Customer Acknowledgements – MiFID II/MiFIR Reporting

Published
01.07.2019
Leipzig

Ref. 0001A

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1. Document Administration

1.1 Document Change History

Version	Date	Status	Changes	Author
1	01.07.2019	Initial Document	n/a	Rene Heller Peter Blachnik

2. Introduction

2.1 Aims of this document

This document describes the technical response functionality of the EEX Group MiFID II/MiFIR Data Services. Technical responses are provided for each data file upload and provides feedback on the technical validity of the data file that was uploaded.
In this context, the following aspects will, in particular, be presented:

- Technical details of acknowledgement files
- Technical preconditions and certificate creation
- Content validations and error codes

2.2 Target Group of this document

This document is addressed to reporting participants of the EEX Group MiFID II/MiFIR Data Services.

2.3 Contact details and availability

In case of any question related to the MiFID II/MiFIR Data Services please contact our Reporting Services Team under the following contact details.

Reporting Services
Phone: +49 341 2156 380
E-Mail: reporting-services@eex.com

The Reporting Services Team is usually available from Monday to Friday during market hours. Support will not be provided on TARGET2 holidays.

2.4 Glossary

Term	Definition
EEX	European Energy Exchange AG
GUI	Graphical User Interface
PKI	Public Key Infrastructure
MIC	Market Identification Code
MiFID II	Markets in Financial Instruments Directive (2014/65/EU)
MiFIR	Markets in Financial Instruments Regulation ((EU) No 600/2014)
NCA	National Competent Authority
RRH	Regulatory Reporting Hub of Deutsche Börse AG
XML	Extensible Markup Language
XSD	XML Schema Definition

3. Get Access

3.1 FTP Server

In the context of the existing REMIT and EMIR data services, EEX Group provides an FTP server. This FTP server will also be used for the provision and exchange of data files related to the MiFID II/MiFIR Data Services.

Following are the technical details for this FTP server:

IP address	URL	Type	Traffic control port	Data port range for passive mode
85.239.110.16	rcr.eex.com	FTPS Implicit FTP over TLS	990	50000-55000
		sFTP	22	-

Please note that the FTP server can only be accessed via FTP clients, e.g. WinSCP or FileZilla, but not via an internet browser.

3.1.1 Folder structure

The before mentioned data services FTP has the following folder structure:

Folder Level	Folder Name	Description
First	LEI	First level of the folder structure. Please note: This folder can also include EMIR files related to an existing EMIR data services subscription with EEX Group.
Second	MIFID	Folder containing MiFID II/MiFIR data services related data files.
Third	ACKNOWLEDGEMENT	Folder containing customer acknowledgments for uploaded MiFID II/MiFIR reports.
	ARCHIVE	Folder containing all files positively validated by and imported into the MiFID II/MiFIR data services application.
	ERROR	Folder containing all files which are not positively validated by EEX and not imported by the MiFID II/MiFIR data services application.
	IN	Folder for the amended and encrypted draft reports uploaded by the customer.
	ORDERREPORT	Folder containing order record files.
	OUT	Folder containing all draft reports and the instrument file provided by EEX Group to the customer.

3.1.2 File naming convention

The file naming convention of customer acknowledgments for uploaded position and transaction reports is the following:

<Upload file name>_ACK.xml.enc

Example: MiFIDPosition_ABCEX_NCADE_20190606133655_ACK.xml.enc
MiFIRTransaction_ABCEX_NCADE_20190606133655_ACK.xml.enc

3.2 Decryption of customer acknowledgement files

3.2.1 Preparations

1. Install OpenSSL
2. Download the encrypted file from the FTP
3. Setup the certificate (see point 4. *Manage Certificates – PKI Self-Service platform*)

3.2.2 Convert certificate

1. Open OpenSSL
2. Ensure to have no spaces in your folder and file names
3. Use the following command to convert the PFX file:

openssl pkcs12 –in Filename.pfx –out Filename.pem –nodes

Parameter	Description
-in Filename.pfx	Indicate the pfx file that was created during the certificate creation process.
-out Filename.pem	Indicate the filename and path of the converted PEM coded file, which is to be created.

4. Insert the password that was specified for the PKCS#12

Parameter	Description
Enter Import Password	Indicate the password that was specified during the certificate creation process for the PKCS#12 file (pfx file).

Example:

```
OpenSSL> pkcs12 -in C:\PKI\CustomerPKCS12.pfx -out C:\PKI\CustomerPKCS122.pem -n
odes
Enter Import Password:
MAC verified OK
OpenSSL>
```

3.2.3 Decryption of customer acknowledgment

1. Open OpenSSL
2. Ensure to have no spaces in your folder and file names
3. Use the following command to decrypt the customer acknowledgement

smime -decrypt -inform PEM -in Filename.xml.enc -out Filename.xml.sig -inkey PKCS12_file_of_Customer.pem

Parameter	Description
-in Filename.xml.enc	Indicate the encrypted XML-file, which should be decrypted (exact name and path are required).
-out Filename.xml.sig	Indicate the filename and path of the decrypted, but signed XML-file, which is to be created.
-inkey PKCS12_file_of_Customer.pem	Indicate your PFX-file which contains your private key (exact name and path are required). Please note: The file must be in a PEM coded PKCS#12 format.

Example:

```
OpenSSL> smime -decrypt -inform PEM -in C:\PKI\PositionReportOriginal.xml.enc -o
ut C:\PKI\PositionReportOriginal.xml.sig -inkey C:\PKI\CustomerPKCS12.pem
OpenSSL>
```

3.2.4 Removal of signature

1. Open OpenSSL
2. Ensure to have no spaces in your folder and file names
3. Use the following command to remove the signature of the decrypted file

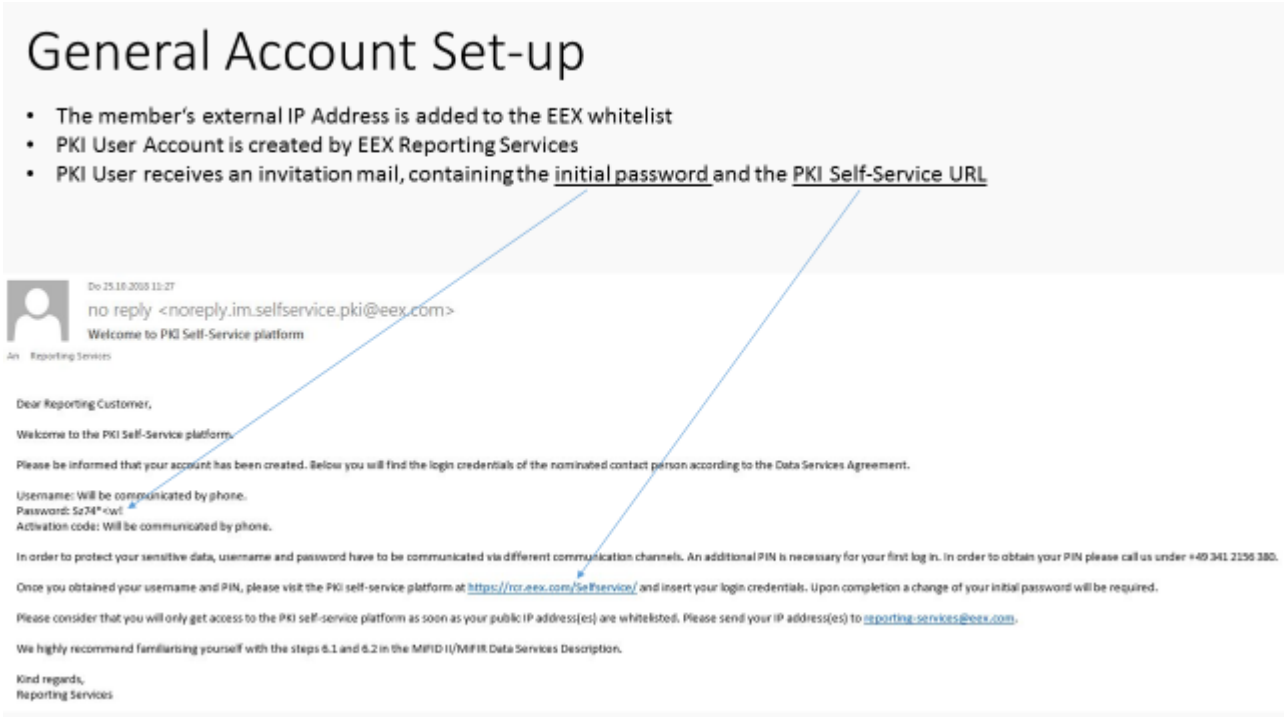
openssl smime -verify –noverify -in Filename.xml.sig -inform PEM -out Filename.xml

