

Bundesbank's ExtraNet

Customer Documentation

Version 2.10



Content

Amendments in version 2.10

I	Overview	
1	Basic principles	1
2	Services	2
2.1	Overview	2
2.2	Basic services.....	3
2.2.1	File transfer	3
2.2.2	User management	3
2.2.3	ConTact	4
2.3	Special interactive services	5
2.3.1	Bidding systems	5
2.3.1.1	Bund Bidding System (BBS)	5
2.3.1.2	Open Market Tender Operation System (OMTOS)	5
2.3.1.3	EFSF Bidding-System (EBS)	5
2.3.2	Master data search engine for the reporting system for large exposures and loans of € 1.5 million or more	6
2.3.3	Europe request procedure for loans of € 1.5 million or more	6
2.3.4	Reporting platform for large exposures and loans of € 1.5 million or more	7
2.3.5	Drafting of prudential reports in connection with the Solvency Regulation, the Liquidity Regulation, bank levy, monthly returns, HA-Report	8
2.3.6	Credit claims - submission and administration (KEV)	8
2.3.7	Integrated Collateral Pooling System (IPS)	9
2.3.8	Cash Electronic Data Interchange (CashEDI)	9
2.3.9	General statistics reporting portal (AMS).....	10
2.3.10	CashRecycling.....	11

2.4	Additional services.....	12
2.4.1	Documentation	12
2.4.2	ExtraNet homepage	12
2.4.3	Call Centre	13
2.5	Basic infrastructure	14
3	Participation	15
3.1	Participation criteria	15
3.2	Advantages.....	16
4	Security	17

II	Infrastructure criteria	
1	Customer access to ExtraNet	19
2	System requirements customer's PC	21
3	Technical connections customer's PC	22

III	Basic services	
1	Overview	23
2	File transfer	24
2.1	File transfer via browser	24
2.1.1	Basic features	24
2.1.2	File upload	24
2.1.3	Uploads of the last 10 days	26
2.1.4	Uploads of the last 100 days	26
2.1.5	File download	26
2.1.6	Confirm download	28
2.2	File transfer via automated access	29
2.2.1	Basic features	29
2.2.2	General procedure	30
2.2.3	File upload	31
2.2.4	Upload list	34
2.2.5	File download	36
2.2.6	Confirm download	38
3	User management	40
3.1	Access to user management	40
3.2	User registration	41
3.2.1	Basic features	41
3.2.2	Online registration with written application	43
3.2.3	Registration through personal contact	45
3.3	Changing user data	46
3.3.1	Basic features	46
3.3.2	Data changes by user	46
3.3.3	Data changes by operational unit	48
3.4	Blocking users	50
3.4.1	Basic features	50
3.4.2	Blocking by the customer	50
3.4.3	Blocking by the operational unit	52

3.5	Unblocking users	53
3.5.1	Basic features	53
3.5.2	Unblocking by the customer	53
3.5.3	Unblocking by the operational unit	55
3.6	Resetting user password	56
3.6.1	Basic features	56
3.6.2	Standard procedure	56
3.6.3	Special procedure	57
3.7	Deleting users.....	59
3.7.1	Basic features	59
3.7.2	User deletes him-/herself as a user	59
3.7.3	User is deleted by ExtraNet administration	60
3.8	Verifying user authorisations	62
3.8.1	Basic features	62
3.8.2	User manager for one specialised procedure	62
3.8.3	User manager for several specialised procedures	63
4	ConTact	64
4.1	Basic features	64
4.2	Requirements for participation.....	65
4.3	Procedures	66
4.3.1	General procedure	66
4.3.2	Mask structure	67
4.3.3	Procedure of responding to a query	68
4.3.3.1	Using the link sent via e-mail message	68
4.3.3.2	Using user management	69
4.3.4	Status	71

IV	Technical specifications	
1	File transfer	72
1.1	Error messages	72
1.2	Order identification and type.....	74
1.2.1	Order identification	74
1.2.2	Order type	74
2	Implementing automated access to file transfer	75
2.1	Requirements ..	75
2.2	Use of Java.....	76
2.3	Certificates in JSSE.....	77
2.4	Login form.....	79
2.5	Treatment of cookies	80
2.6	HttpsURLConnection.....	81
2.7	Local proxy servers/firewalls	82

Glossary

Index

Amendments in version 2.10

General information

Amendments of the content in version 2.10 of the ExtraNet documentation compared to version 2.9 are shown in this chapter. Re-phrasings which did not alter the content are generally not listed here.

Amendments are shown in red and can be identified by red correction bars on the left hand side.

Amendments in part I “Overview“

The following amendments were made in part I “Overview“:

Chapter	Block	Amendment
4 Security	Technical measures	Order of the bullet points amended as well as two new bullet points added.

I Overview

1 Basic principles

ExtraNet is a high-performance IT infrastructure at the disposal of all operational units of the Deutsche Bundesbank. It offers customers a range of services via cutting-edge internet technology.

Thanks to ExtraNet, procedures that previously involved the use of paper or data media are now fully automated and streamlined.

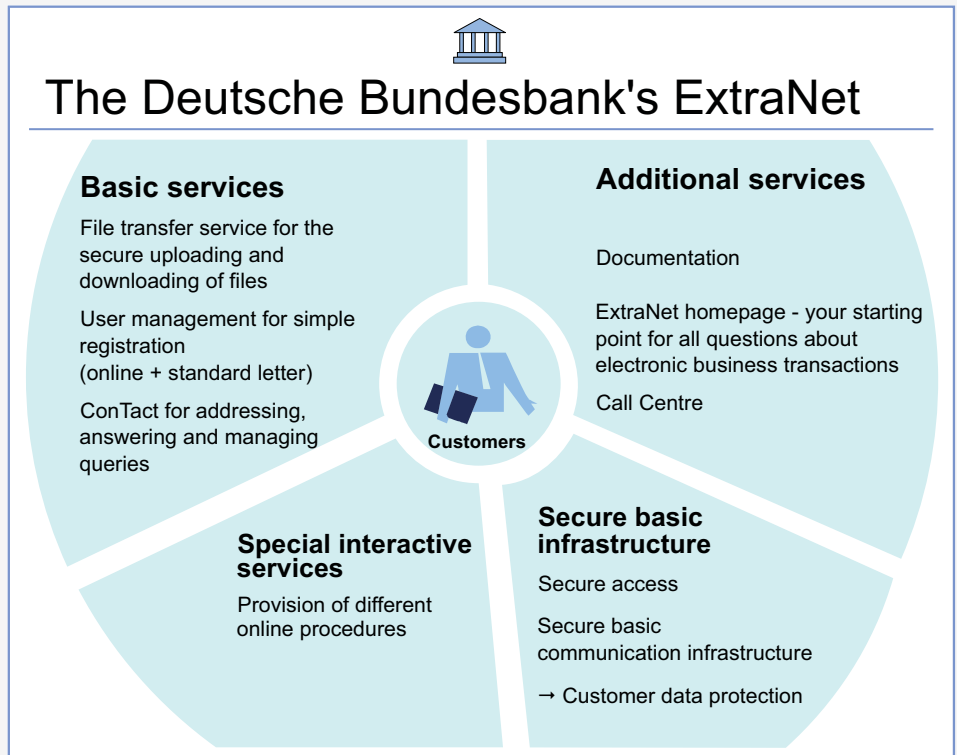
Note: ExtraNet documentation only provides details of the infrastructure and the services offered by ExtraNet. In order to find information about the ExtraNet services (specialised applications) on the Deutsche Bundesbank homepage (<http://www.bundesbank.de>), you click on the operational unit of interest to you.

