDate	DateTime	Time of signature or upload.
Person	Person	The signer or uploader.

Person

Property	Type	Description
Name	string	The name of the person
CivicNumber	string	The civic number of the person.

FileSummaryRow

Property	Type	Description
Account	string	Account information, Bankgiro number or customer number
Category	string	
FileSummaryRowType	string	Row type, "BGNumber" or "CustomerNumber"
Count	int	Row number
AmountInfo	Currency	The currency

Currency

Property	Type	Description
CurrencyCode	string	Currency code
Value	decimal	Amount

3.11   GetResultFiles

The GetUploadedFiles operation returns info about all files which the user has user rights to download.

3.11.1 GetResultFiles request

The request does not contain any other input parameters than the ones in the request context.

3.11.2 GetResultFiles response

Property	Type	Description
Files	FileInfoResult[]	Array of result files

FileInfoResult

Property	Type	Description
FileId	long	The id of the file
CustomerNumber	string	The customer number for the customer who earlier uploaded the file.
Product	Product	The product type of the file.
StatusCode	StatusCode	File status
DeliveryDateTime	DateTime	Time when file was uploaded.
IsDownloadable	bool	IsDownloadable is set to true if the file can be downloaded.

The Product class is described under GetUploadedFiles.

3.12 DeleteFile

The DeleteFile operation deletes an uploaded file.

3.12.1 DeleteFile request

Property	Type	Description
FileId	long	The id of the file to delete.

3.12.2 DeleteFile response

The response does not contain any other output parameters than the ones in the response context.

3.13 GetFile

Gets the file data of an uploaded file.

3.13.1 GetFile request

Property	Type	Description
FileId	long	The id of the file to delete.

3.13.2 GetFile response

Property	Type	Description
DownloadedFile	DownloadedFile	The downloaded file.

DownloadedFile

Property	Type	Description
MimeType	string	The mime type of the file. For example "text/plain" for a text file.
FileContentBase64	byte[]	The file content as byte-array of the base64 encoded file content.