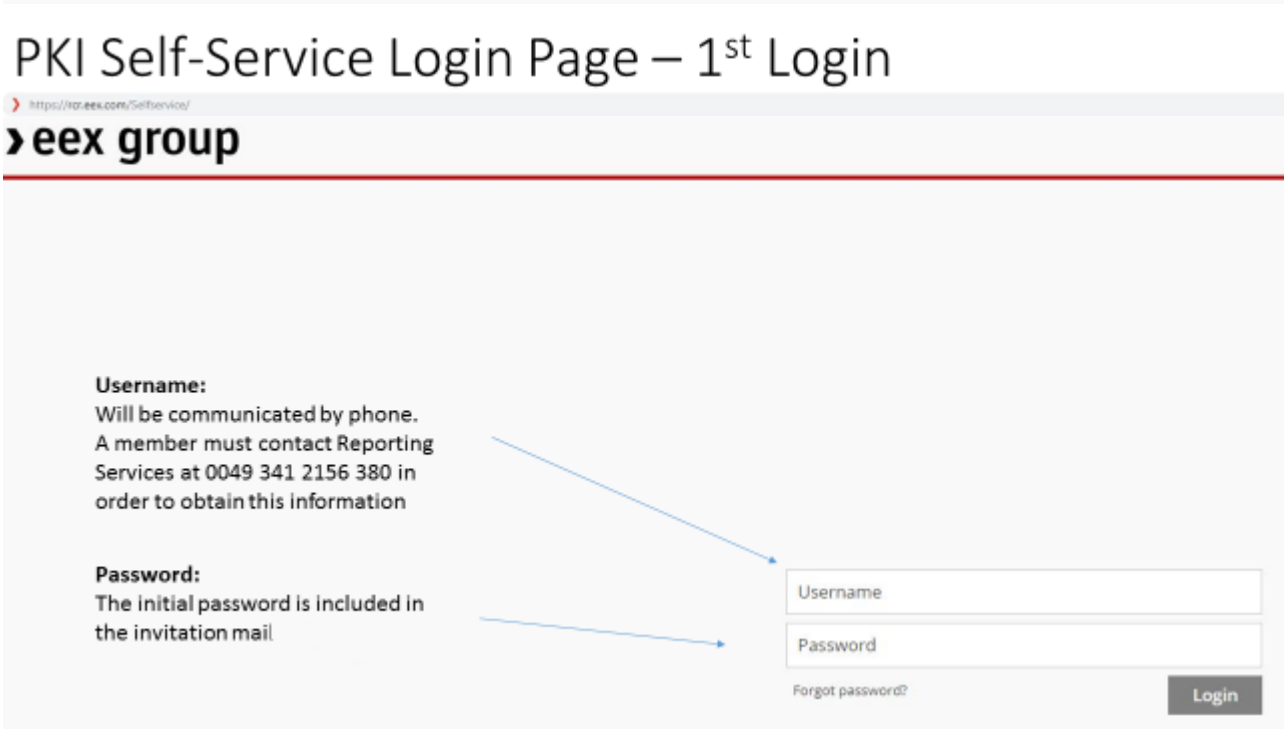
Example:

```
OpenSSL> smime -verify -noverify -in C:\PKI\PositionReportOriginal.xml.sig -info
rm PEM -out C:\PKI\PositionReportOriginal.xml
Verification successful
```

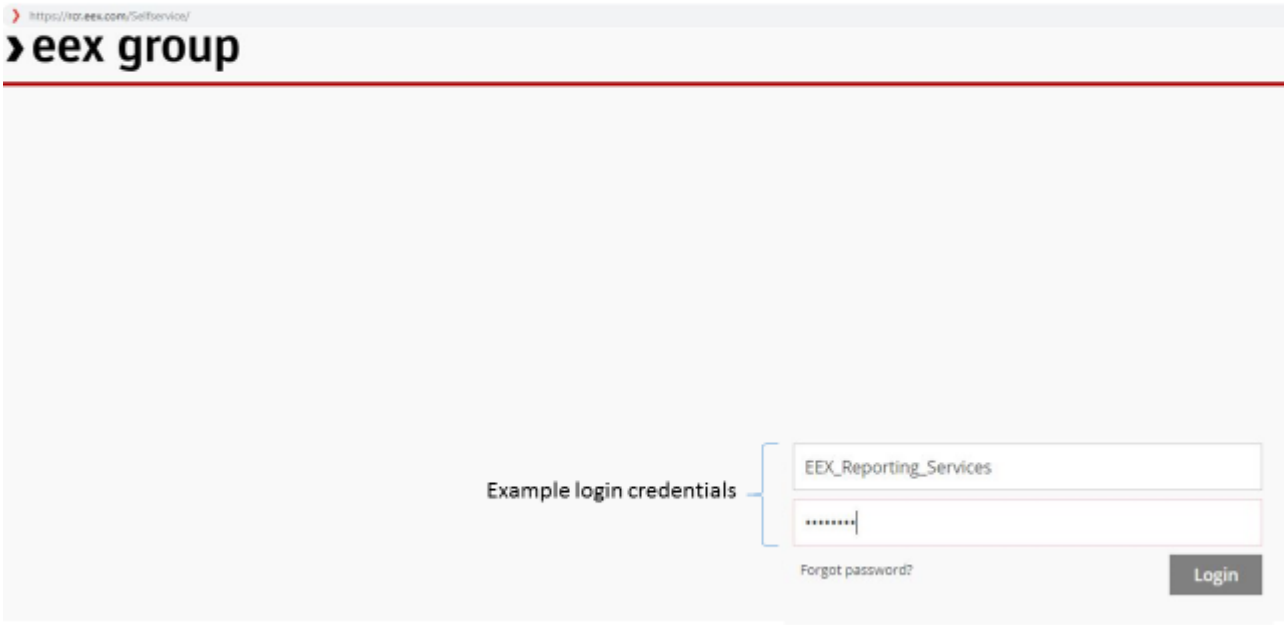
4. Manage Certificates – PKI Self-Service platform