ExtraNet

2 Services

2.1 Overview

ExtraNet at a glance



2.2 Basic services

2.2.1 File transfer

Purpose

The file transfer service is used to transmit files between customers and operational units. This service can be used by the *customer* in one of two ways,

- manually, from a *browser*, or
- automatically, from the customer's software application.

Functions

The same functions are available to the customers regardless of whether they are accessing ExtraNet using a browser or their own software applications:

- **Upload:** File transfer from the customer to the operational unit, including the display of an upload list
- **Download:** File transfer from the operational unit to the customer, including download confirmation

2.2.2 User management

Purpose

User management manages users of the system, ie customers' staff.

Functions

User management provides the following functions:

- Registering users
- Changing user data
- Blocking users
- Unblocking users
- Resetting user password
- Deleting users

2.2.3 ConTact

Purpose

The ConTact service is responsible for addressing, answering and managing queries.

ConTact has been integrated into ExtraNet's user management.

2.3 Special interactive services

2.3.1 Bidding systems

2.3.1.1 Bund Bidding System (BBS)

Definition

BBS is a modern electronic primary market platform which is easily accessible and user-friendly while complying with strict security requirements.

Further details

Further details of the purpose and functions of BBS are available on the Deutsche Bundesbank's website (<http://www.bundesbank.de>) under Services/More Services/BBS and in the BBS documentation.

2.3.1.2 Open Market Tender Operation System (OMTOS)

Definition

OMTOS is a modern auction system which is easily accessible and user-friendly while complying with strict security requirements.

Further details

Further details of the purpose and functions of OMTOS are available on the Deutsche Bundesbank's website (<http://www.bundesbank.de>) under Services/More Services/OMTOS and in the OMTOS documentation.

2.3.1.3 EFSF Bidding-System (EBS)

Definition

EBS is a modern electronic primary market platform which is easily accessible and user-friendly while complying with strict security requirements.

Further details

Further details of the purpose and functions of EBS are available on the Deutsche Bundesbank's website (<http://www.bundesbank.de>) under Services/More Services/EBS and in the EBS documentation.

2.3.2 Master data search engine for the reporting system for large exposures and loans of €1.5 million or more

Definition

The Deutsche Bundesbank's master data search engine for the reporting system for large exposures and loans of € 1.5 million or more enables reporting lending institutions to obtain information online at any time via the master data sets of borrowers, single borrower units and lending institutions stored at the Deutsche Bundesbank. The master data are comprised of information to aid identification (eg first name, name, company, domicile, register number).

Further details

Further details of the purpose and functions of the master data search engine for the reporting system for large exposures and loans of € 1.5 million or more are available on the Deutsche Bundesbank's website (<http://www.bundesbank.de>) under Areas of interest/Banking Supervision/Lending business.

2.3.3 Europe request procedure for loans of €1.5 million or more

Definition

The Europe request procedure for loans of € 1.5 million or more offers the possibility of looking up the credit history of a borrower when this is required. Currently the details of borrowers based in Austria, Belgium, France, Germany, Italy, Portugal and Spain can be requested.

The credit ratings of companies and public authorities can be requested. Individuals, groups of people (civil-law associations, joint accounts, federations, etc) and borrower units are not covered by the scheme.

Europe requests are centrally handled by the Deutsche Bundesbank's Central Credit Register and are then forwarded to the responsible foreign credit register for a response.

The credit data contain credit amounts from all participating credit registers. The response is made available via the ExtraNet mailbox. The requesting party receives e-mail notification that a response has been received.

Further details

Further details on the Europe request procedure are available on the Deutsche Bundesbank's website (<http://www.bundesbank.de>) under Areas of interest/Banking Supervision/Lending business as well as in the online help section.

2.3.4 Reporting platform for large exposures and loans of €1.5 million or more

Definition

The new German Banking Act concerning large exposures and loans of € 1.5 million or more came into force on the 1 January 2007. Pursuant to section 8 (1) of the German Banking Act concerning large exposures and loans of € 1.5 million or more, the amount details of credit reports according to sections 13 to 13b and 14 of the German Banking Act are, as of the reporting day 31 March 2008, to be submitted by the reporting institutions exclusively in paperless format.

In order to support the reporting institutions in the paperless submission of reports, from 31 March 2008 onwards, the Deutsche Bundesbank will offer, along with the electronic submission of report files, the possibility of drafting and submitting the reports in accordance with the German Banking Act concerning large exposures and loans of € 1.5 million or more using the new ExtraNet function "Reporting platform for large exposures and loans of € 1.5 million or more pursuant to sections 13 to 13b and 14 of the German Banking Act".

Further details

Further details on the reporting platform for large exposures and loans of € 1.5 million or more pursuant to sections 13 through 13b and 14 of the German Banking Act are available on the Deutsche Bundesbank's website (<http://www.bundesbank.de>) under Areas of interest/Banking Supervision/Lending business as well as in the online help section.

2.3.5 Drafting of prudential reports in connection with the Solvency Regulation, the Liquidity Regulation, bank levy, monthly returns, HA-Report

Definition

In order to support the credit and financial services institutions as well as payment institutions in the paperless submission of prudential reports, the Deutsche Bundesbank also offers the option of manual entry as a supplementary means of electronic submission to data submission in XML and *XBRL* format. Using this ExtraNet function, it is currently possible to submit reports pursuant to the Solvency Regulation, Liquidity Regulation, Monthly Returns Regulation and summarised Monthly Returns Regulation as well as the HA-Report relating to the Regulation governing large exposures and loans of €1.5 million or more. In addition, the entry portal also accommodates the report on the bank levy.

Further details

Further details on the data entry portal are available on the Deutsche Bundesbank's website (<http://www.bundesbank.de>) under Services/Reporting system/Prudential supervisory reporting system as well as in the online help section.

2.3.6 Credit claims - submission and administration (KEV)

Definition

KEV is a convenient and secure procedure for submitting credit claims as eligible assets. Access to KEV is via interactive online entry or file transfer.

Further details

Further details of the purpose and functions of KEV are available on the Deutsche Bundesbank's website (<http://www.bundesbank.de>) under Services/More Services/KEV.

2.3.7 Integrated Collateral Pooling System (IPS)

Definition

IPS is the Deutsche Bundesbank's central system for managing collateral accounts as well as for the real-time posting and settlement of collateral and credit transactions. The Deutsche Bundesbank's counterparties can view their IPS collateral accounts online.

Further details

Further details of IPS are available on the Deutsche Bundesbank's website (<http://www.bundesbank.de>) under Services/More Services/IPS.

2.3.8 Cash Electronic Data Interchange (CashEDI)

Definition

With CashEDI the Deutsche Bundesbank offers its customers the possibility of carrying out transactions electronically using standardised electronic data exchanges. Access channels are WebEDI (Online entry) as well as file transfer.

Further details

Further details of the purpose and functions of CashEDI are available on the Deutsche Bundesbank's website (<http://www.bundesbank.de>) under Areas of interest/Cash management/CashEDI.

2.3.9 General statistics reporting portal (AMS)

Definition

The Deutsche Bundesbank has developed the AMS general statistics reporting portal to facilitate the creation of reports in the fields of foreign trade and payments.

The reporting data can be directly inputted into an internet browser entry mask using AMS (for the foreign trade and payments regulation, data can also be transferred into the AMS entry mask from another data source in a pre-defined format to save on non-essential data entry). The AMS reporting portal offers a range of help functions and plausibility checks to simplify the task of delivering a report. The data are automatically checked and any errors are identified. Drop-down lists show the entry options available. It is also possible to change the interface language to English. It is a multi-client system meaning that it can be used by third-party submitters, such as a lawyer's office or computer centres, to create reports for several parties required to report.

Individual AMS functions can also be used for submitting reporting data on statistics about FVCs (Financial Vehicle Corporations).

The possibility of using the reporting portal as a back-up facility for submitting selected statistic reports from the area of banking statistics is in the pipeline.

Further details

Further details of the reporting of external transactions and stock are available on the Deutsche Bundesbank's website (<http://www.bundesbank.de>) under Areas of interest/Statistics/Reporting system/External sector statistics.

2.3.10 CashRecycling

Definition

Credit institutions are currently allowed to submit statistical cash recycling data electronically on the basis of the agreement on the national implementation of the framework for the detection of counterfeits and fitness sorting of euro banknotes by credit institutions and other professional cash handlers. WebCRC (online entry) is currently available as the access channel.

Further details

Further details of the purpose and functions of CashRecycling are available on the Deutsche Bundesbank's website (<http://www.bundesbank.de>) under Sachgebiete/Bargeld/Banknotenrecycling (only available in German).

2.4 Additional services

2.4.1 Documentation

Purpose

“Documentation” gives details of the entire range of services offered by ExtraNet.

Structure

The documentation describes the infrastructure and the services offered by ExtraNet

- for customers and
- gives additional information for the Deutsche Bundesbank’s operational units.

2.4.2 ExtraNet homepage

Address

The ExtraNet homepage is part of the Deutsche Bundesbank’s website. The ExtraNet pages can be found at the following address:

<http://www.bundesbank.de/extranet/extranet.en.php>

Purpose and functions

The ExtraNet homepage is the starting point for all questions concerning electronic business transactions.

The ExtraNet homepage also offers the following functions:

- Initial registration/login
- Access for registered users of the ExtraNet and to the ExtraNet user management
- Download of ExtraNet documentation
- Information regarding
 - operating hours
 - services/contact persons in the operational units

2.4.3 Call Centre

Purpose

The Call Centre is a hotline which is open during ExtraNet operating hours.

Function

Customers' technical and specialised questions about using the basic services and the special interactive services are taken by the Call Centre.

Questions are dealt with as follows:

- **Technical** questions are answered by the Call Centre staff.
- **Specialised** questions are put through to the relevant operational unit.

2.5 Basic infrastructure

Properties

ExtraNet is a high-performance IT infrastructure which

- is readily accessible.
- meets technologically and economically feasible security standards.
- is compatible with a number of different specialised applications.
- can be easily adjusted to meet new requirements of the operational units.

These criteria serve to guarantee the protection of customer data.

Accessibility

Messages are exchanged with customers via the internet. ExtraNet has no control over access to this public communication network.

3 Participation

3.1 Participation criteria

Specific requirement

The specific requirements for using a specialised application are drawn up by the operational unit concerned, which is ultimately in charge of user authorisation.

In order to find further information about the specific requirements for each of the specialised ExtraNet applications, eg data set formats, on the Deutsche Bundesbank homepage (<http://www.bundesbank.de>), you click on the operational unit of interest to you.

General requirements

There are no general requirements in force.

3.2 Advantages

Customers who use the ExtraNet services enjoy the following advantages:

- low costs, since the *customer* already has the necessary infrastructure
- fully automated execution of business processes
- a communication link using state-of-the-art internet technology
- easy implementation via *browser* access
- possibility of calling up Deutsche Bundesbank information quickly and as required
- instant access to information provided by the operational units

Advantages

4 Security

High level of security

The services available through ExtraNet operate at a very high level of security.

Given the protective measures in place, the risk of any violation is, from a technical point of view, very small.

The aim is to guarantee customer data protection.

Technical measures

The security technology used to safeguard against acts of violation is in line with the current standard and is constantly being updated. The following measures are taken to guarantee security:

- The ExtraNet infrastructure is divided into several security zones.
- Up-to-date and reliable encryption technology (https and SSL) is used for transmitting data with the services, thereby ensuring the confidentiality and integrity (authenticity) of data. A server certificate also attests that the server is actually a Deutsche Bundesbank server.
- Individual users must log in with their *user ID* and password before they can use ExtraNet services, meaning that no unauthorised person has access to ExtraNet.
- Modern *firewall* systems are in use.
- **The applications are protected by a web application firewall.**
- **The network communications are analysed by an *IDS*.**
- Regular checks are made to ensure that the infrastructure meets the prevailing technical requirements.

Organisational measures

In addition, organisational measures protect access to ExtraNet during file transfer as well as to specialised applications:

- ExtraNet can only be accessed if the operational unit has granted the appropriate authorisation. Provided that the access information (user ID/ password) is used correctly by the customer, this ensures that no unauthorised person has access to ExtraNet.
- The infrastructure is monitored by experienced ExtraNet operating staff.
- The organisational framework is subject to regular checks in order to guarantee the highest level of security.

Authorisation by the operational unit

It is the task of the relevant operational unit to give ExtraNet authorisation to:

- individual customers (eg a bank or a business enterprise)
- individual users upon registration

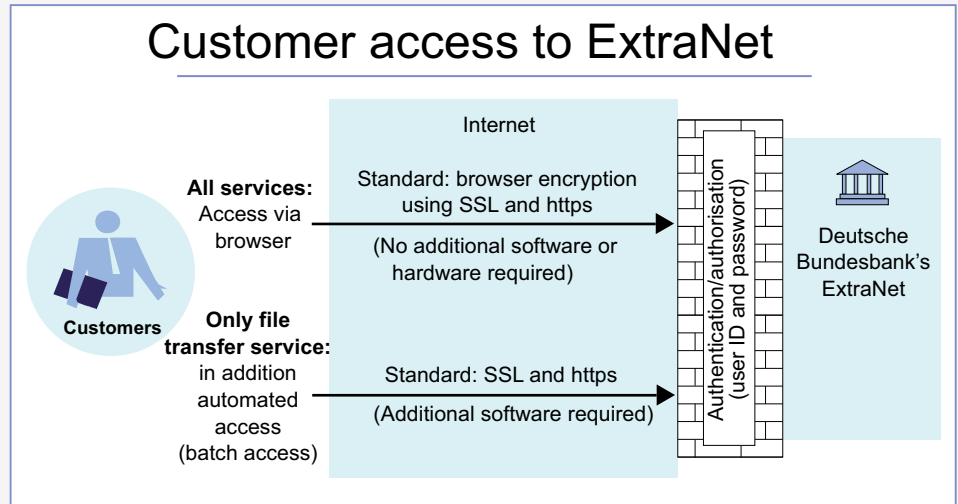
II Infrastructure criteria

1 Customer access to ExtraNet

II Infrastructure criteria

1 Customer access to ExtraNet

Diagram



Basic features

Access to the Deutsche Bundesbank's ExtraNet is via the internet.