4.1 Account Setup Preconditions

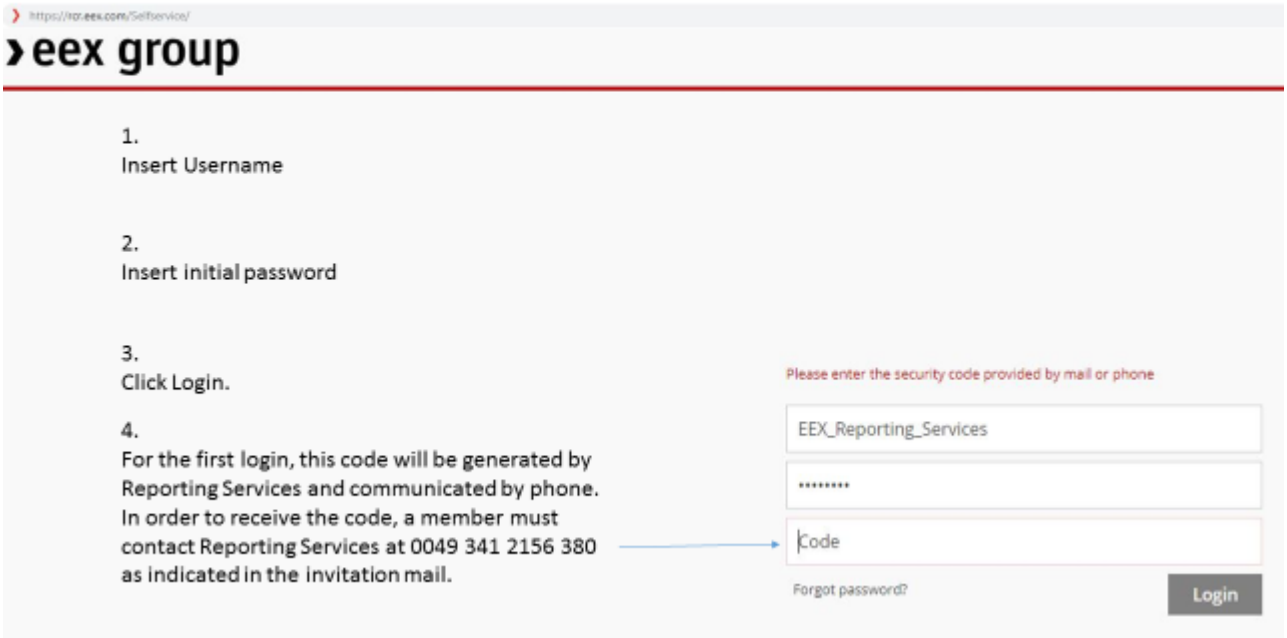




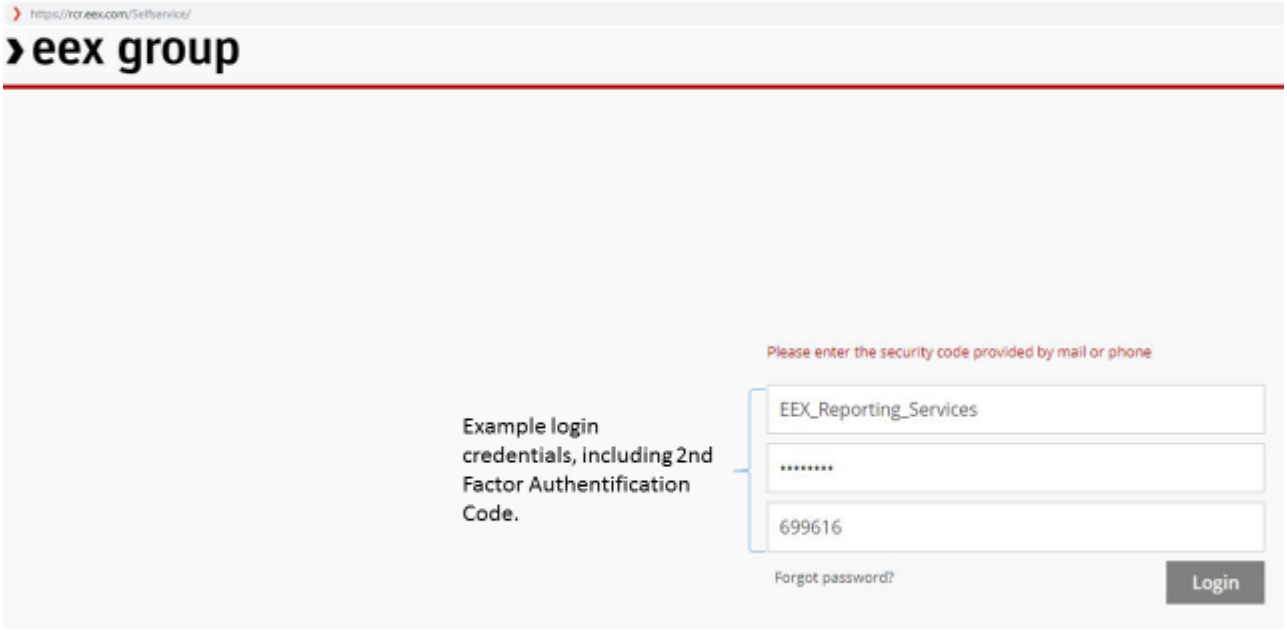
Login credentials - Example



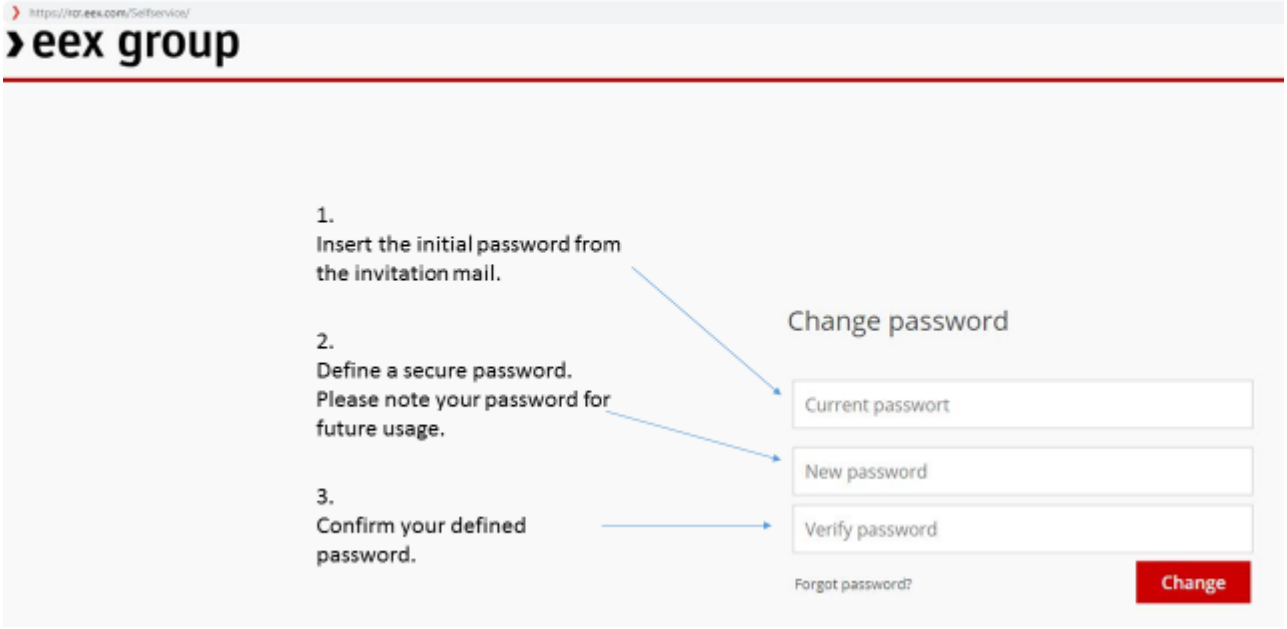
2nd Factor Authentification Code



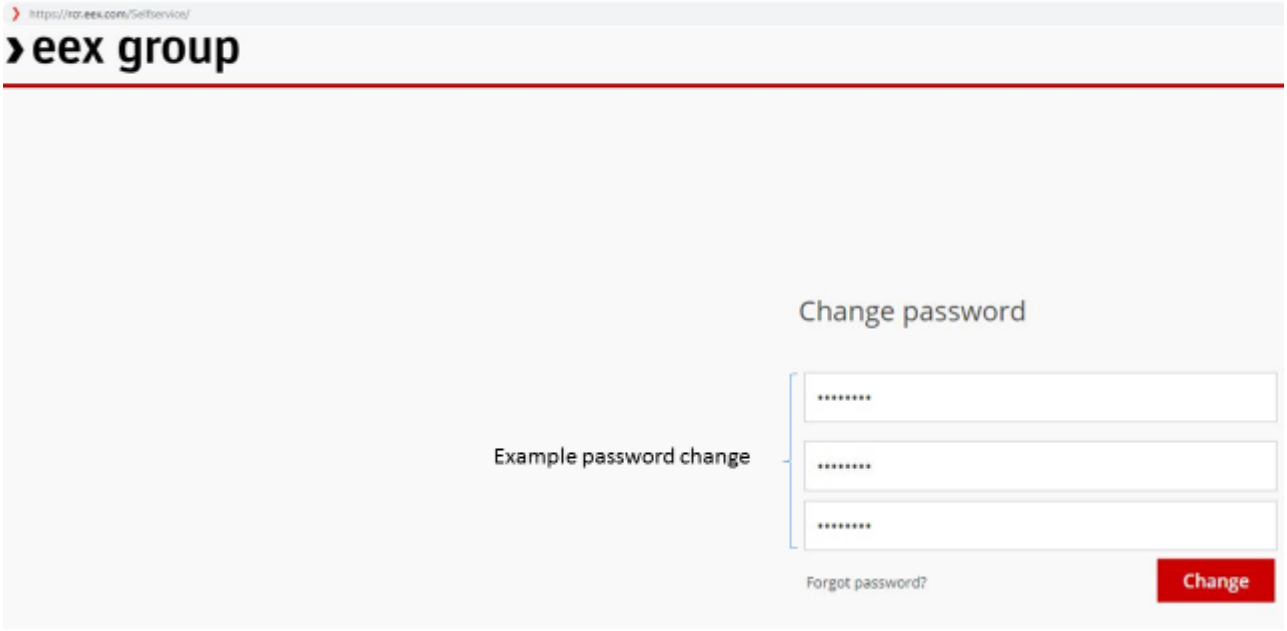
2nd Factor Authentification Code - Example



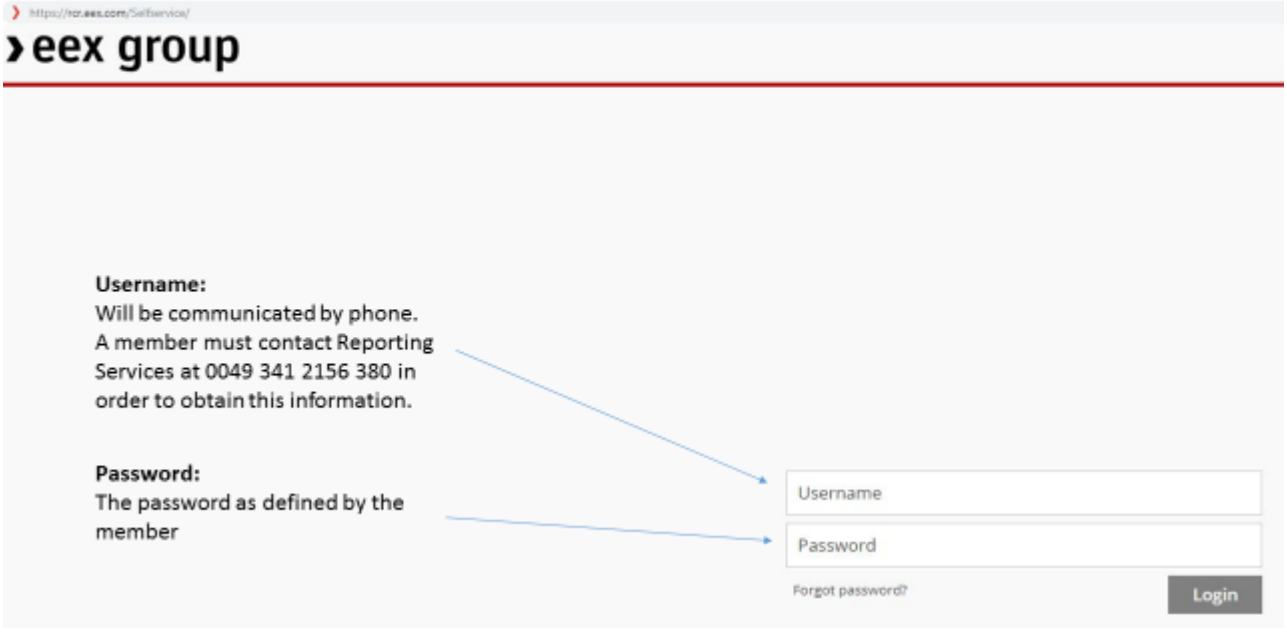
PKI Self-Service - Password change after 1st login



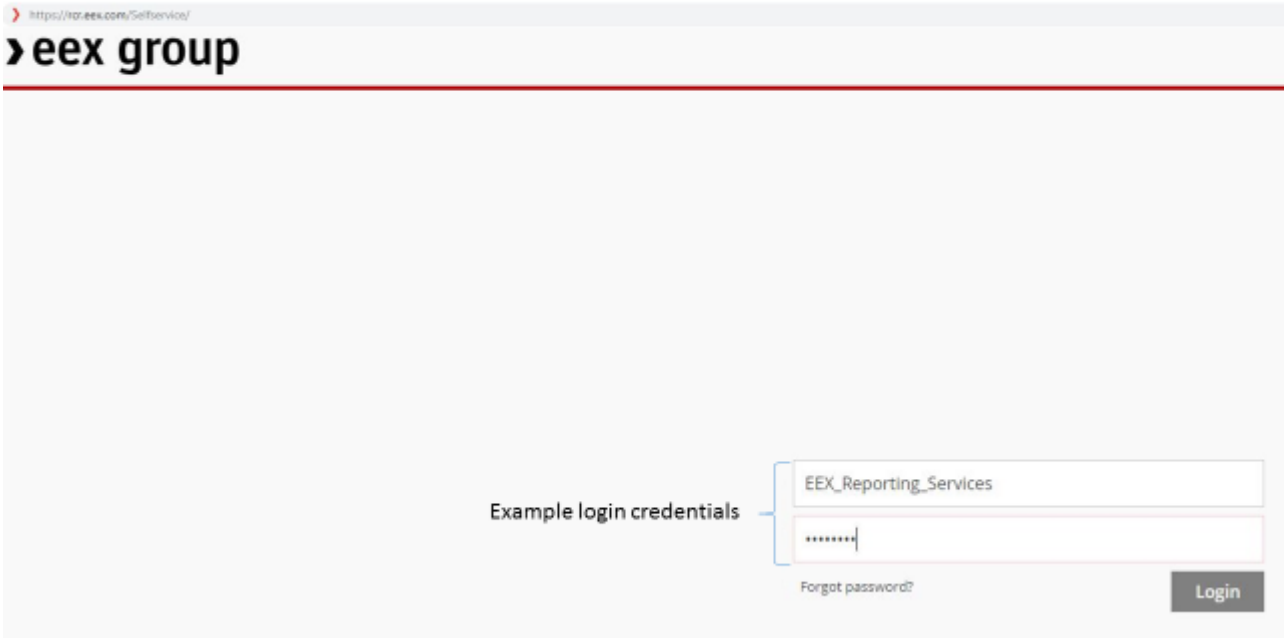
PKI Self-Service - Password change after 1st login