Access via browser

Conventional web browsers may be used to access ExtraNet ([see chapter 2 System requirements customer's PC, page 21](#)). SSL and https encryption is used. No additional software or hardware is required.

Automated access (batch access)

Encryption of automated access (batch access) is also by SSL and https. Special software is needed ([see chapter 2 Implementing automated access to file transfer](#) in part IV Technical specifications).

Authentication/ authorisation

Regardless of the access path taken, users must be authenticated/authorised before they can access ExtraNet.

This is done by entering

- a *user ID* and
- a password.

2 System requirements customer's PC

Screen resolution ExtraNet applications can be run with a resolution of at least 1024 x 768 *pixels*.

Graphic card The graphic card used by the *client* must support at least a 24-bit colour dpth at 1024 x 765 pixels.

Browser type Browsers may be used provided they fulfil the following criteria:

- Specifications: XHTML 1.0 and CSS2
- Support: SSL v3 with help from 3DES

Handling cookies The browser must be set to "Accept cookies".

Handling JavaScript The browser must be set to "Accept *JavaScript*".

Special features for bidding systems In addition to the general system requirements for ExtraNet special requirements are possible particularly in the case of the bidding systems BBS and OMTOS (see [chapter 2.3.1 Bidding systems](#) in part I Overview). These special system requirements are described in the relevant system documentation.

3 Technical connections customer's PC

Connection

Simple internet access is all you need to connect to ExtraNet.

Firewall

If the ExtraNet customer has secured his internet access with a *firewall*, the following ports must be unlocked:

- *port 80 for HTTP*
- *port 443 for SSL*


Interruption

If the message "Service not available" appears during connection, the browser has to be closed and then restarted, including logging in the application again.

III Basic services


1 Overview

Overview of basic services



The Deutsche Bundesbank's ExtraNet

Basic services:

<p>File transfer</p> <p>Secure upload and download of files via browser or automated access</p>	 <p>Customers</p>	<p>User management</p> <p>Simple registration (online and standard letter)</p>
<p>ConTact</p> <p>Addressing, answering and managing queries</p>		

Access to basic services

As a general rule, the basic services file transfer, user management and/or ConTact can be accessed via the ExtraNet link on the Deutsche Bundesbank's website (<http://www.bundesbank.de/extranet/extranet.en.php>).

However, before initial registration and before applying for authorisation, we recommend that, on the Deutsche Bundesbank homepage (<http://www.bundesbank.de>), you click on the operational unit of interest to you and take a look at the additional information available there regarding the link between ExtraNet and the operational units' current concerns.

2 File transfer

2.1 File transfer via browser

2.1.1 Basic features

Functions

The following file transfer functions are available:

Name	Purpose
File <i>upload</i>	To transfer files from the <i>customer</i> to the Deutsche Bundesbank
Uploads of the last 10 days	To list all submitted files of the last 10 days
Uploads of the last 100 days	To list all submitted files of the last 100 days
File <i>download</i>	To transfer files from the Deutsche Bundesbank to the customer
Confirm download	For customer to confirm download has been successful

Access to file transfer functions

The file transfer functions may be accessed via the ExtraNet link on the Deutsche Bundesbank's website (User domain, "Submission and collection of reports and files"):

<http://www.bundesbank.de/extranet/extranet.en.php>

2.1.2 File upload

Purpose of the function

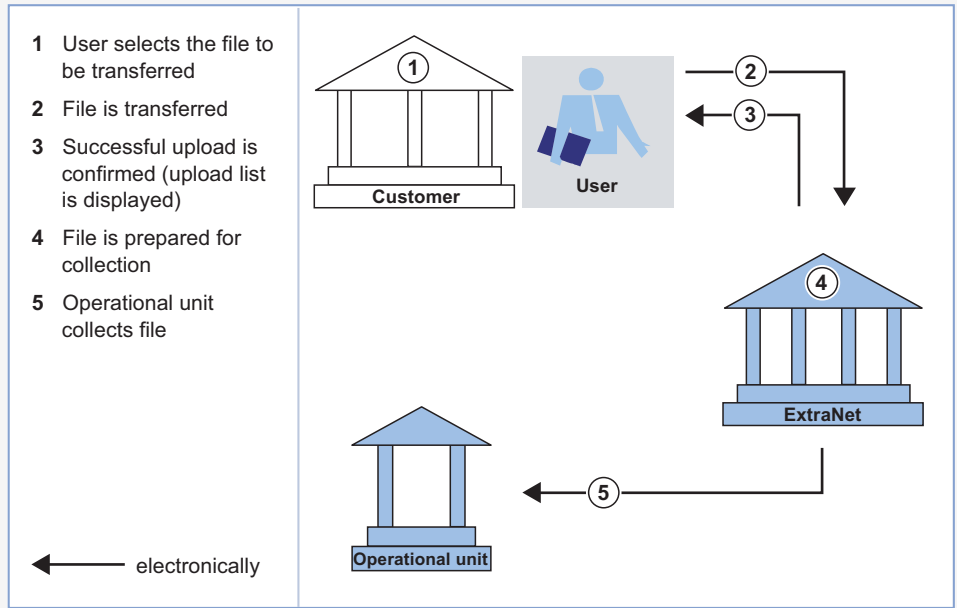
The customer can transfer files electronically to the individual operational units of the Deutsche Bundesbank.

The customer initiates the transfer.

III Basic services

- 2 File transfer
- 2.1 File transfer via browser

Flow chart



File properties to be maintained

When choosing or entering file names, the following rules are to be observed:

The file name should

- contain no relative path entry.
- contain no control character or special character.
- be no more than 44 digits long including the *extension*.

In order to find additional specifications for the individual specialised applications offered through ExtraNet on the Deutsche Bundesbank's website (<http://www.bundesbank.de>), you click on the operational unit of interest to you.

Purpose of the function

2.1.3 Uploads of the last 10 days

The *customer* can display all files which he has submitted for an operational unit within the last 10 days.

However, the list does not indicate what processing stage the transferred file has reached.

Purpose of the function

2.1.4 Uploads of the last 100 days

The customer can display all files which he has submitted for an operational unit within the last 100 days.

The list does not indicate what processing stage the transferred file has reached.

Purpose of the function

2.1.5 File download

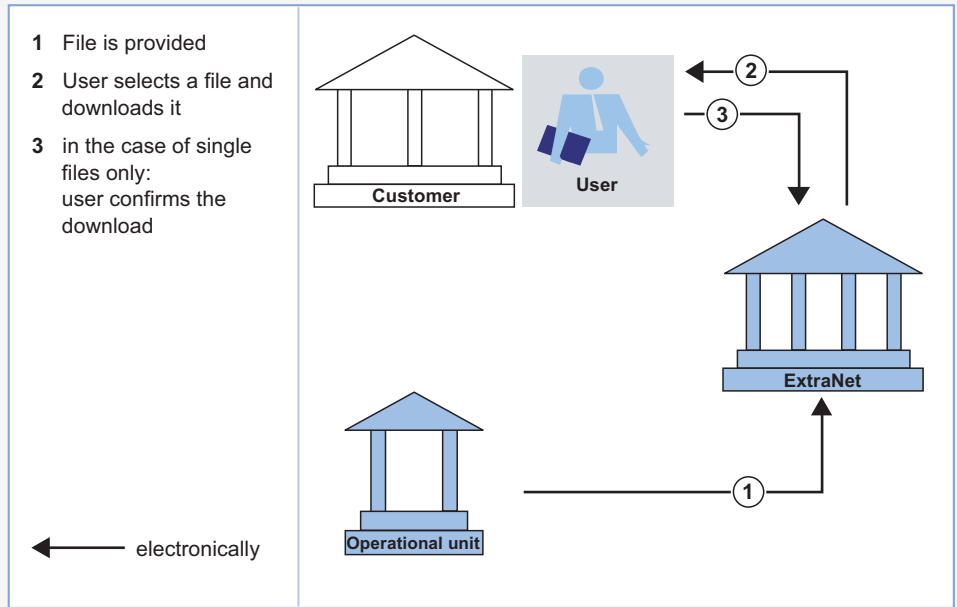
The operational unit provides its customers with one or more files which the customer can collect electronically.

The customer initiates the collection. Customers can select the files they wish to download.

III Basic services

- 2 File transfer
- 2.1 File transfer via browser

Flow chart



File categories

The provided files belong to one of the following categories:

File	Explanation
Single file (SD)	<ul style="list-style-type: none"> • File which is individually designed for one customer. • It is displayed for downloading until the download has been confirmed. (Standard) • If the operational unit forgoes customer confirmation of the download, the file is displayed for as long as has been specified by the operational unit. (Exception) <p>However, the customer can first confirm the file to keep it from being redisplayed for downloading.</p>
Multiple file (MD)	<ul style="list-style-type: none"> • File which is available to all customers with access to the special-ised application. • It is displayed for downloading until the operational unit <ul style="list-style-type: none"> – replaces it with a new version or – deletes it. • The download of multiple files cannot be confirmed.

2.1.6 Confirm download

Purpose of the function

Confirming the successful download of a file in ExtraNet results that the file will be deleted from the download area.

Note: Only the download of single files (SD) can be confirmed!

Procedure

The user receives a list of all the files intended for his specific institution

- which he has already downloaded using the download function and
- for which the download has not yet been confirmed.

The user selects the downloaded files on the list and confirms so the files as “downloaded by recipient” to ExtraNet.

Note: If users are authorised for several ExtraNet institutions, the list comprises the files of all institutions for which they have authorisation.

Result

Once the *customer* has confirmed that a file has been downloaded, the file is deleted and can no longer be downloaded.

Time

Confirmation that the file has been downloaded successfully can be called up at a later date separately from the download.

Note: Download must always be confirmed.

2.2 File transfer via automated access

2.2.1 Basic features

Functions

The following file transfer functions are available via automated access:

Name	Purpose
File <i>upload</i>	To transfer files from the <i>customer</i> to the Deutsche Bundesbank
Upload list	To display files in upload list
File <i>download</i>	To transfer files from the Deutsche Bundesbank to the customer
Confirm download	For customer to confirm download has been successful

Conditions for use

The use of an electronic client has to be flagged to the ExtraNet Call Centre so that customers can be informed as soon as possible of any changes to the interface.

Before an electronic client is put into operation, customer tests should be set up in consultation with the ExtraNet Call Centre.

Main procedure

The functions have to be called up via the corresponding servlets by entering the *URL* and other parameters.

The *servlet* output must be evaluated.

Note: The correct URL is issued by the Deutsche Bundesbank.

Servlet output

The servlet output is carried out controlled by parameters in *XML* format.

Note: In order to activate output in XML format, it is necessary to set the request parameter as follows: **ftclient = "application"**.

Caution: The customer bears the responsibility for access via a proxy server or local *firewall*.

- 2 File transfer
- 2.2 File transfer via automated access

Use of SSL

Secure communication between application programs and file transfer is usually only possible via *SSL* (Version 3.0).

2.2.2 General procedure

Setting up a connection

Phases of setting up a connection:

Phase	Description
1	<p>The client connects to the Deutsche Bundesbank's ExtraNet by calling up a <i>URL</i> in the following form:</p> <ul style="list-style-type: none">• <a href="https://extranet.bundesbank.de/<Application name>/<Ressource>[?Parameter]">https://extranet.bundesbank.de/<Application name>/<Ressource>[?Parameter] <p>The server uses a certificate created by the <i>Root CA</i> of a certification authority (<i>TC TrustCenter GmbH</i>).</p> <p>Note: HTTPS (SSL 3.0 and TLS 1.0) is the only protocol that may be used.</p>
2	<p>The client receives a <i>cookie</i> with the following name:</p> <ul style="list-style-type: none">• PD-S-SESSION-ID <p>Caution: The cookie is valid for a maximum of 240 minutes during an active session and a maximum of 30 minutes during an inactive session. After this time, new <i>authentication</i> is required!</p>
3	<p>A login form is transferred to the client. The client has to enter <i>user ID</i> and password and send the form back to the server with the parameter <i>login-form-type=pwd</i>.</p> <p>Note: For automated access, the variables “user name” and “password” are to be filled in and transmitted by <i>POST request</i> to the following URL:</p> <ul style="list-style-type: none">• https://extranet.bundesbank.de/pkmslogin.form
4	<p>After successful authentication the client receives cookies with the following names:</p> <ul style="list-style-type: none">• PD-ID• PD_STATEFUL_<variable>
5	<p>If access is granted, the originally requested application resource (Phase 1) is delivered.</p>

Note: It is important that all cookies transmitted to the client are transmitted to the server with each subsequent request.

- 2 File transfer
- 2.2 File transfer via automated access

Servlet call-up and parameter processing

Phases of servlet call-up and parameter passing:

Phase	Description
1	A connection to the <i>servlet</i> needed to be set up using the URL indicated.
2	The required parameters are sent to the servlet as a string (eg "parameter x = value y") via the output data stream (a POST request) of this connection.
3	The servlet's answer is read via the input data stream of the connection.
4	The content of the input data stream is evaluated in accordance with the format used.

Evaluating the servlet's answer

Evaluating the servlet's answer:

Phase	Description
1	The called-up servlet returns an answer in the form of an <i>XML</i> page to the caller. This answer can be evaluated with the help of an <i>XML parser</i> .
2	To evaluate the answer, the input stream of the servlet connection can be transmitted directly to the parser.