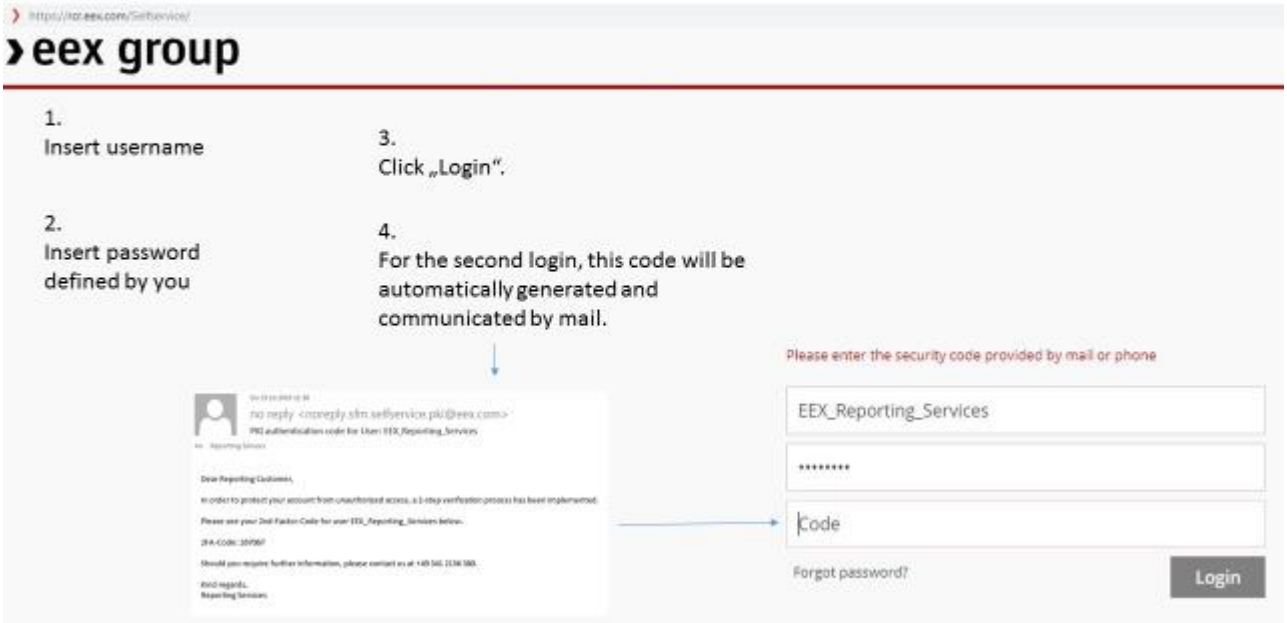
PKI Self-Service - Login Page 2nd Login



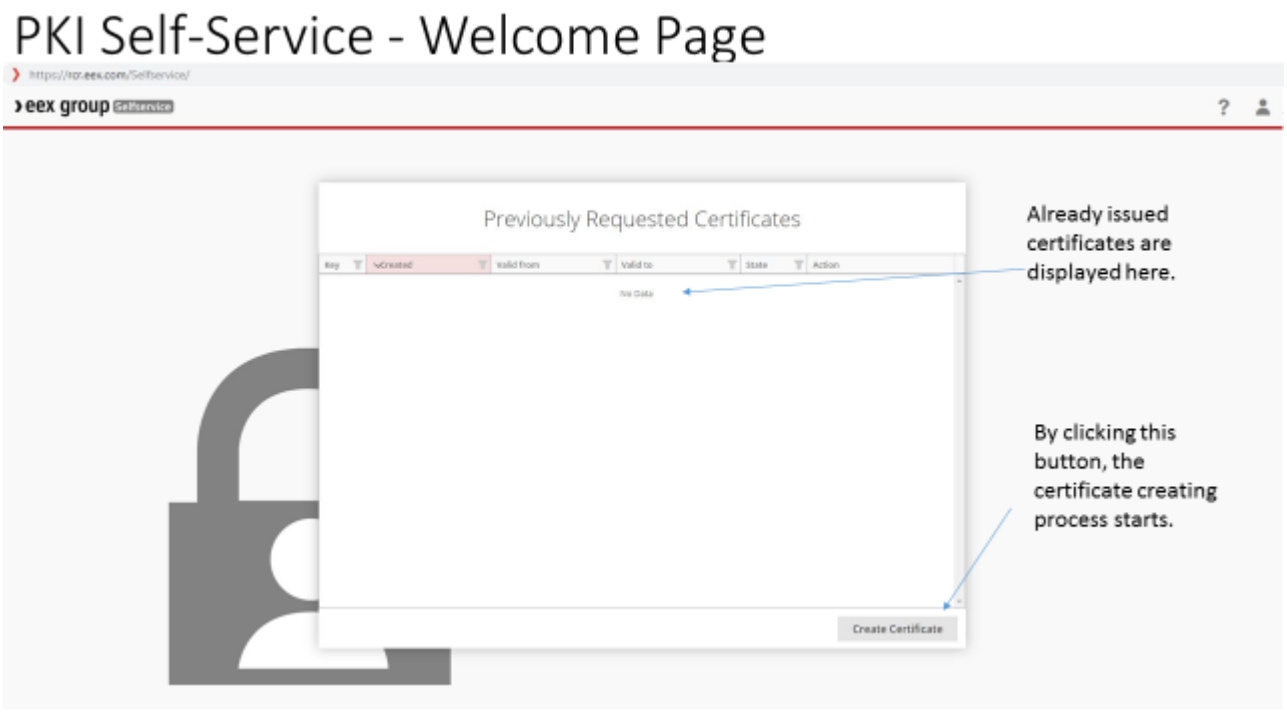
Login credentials - Example

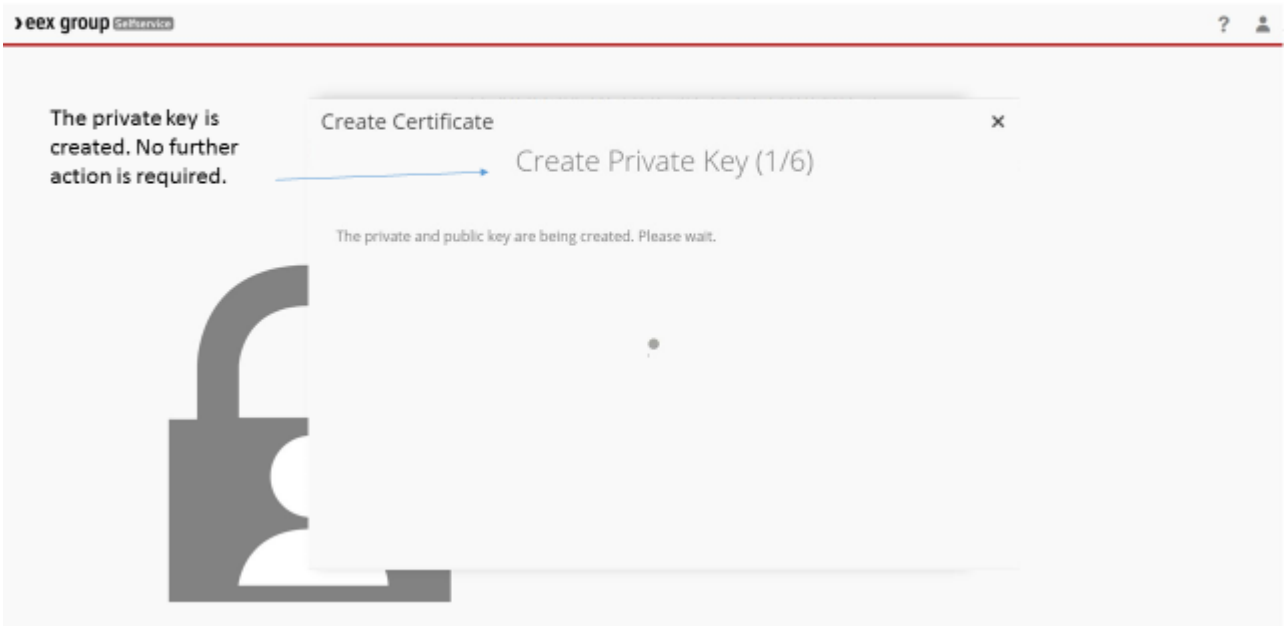


2nd Factor Authentification Code

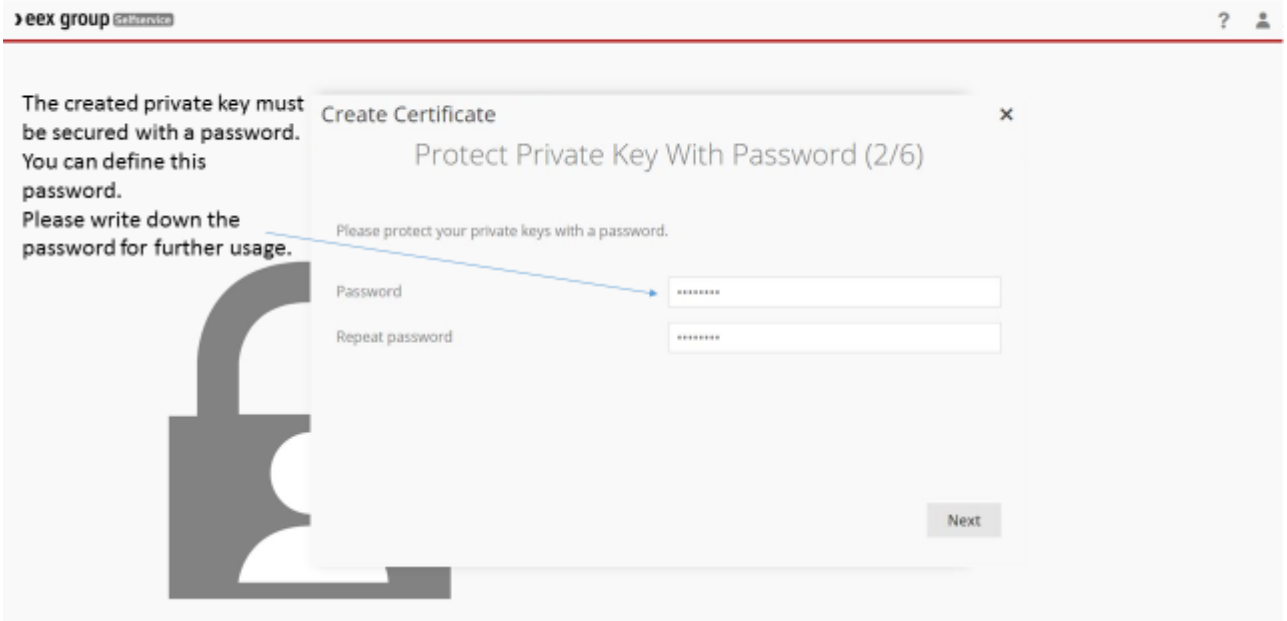


4.2 Certificate Request