Purpose of the function

2.2.3 File upload

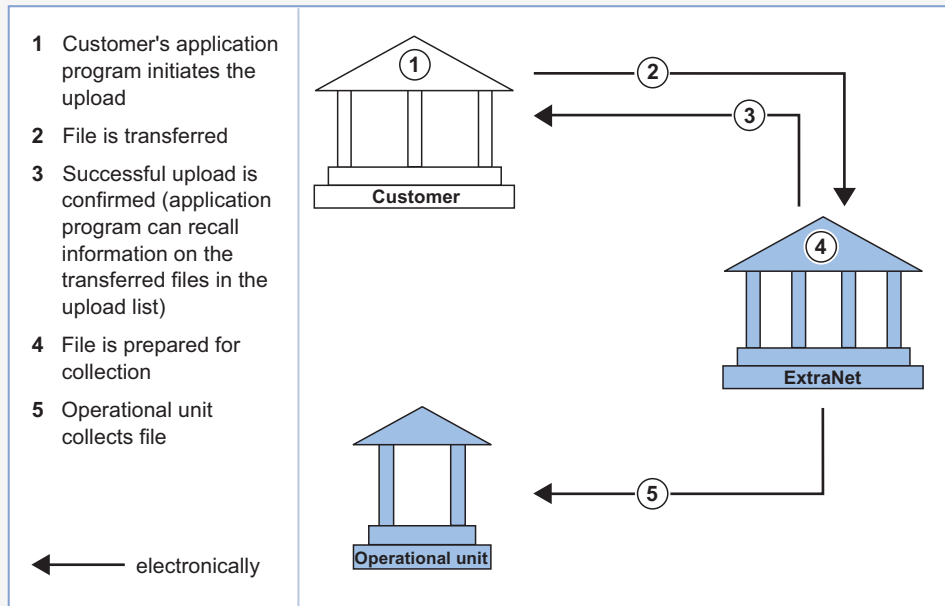
The customer's application program transfers a file to an operational unit of the Deutsche Bundesbank.

The *customer* initiates the transfer.

III Basic services

- 2 File transfer
- 2.2 File transfer via automated access

Flow chart



Servlet to use

The *upload servlet* is used to send a file to the Deutsche Bundesbank. In order to find the *URL* to call up this servlet on the Deutsche Bundesbank homepage (<http://www.bundesbank.de>), you click on the operational unit of interest to you. Alternatively you can obtain the URL by contacting the relevant operational unit.

Parameters for upload servlet

The following parameters must be transferred to the URL in the *POST request*:

Parameter	Definition	From where?
fileName	Path entry + file name (eg C:\temp\test.doc)	Provided by the user.
FTPOA	Recipient	-

2	File transfer
2.2	File transfer via automated access

Note: When uploading, the *content type* must additionally be set in accordance with RFC1867. The actual content of the file is also written in the POST request in accordance with RFC1867. A *boundary* (see also RFC1867) shows the start and the end of the file.

More information can be found at:

<http://www.ietf.org/rfc/rfc1867.txt>

After calling up the URL and passing the parameters, the file specified in the parameter `fileName` is transferred to the customer interface. In response, an *XML* page with the following structure is returned:

```
<?xml version="1.0" ?>
<!DOCTYPE upload [
<!ELEMENT upload (dateiname,dateigroesse,einstellzeit,auftragskennung)>
<!ELEMENT dateiname (#PCDATA)>
<!ELEMENT dateigroesse (#PCDATA)>
<!ELEMENT einstellzeit (#PCDATA)>
<!ELEMENT auftragskennung (sender,empfaenger,typ,auftragsid)>
<!ELEMENT sender (#PCDATA)>
<!ELEMENT empfaenger (#PCDATA)>
<!ELEMENT typ (#PCDATA)>
<!ELEMENT auftragsid (#PCDATA)>
]>

<!-- -->

<upload>

<dateiname>Alterkontostand.txt</dateiname>
<dateigroesse>3</dateigroesse>
<einstellzeit>18.05.07/14:59</einstellzeit>
<auftragskennung><sender>FTSEX</sender><empfaenger>NACHS<empfaenger><typ>SD</
typ><auftragsid>1065</auftragsid></auftragskennung>
</upload>
```

Structure of XML page

- 2 File transfer
- 2.2 File transfer via automated access

Definition of XML tags

The individual XML tags have the following definitions:

Tag	Definition
dateiname	File name
dateigroesse	File size in bytes
einstellzeit	Time of upload
auftragskennung	Relevant data for upload
sender	Always using FTSEX
empfaenger	Application processing the order
typ	Type of order
auftragsid	Order number

Purpose of the function

The upload list displays all files which have been transferred to an operational unit within the last ten days.

Servlets to use

The *Dir servlet* is used to display an upload list. This servlet can be called up using the following URL:

<https://extranet.bundesbank.de/FT/dir>

Fixed parameters for Dir servlet

The following fixed parameters must be transferred to the URL:

Parameter	Value	Use
dirKind	“DOWN“	To call up a list of files which are ready to be downloaded.
	“DEL“	To call up a list of files which are ready to be confirmed.
	“DIR“	To call up a list of all files which have been transferred from the customer to ExtraNet.

- 2 File transfer
- 2.2 File transfer via automated access

Structure of XML page

After calling up the URL and passing the parameters, the list established through the parameter `dirKind` is created and returned in the form of an XML page with the following structure:

```
<?xml version="1.0" ?>
<!DOCTYPE auftragsview [
<!ELEMENT auftragsview (auftrag*)>
<!ELEMENT auftrag (nr,dateiname,dateigroesse,einstellzeit,auftragskennung)>
<!ELEMENT nr (#PCDATA)>
<!ELEMENT dateiname (#PCDATA)>
<!ELEMENT dateigroesse (#PCDATA)>
<!ELEMENT einstellzeit (#PCDATA)>
<!ELEMENT auftragskennung (sender,empfaenger,typ,auftragsid)>
<!ELEMENT sender (#PCDATA)>
<!ELEMENT empfaenger (#PCDATA)>
<!ELEMENT typ (#PCDATA)>]>
<!ELEMENT auftragsid (#PCDATA)>
]>

<auftragsview>

<auftrag><nr>0</nr><dateiname>Alterkontostand.txt</dateiname><dateigroesse>3</
dateigroesse><einstellzeit>2007-05-18 14:59:26.0</einstellzeit><auftragskennung>
<sender>FTSEX</sender><empfaenger>NACHS</empfaenger><typ>SD</typ><auftragsid>
1065</auftragsid></auftragskennung></auftrag><auftrag><nr>1</nr><dateiname>
Alterkontostand.txt</dateiname><dateigroesse>3</dateigroesse><einstellzeit>
2007-06-08 09:58:31.0</einstellzeit><auftragskennung><sender>FTSEX</sender>
<empfaenger>NACHS</empfaenger><typ>SD</typ><auftragsid>1073</auftragsid>
<auftragskennung></auftrag></auftragsview>
```

Definition of XML tags

The individual XML tags have the following definitions:

Tag	Definition
auftrag	Order element in the list
nr	Number
dateiname	File name
dateigroesse	File size in bytes
einstellzeit	Time of upload

- 2 File transfer
- 2.2 File transfer via automated access

Tag	Definition
auftragskennung	Relevant data for upload
sender	Sending application
empfaenger	Application processing the order
typ	Type of order
auftragsid	Order number

Note: For orders which have been transferred to ExtraNet by the customer, “FTSEX” always appears as the sending application.

In addition to this XML file, the Dir servlet sets the following cookie:

“JSESSIONID”

This session *cookie* is used when carrying out downloads or confirmations in order to read the data of the list (auftragsid etc).