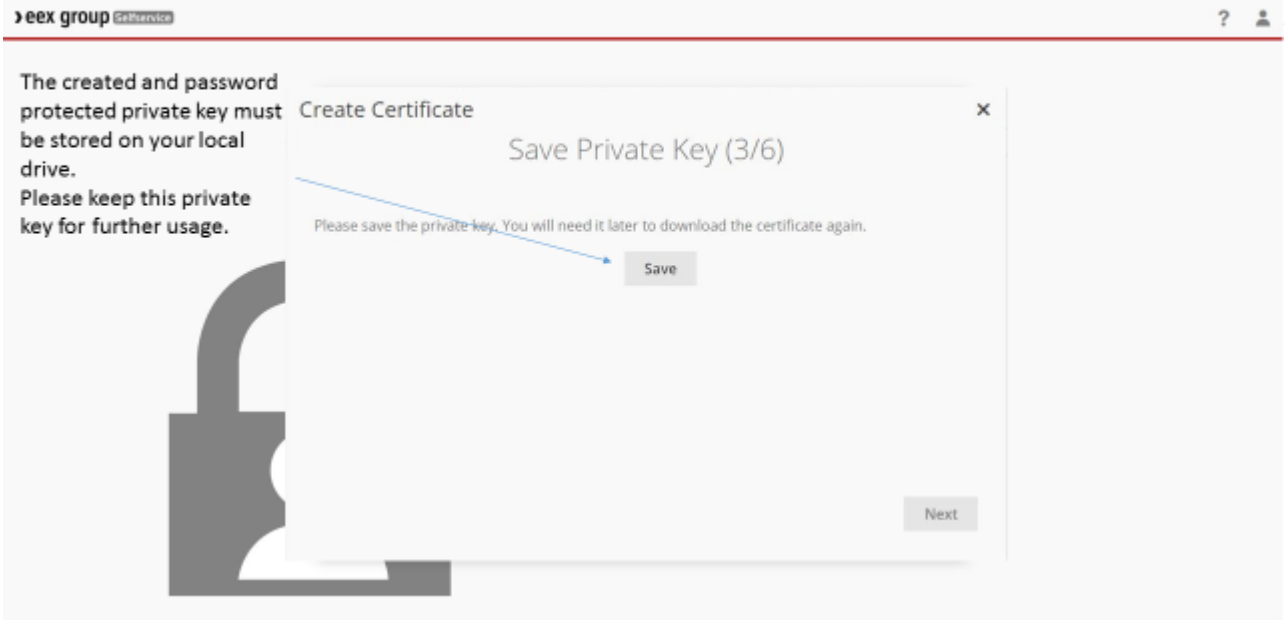




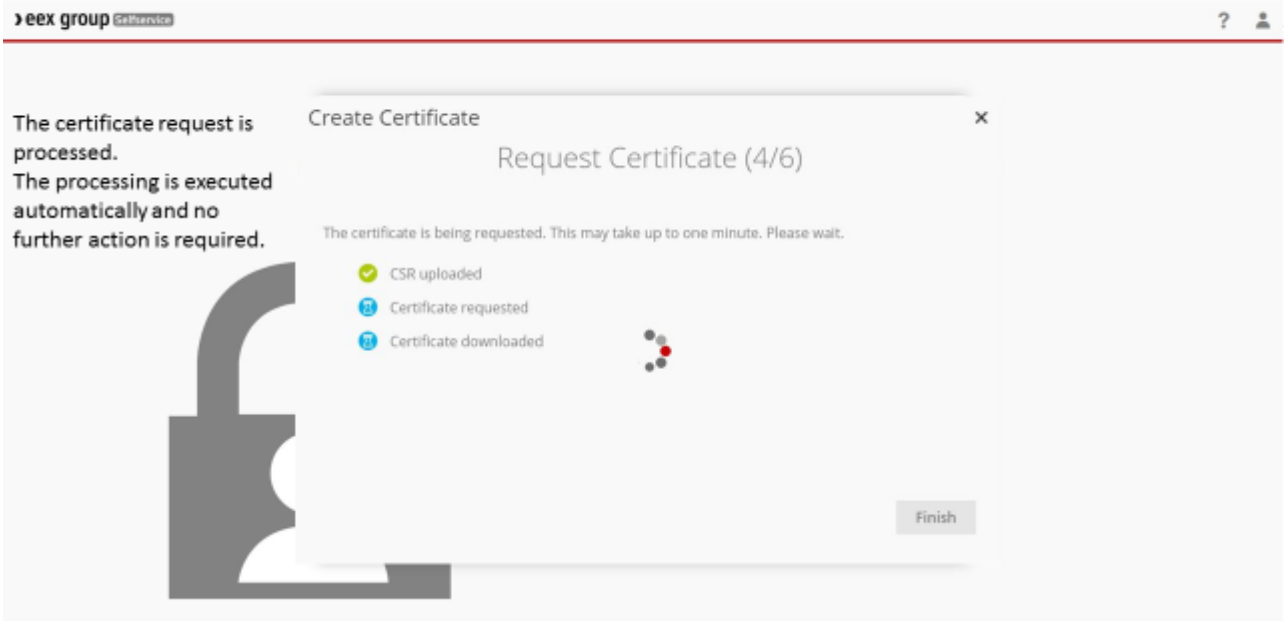
Certificate request – Protecting the Private Key



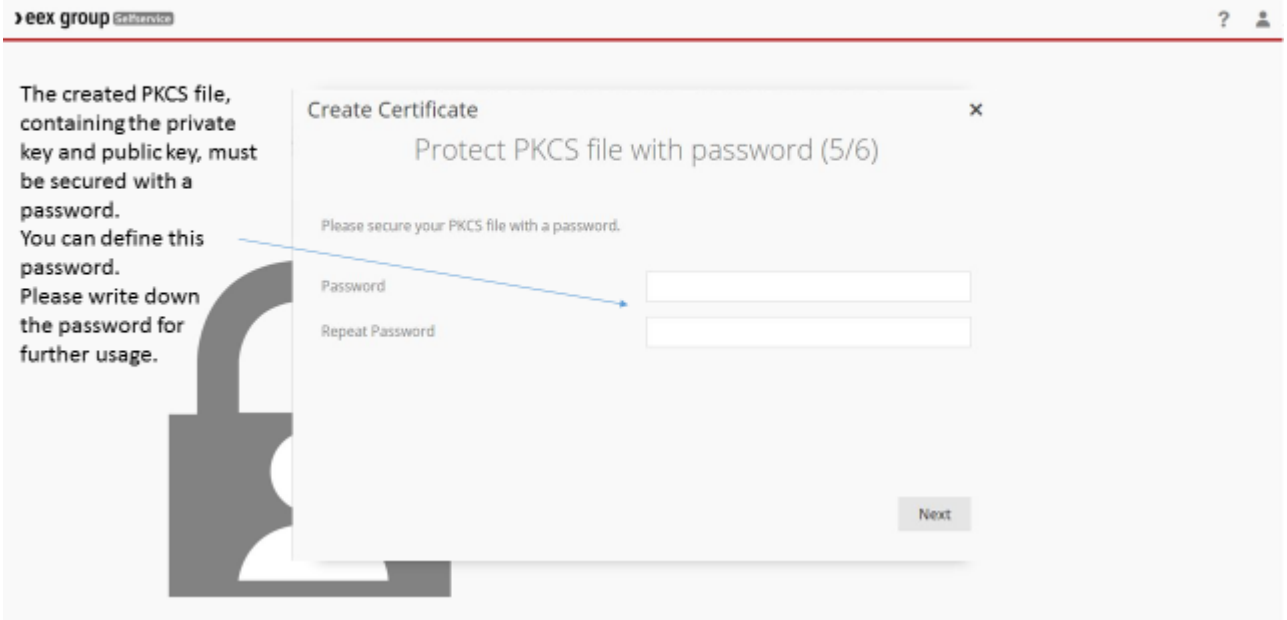
Certificate request – Saving the Private Key



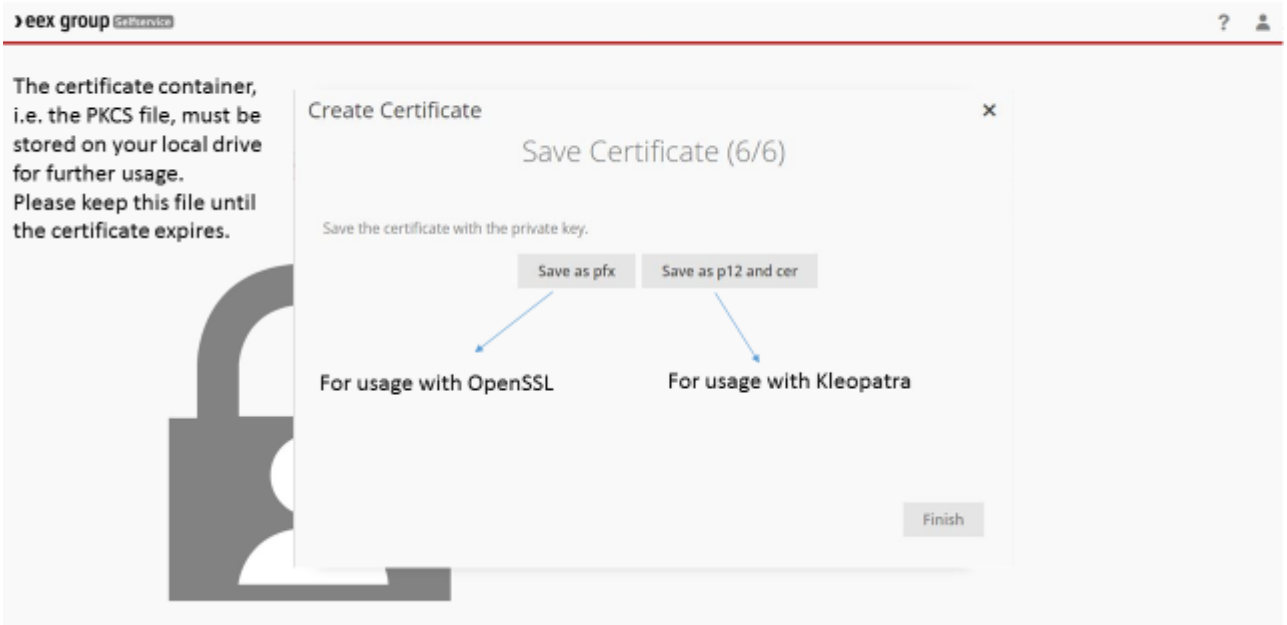
Certificate request – Requesting the Certificate



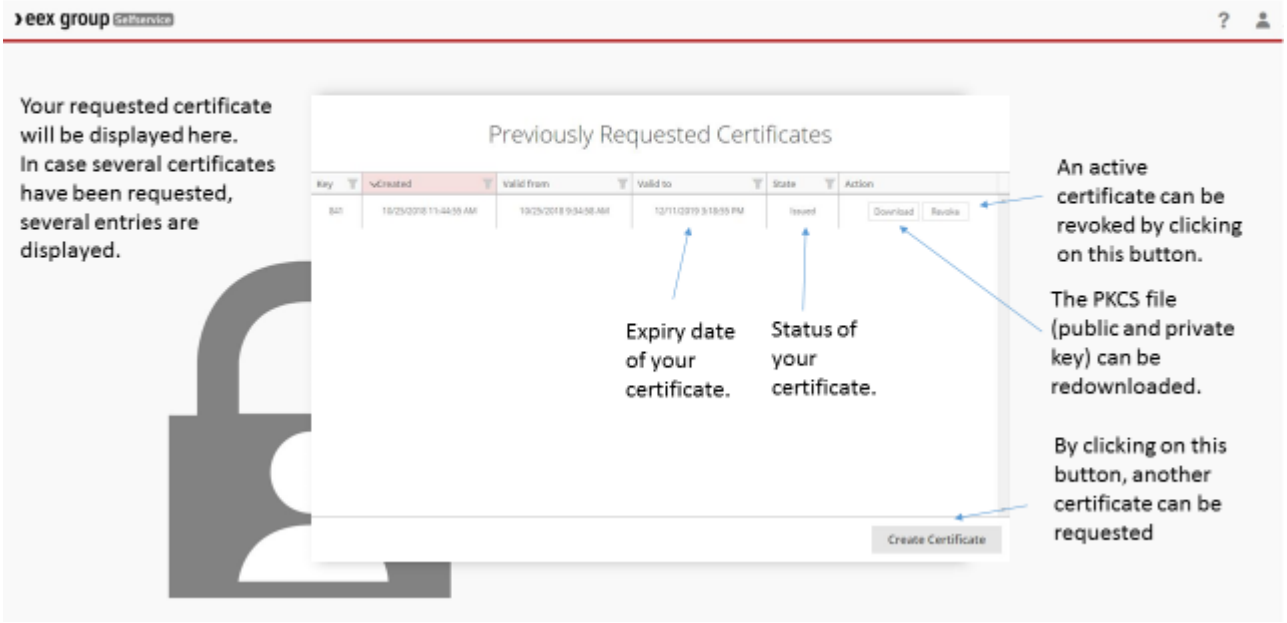
Certificate request – Protecting the Certifcate File



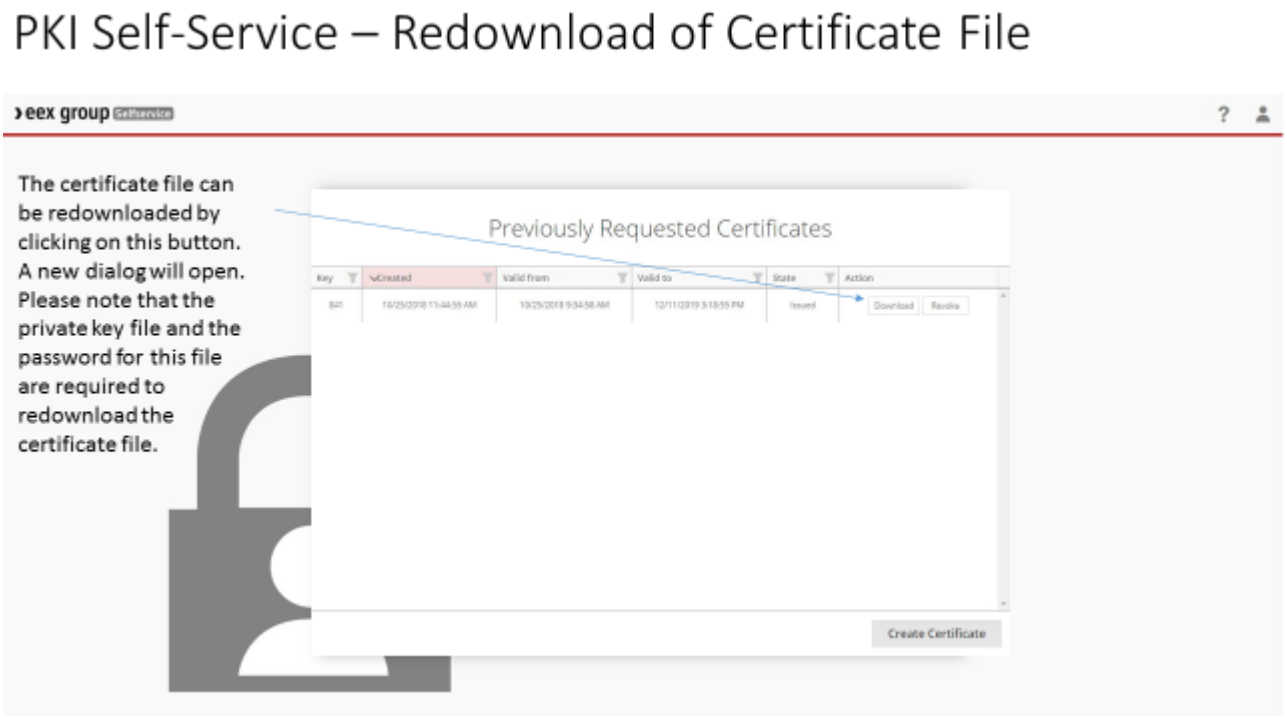
Certificate request – Saving the Certificate File