2.2.5 File download

Purpose of the function

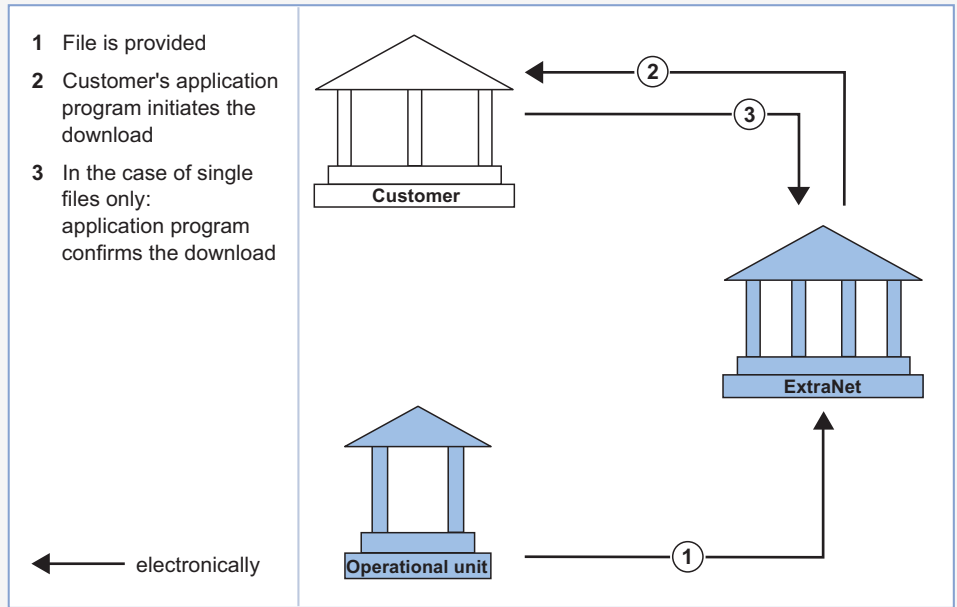
The operational unit provides its customers with one or more files which can be accessed automatically.

The *download* with automated access is initiated by the customer’s application program.

III Basic services

- 2 File transfer
- 2.2 File transfer via automated access

Flow chart



Servlet to use

To download a file from the Deutsche Bundesbank, the first thing to do is to call up the *Dir servlet* with the parameter `dirKind = "DOWN"` and the sender in order to get a list of the possible files to be downloaded.

The *download servlet* is used to download a file from the Deutsche Bundesbank. This servlet can be called up using the following *URL*:

<https://extranet.bundesbank.de/FT/download>

- 2 File transfer
- 2.2 File transfer via automated access

Parameters for download servlet

The list indicates the parameters required for the download and used to call up the download servlet:

Parameter	Definition	From where?
fileName	Order number	<nr> from the list
CHECKFTPOA	Sending application	<Sender> from the list

Furthermore, the JSESSIONID *cookie* resulting from the “DIR” call-up is to be written in the request header.

After calling up the URL and passing the parameter, the file is transferred from the customer interface (*FTSext*) to the application which is calling up.

2.2.6 Confirm download

Purpose of the function

Confirming the successful download of a file in ExtraNet results that the file will be deleted from the download area.

Note: Only the download of single files (SD) can be confirmed!

Procedure

Phases of servlet call-up and parameter passing:

Phase	Description
1	The files which are to be confirmed are identified via the <i>Dir servlet</i> with the parameter dirKind = “DEL“ and the sender. Result: List of files and their order numbers

Phase	Description
2	<p>The URL https://extranet.bundesbank.de/FT/confirm is called up when transferring the relevant parameters.</p> <p>Result: The order status of the selected files is changed in the file transfer.</p> <p>Note: The parameter nr is transferred to the URL https://extranet.bundesbank.de/FT/confirm as an <i>array</i>.</p> <p>In response, an <i>XML</i> page with the following structure is returned:</p> <pre><?xml version="1.0" ?> <!DOCTYPE bestaetigen [<!ELEMENT bestaetigen (message)> <!ELEMENT message (#PCDATA)>]> <bestaetigen> <message> Auftrag/Aufträge bestätigt.</message> </bestaetigen></pre>

Note: At the same time, the *JSESSIONID* *cookie* must be written in the request header.

Parameters required for the confirmation are taken from the list of files in Phase 1:

Parameter	Definition	From where?
confirmcheck	Sequential number	<nr> from the list

Note: Multipart/form data is used as the content type.

Result Once the *customer* has confirmed that a file has been downloaded, the file is deleted and can no longer be downloaded.

3 User management

3.1 Access to user management

Access to user management

User management may be accessed via the ExtraNet link on the Deutsche Bundesbank's website:

<http://www.bundesbank.de/extranet/extranet.en.php>

This page also gives customers' employees the opportunity to register for ExtraNet if they have not already done so.

3 User management

3.2 User registration

3.2 User registration

3.2.1 Basic features

Objective

Employees (users) of customers of the various operational units must register before they can use the range of ExtraNet specialised applications.

Requirements

To register for an ExtraNet specialised application, the customer needs to know the *ID code* of the institution concerned.

The ID code for each operational unit is also referred to as indicated below:

Operational unit	Name
Banking supervision	Creditor number
Banking statistics	Institution number
External sector statistics	Enterprise number or bank sorting code
Monetary policy instruments	WIK number or MFI code
Federal securities	MFI code
Cash management	Global Location Number (GLN)
Payment systems	Bank sorting code

The ID code can be obtained by contacting the relevant operational unit. Before registering for a specialised application, customers are therefore advised to contact the relevant operational unit.

The relevant operational unit gives the customer the latest data record descriptions for the service file transfer and asks him to submit test files so that formats may be aligned.

Initial registration

An employee of a customer registers for ExtraNet specialised applications for the first time.

In the course of registration process the employee will be given a *user ID* and an initial password.

Secondary registration

An employee of a customer is already registered as user of one of the ExtraNet specialised applications.

Using his/her personal user ID and password, a user can sign up for other services via the secondary registration procedure.

User manager

When registering, the user can indicate whether s/he wishes to make use of the standard user manager function.

This standard function enables the user to verify user authorisations within a procedure for his/her own institution ([see chapter 3.8 Verifying user authorisations, page 62](#)).

Note: Use of the standard user manager function requires the approval of the operational unit. This is obtained during the registration procedure.

User data

User data are requested as part of the initial registration procedure. These are personal data of the individual user of one of the ExtraNet specialised applications. These data must be kept up to date by the user.

User data include:

- Name
- First name
- Street/PO Box
- Postcode
- Place
- Institution name
- Telephone
- Fax
- E-mail address
- Question/answer, if the user has opted to take part in the simplified password resetting procedure

Note: The address data provided should be the data of the institution/ enterprise to which the password is to be sent.

Simplified password resetting procedure

When registering, the user can indicate whether or not s/he wishes to take part in the simplified password resetting procedure. If s/he does, s/he can reset his/her password over the phone by contacting the *ExtraNet Call Centre*.

In such cases, the user, when logging in for the first time, is asked to enter his/her chosen question and the corresponding answer.

Note: Participation in the simplified password resetting procedure is strongly recommended.