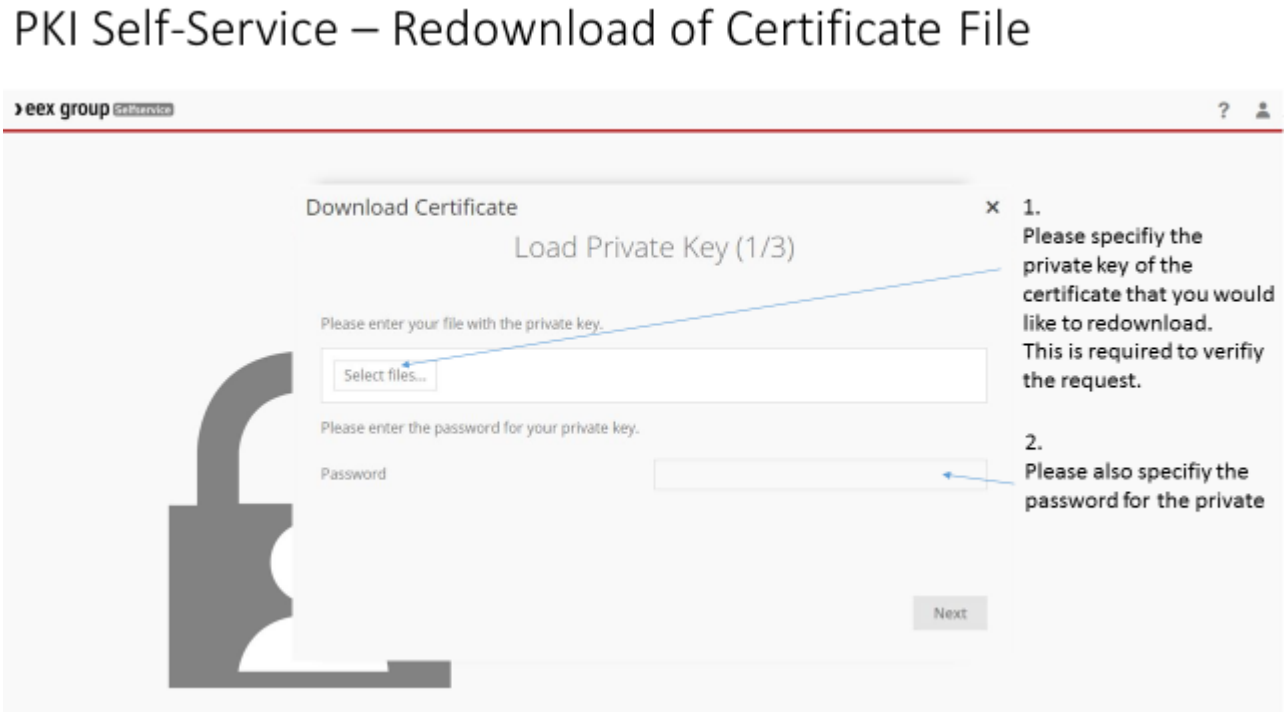


PKI Self-Service - Welcome Page

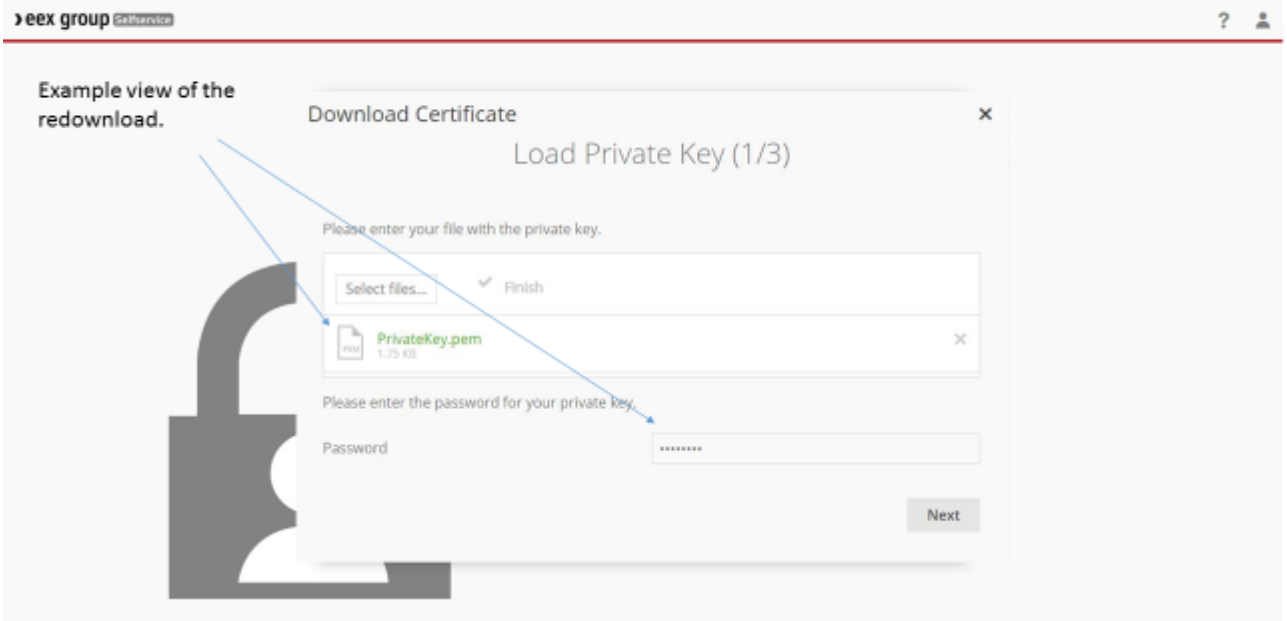


4.3 Re-download of your certificate

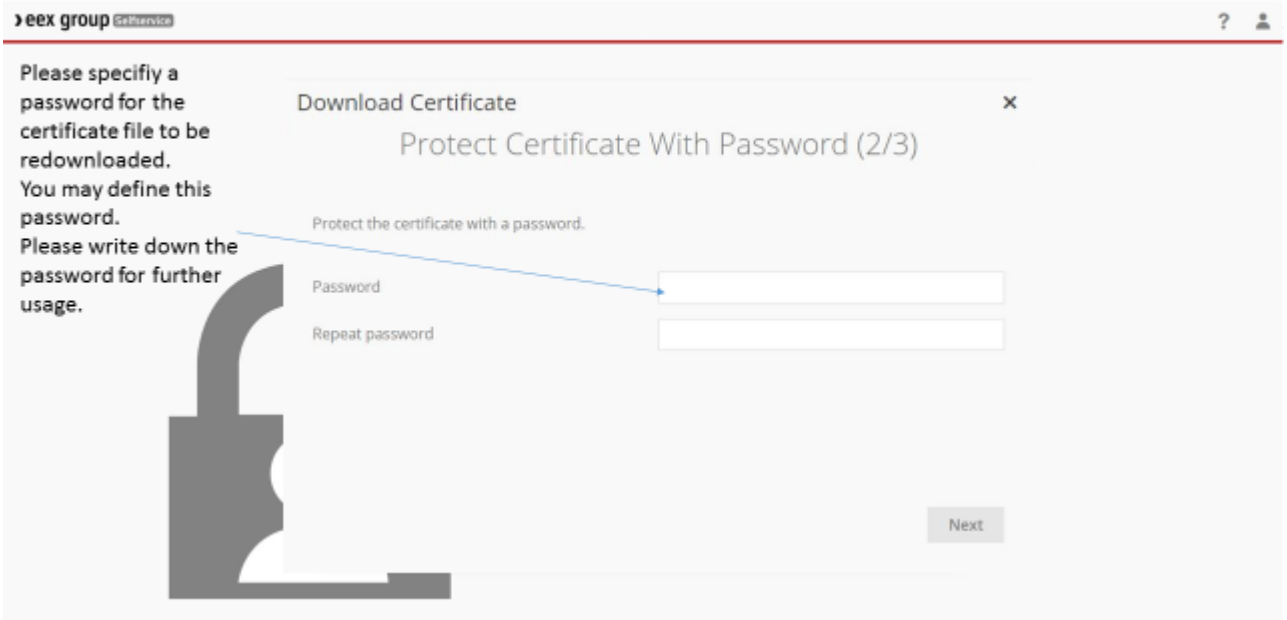




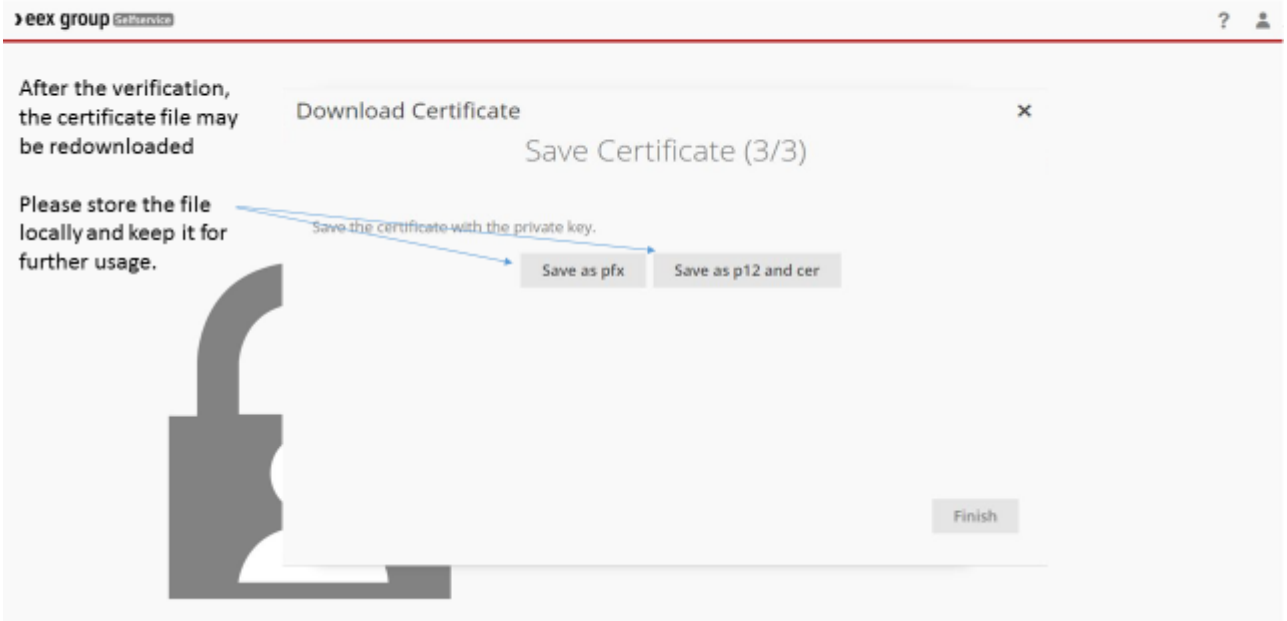
PKI Self-Service – Redownload of Certificate File



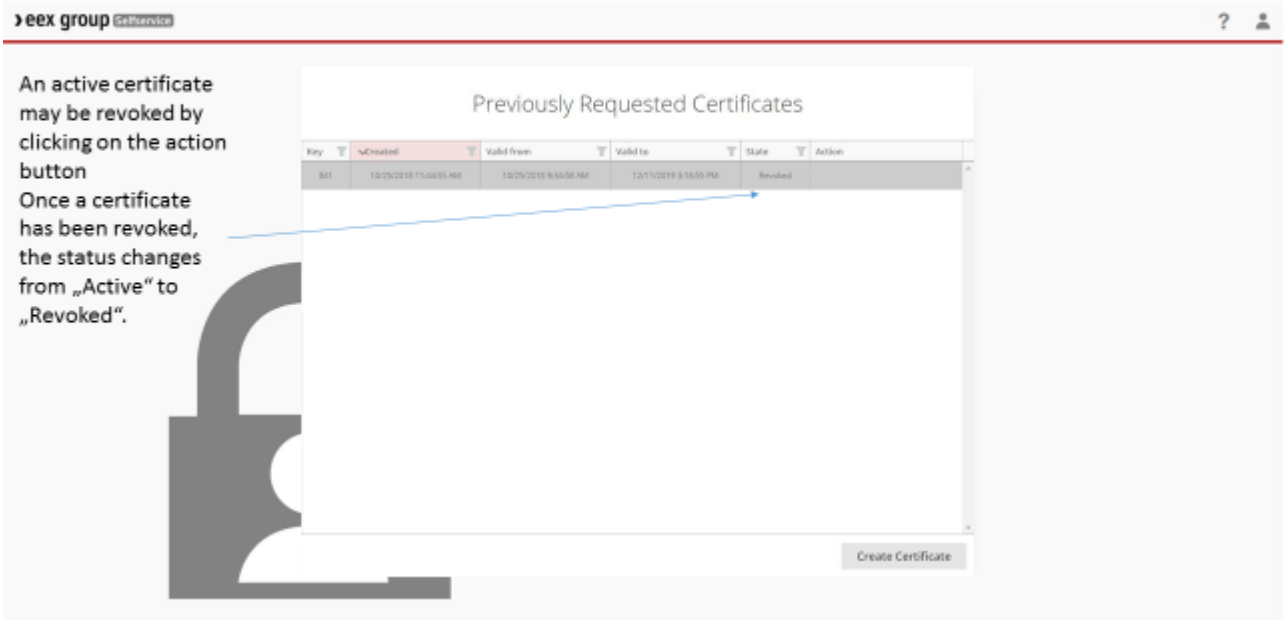
PKI Self-Service – Redownload of Certificate File



PKI Self-Service – Redownload of Certificate File



PKI Self-Service – Revokation of Certificate



5. Acknowledgement File Structure

5.1 File details

The following table shows the structure of customer acknowledgments.

Please note that the header part is always included in the response file, whereas the body part is only listed if errors or warnings occurred.

Section	Field name	Description
Header	Environment	Identifier of the reporting environment. Usually PRO for production.
Header	Timestamp	Date and time at which the response file was created.
Header	SubmitterID	Indicates the LEI of the response provider.
Header	CustomerID	Indicates the LEI of the response receiver.
Header	InboundFileReference	Identifier of the inbound file the response was created for.
Header	UltimateReceivingNCA	Identifier of the receiving authority.
Header	FileType	Indicates the report type, either Position or Transaction.
Header	ValidationResult	Indicates the validation result for the uploaded file, either Accepted or Rejected.
Header	AcknowledgmentStatus	Indicates the status of the acknowledgement, either Accepted or Rejected.
Header	TotalRecords	Indicates the total number of records within the uploaded file.
Header	ValidRecords	Indicates the number of valid records within the uploaded file.
Header	WarningRecords	Indicates the number of warning records within the uploaded file.
Header	ErrorRecords	Indicates the number of error records within the uploaded file.
Header	RejectedRecords	Indicates the number of rejected records within the uploaded file.
Body	ReportRefNo	Only listed if the validation results in error or warning. Indicates the reference id of the validated record.
Body	Busdt	Only listed if the validation results in error or warning. Indicates the reported trading day of the validated record.
Body	TrdngVenID	Only listed if the validation results in error or warning. Indicates the MIC Code of the validated record.
Body	RecordNumber	Only listed if the validation results in error or warning. Indicates the dataset number of the validated record.
Body	Sequence	Only listed if the validation results in error or warning. Indicates the sequence number of acknowledgment records.
Body	FieldID	Only listed if the validation results in error or warning. Indicates the field Id of the validated record.
Body	FieldName	Only listed if the validation results in error or warning. Indicates the field name of the validated record.

Body	Severity	Only listed if the validation results in error or warning. Indicates the severity of the validated, either error or warning.
Body	ErrorCode	Only listed if the validation results in error or warning. Indicates the error code of the validated record.
Body	ErrorDescription	Only listed if the validation results in error or warning. Indicates the error reason for the validated record.

5.2 Content validation

5.2.1 Error Codes

Once a position or transaction report has been uploaded to the FTP server, a content validation of every dataset is executed. The following table lists existing error codes and consequent actions if they occur.

Please note: An uploaded files is rejected if it contains erroneous records. As a result, the whole file must be corrected and re-uploaded if one of the error codes below occurs.

Error Code	Error description	Required action
E001	The specified LEI code is not valid according to the GLEIF database.	Please ensure to only specify LEI Codes that are valid and active according to the GLEIF database for the reported business day.
E002	The specified instrument is not a reportable Instrument on the respective business day.	1. Please ensure that the specified instrument is reportable on the respective business day, i.e. included in the instrument file. 2. Please ensure that the specified ISIN is an instrument ISIN and not a product ISIN.
E003	The specified ReportReferenceNumber is not unique and has been used multiple times within the uploaded file.	Please ensure that the uploaded file does not contain duplicate Reference IDs, i.e. ReportReferenceNumbers. This may be avoided by amending the ‘counter’ part within the Reference ID.
E004	The country code of the specified National ID is not valid according to ISO 3166.	Please ensure that the specified National ID starts with a valid country code according to ISO 3166.
E005	The specified position quantity of the uploaded file (imported quantity) differs significantly from the position quantity of the draft report (reference quantity).	Please ensure that the position quantity for an instrument ISIN matches the position quantity of the draft report.
E006	The uploaded file contained too many elements.	Please ensure that the file was properly created according to the following rules: • The file contains only data for one business day and • The file contains only data for one NCA.
E007	The specified date has an invalid format.	Please specify a valid date.
E008	The specified text is longer than allowed.	Please specify a value with less than 255 digits.

5.2.2 Warning Codes

Once a position or transaction report has been uploaded to the FTP server, a content validation of every dataset is executed. The following table lists existing warning codes.

Please note: An uploaded file is not rejected if validated records only cause warning codes.

Warning Code	Warning description	Required action
W001	The specified position quantity of the uploaded file (imported quantity) differs slightly and within the threshold from the position quantity of the draft report (reference quantity).	No further action required.
W002	The specified reference instrument master data is incorrect according to the instrument file.	No further action required. The incorrect value will be corrected automatically.

5.3 Technical Validation

Once a position or transaction report has been uploaded to the FTP server, a technical validation of the file is executed.

Please note: The technical validation is executed on file level and not on dataset level, hence there are no explicit error codes available, but the error reason is included within the ValidationResult.
In addition, if one of the errors below occurred, the submitted file has been rejected.

Error reason	Error description	Required action
Decryption or verification of Member signature failed. Error message:	The submitted file was not correctly signed and/or encrypted.	Please ensure that: • A file is signed by a valid certificate from EEX's PKI Self-Service platform. • A file is encrypted with the public key of EEX. • The signing and encryption process was executed according to chapter 6.4 of EEX's Data Services Description.
XML validation of file <FilenameWithPath> failed:	The uploaded file is not valid according to the XSD schema.	Please ensure that the submitted file contains only values and elements according to the XSD schema.

Transaction element 1: Invalid content: 'Instrument Name' must be between 0 and 255 characters. You entered 285 characters	The value for the Instrument Name is invalid.	Please ensure that the value for the Instrument Name has a length of maximum 255 digits.
Report contains items for multiple business days: <ListOfBusinessDaysinXMlFile>	The submitted file contains data for more than one reportable trading day.	Please ensure that an uploaded file contains only reportable data for one trading day.
Multiple ncas in upload: <ListOfNCAs>	The submitted file contains reportable data for more than one authority.	Please ensure that an upload file contains only reportable data for one NCA.
CPR element <Number> with reference number <ReferenceNumber> has invalid NCA:	The identified position element refers to an instrument that is not reportable.	Please ensure that an uploaded file contains only instruments that are included in the respective instrument file. **Please note:** This error does currently not occur, since datasets that refer to an invalid instrument are automatically ignored.
Nca in header <NCAName> is different from nca <NCAFromInstrument> of instrument <ISIN>	The identified position element refers to an instrument that must not be reported to the specified authority.	Please ensure that an uploaded file contains only reportable data for the NCA that was specified in the field UltimateReceivingNCA.
data for business day <businessday> and nca <NCA> already reported to regulatory authority	The submitted file contains data for a business day that had already been reported.	Please ensure that amendments are submitted to EEX on T+1 between 10am CET/CEST and 2pm CET/CEST.

5.4 Contents and Validation

5.4.1 Position Report

Field name	Schema Path	Field ID	Code
Report reference number	/FinInstrmRptgTradgComPosRpt/CPR/<Report Status>/ReportRefNo	RD001	E003
Date and time of report submission	/FinInstrmRptgTradgComPosRpt/CPR/<Report Status>/CPRBody/RptDt	RD006	E007
Date of the trading day of the reported position	/FinInstrmRptgTradgComPosRpt/CPR/<Report Status>/CPRBody/BusDt	RD007	E007
Reporting entity ID	/FinInstrmRptgTradgComPosRpt/CPR/<Report Status>/CPRBody/RptEnt/LEI	PA002	E001
Position holder ID	/FinInstrmRptgTradgComPosRpt/CPR/<Report Status>/CPRBody/PstnHldr/LEI	PH001	E001 E004
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Category of position holder	/FinInstrmRptgTradgComPosRpt/CPR/<Report Status>/CPRBody/PstinHldrCategory	PH004	n/a
Ultimate parent entity ID	/FinInstrmRptgTradgComPosRpt/CPR/<Report Status>/CPRBody/FinInstrmRptgTradgComPosRpt/CPR/<Report Status>/CPRBody/PrntEnt/LEI	PH005	E001 E004
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Email address of ultimate parent entity	/FinInstrmRptgTradgComPosRpt/CPR/<Report Status>/CPRBody/ParentPstinHldrCntctEml	PH006	E008

Identification code of contract traded on trading venues	/FinInstrmRptgTradgComPosRpt/CPR/<Report Status>/CPRBody/ISIN	RD003	E002
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Trading venue identifier	/FinInstrmRptgTradgComPosRpt/CPR/<Report Status>/CPRBody/TrdngVenID	RD005	W002
Position type	/FinInstrmRptgTradgComPosRpt/CPR/<Report Status>/CPRBody/PstnTyp	PD001	W002
Position maturity	/FinInstrmRptgTradgComPosRpt/CPR/<Report Status>/CPRBody/PstnMtrty	PD002	W002
Position quantity	/FinInstrmRptgTradgComPosRpt/CPR/<Report Status>/CPRBody/PstnQty	PD003	E005
Notation of the position quantity	/FinInstrmRptgTradgComPosRpt/CPR/<Report Status>/CPRBody/PstnQtyUoM	PD004	W002
Notation of the position quantity (description)	/FinInstrmRptgTradgComPosRpt/CPR/<Report Status>/CPRBody/PstnQtyUoMDesc	PD007	W002
Delta equivalent position quantity	/FinInstrmRptgTradgComPosRpt/CPR/<Report Status>/CPRBody/DeltaPstnQty	PD005	W002

5.4.2 Transaction Report

Field name	XML Tag	Field ID	Code
Trading Date	tradeDate	PD001	E007
Customer Transaction Id	customerTransactionId	PD002	E003
Transaction Reference Number	trnRefNumber	TR001	E003
Executing Entity	executingEntityId	CP002	E001
Submitting Entity	sender	HE001	E001
Buyer	buyerId	CP013 CP014	E001 E004
Buyer Decision Maker	buyerDecisionMakerId	CP019 CP020	E001 E004
Seller	sellerId	CP024 CP025	E001 E004
Seller Decision Maker	sellerDecisionMakerId	CP030 CP031	E001 E004
Trading Time	tradeTime	TR007	E007
Buyer Details	mifirBuyerDetails	EEX01	E006
Buyer Decisionmaker Details	mifirBuyerDecisionMakerDetails	EEX02	E006
Seller Details	mifirSellerDetails	EEX03	E006
Seller Decisionmaker Details	mifirSellerDecisionMakerDetails	EEX04	E006