Registration procedures

Depending on its security requirements, each individual operational unit may choose one of two registration procedures for its service:

- online registration with written application
- registration through personal contact with the operational unit

3.2.2 Online registration with written application

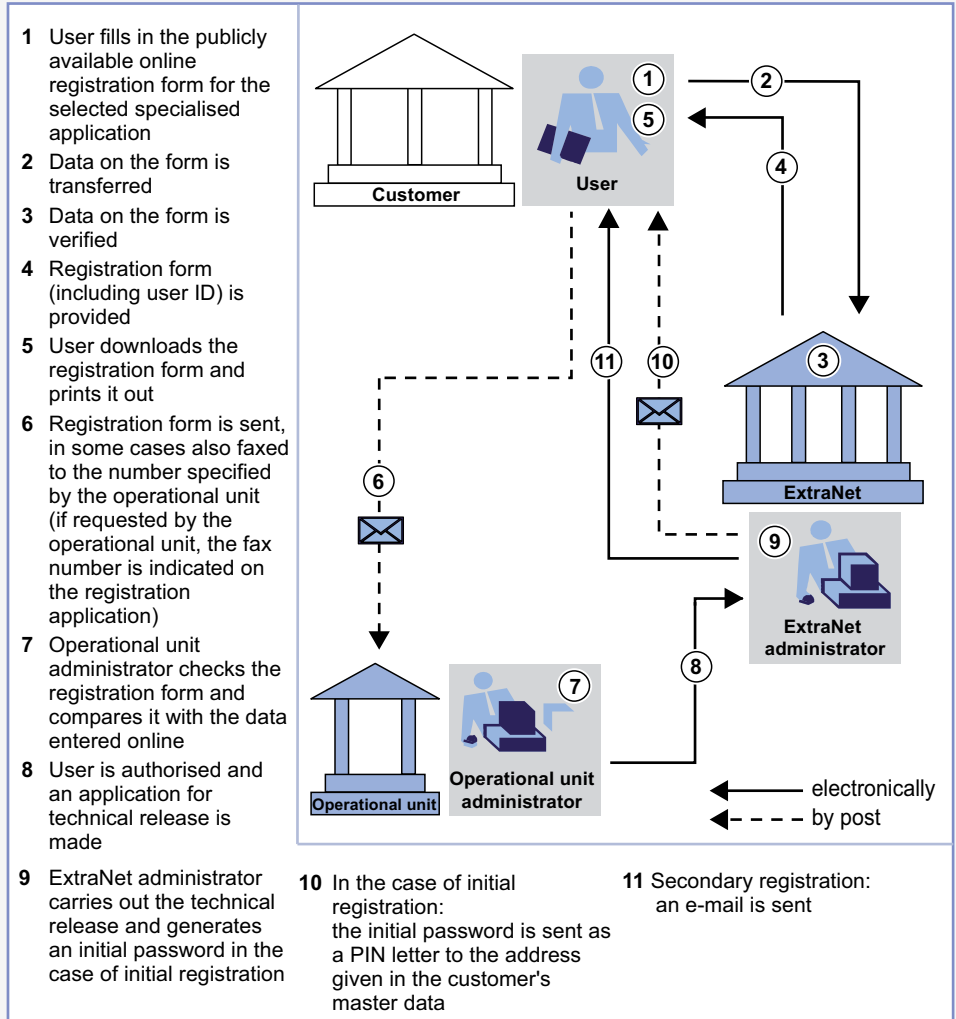
Procedure

Users register online but, as an additional security measure, also submit a paper application to the operational unit for whose specialised application they are registering.

III Basic services

- 3 User management
- 3.2 User registration

Flow chart

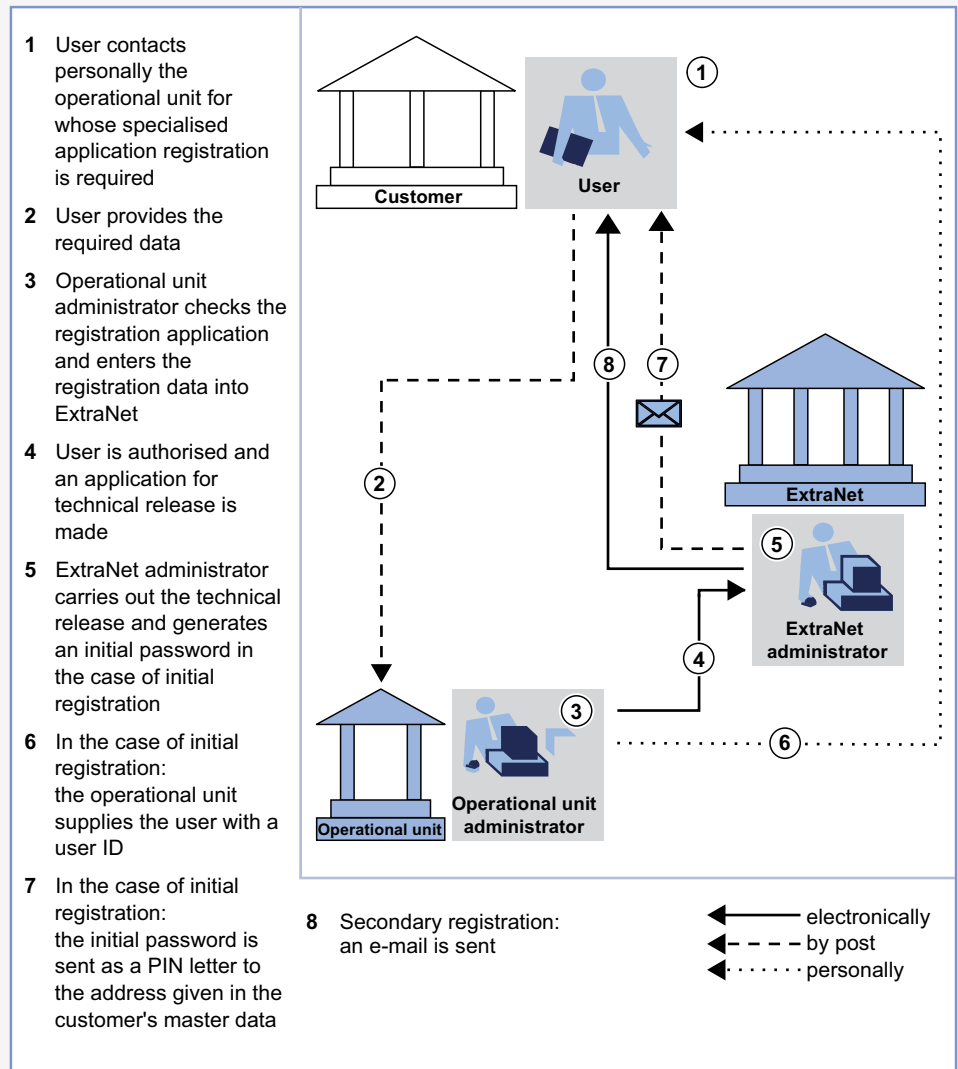


3.2.3 Registration through personal contact

Procedure

The registration is carried out by the *operational unit administrator*.

Flow chart



3.3 Changing user data

3.3.1 Basic features

Persons authorised to change the data

The personal data provided by the user during registration may be changed by

- the user.
- the *operational unit administrator*.

Maintaining the user data

Users are personally responsible for maintaining their personal data. This is done by the user

- updating the data online (as is usually the case).
- informing the relevant operational unit of the changes so that the operational unit administrator can then update the data (as an exception).

3.3.2 Data changes by user

Data that can/cannot be changed by the user

The user may

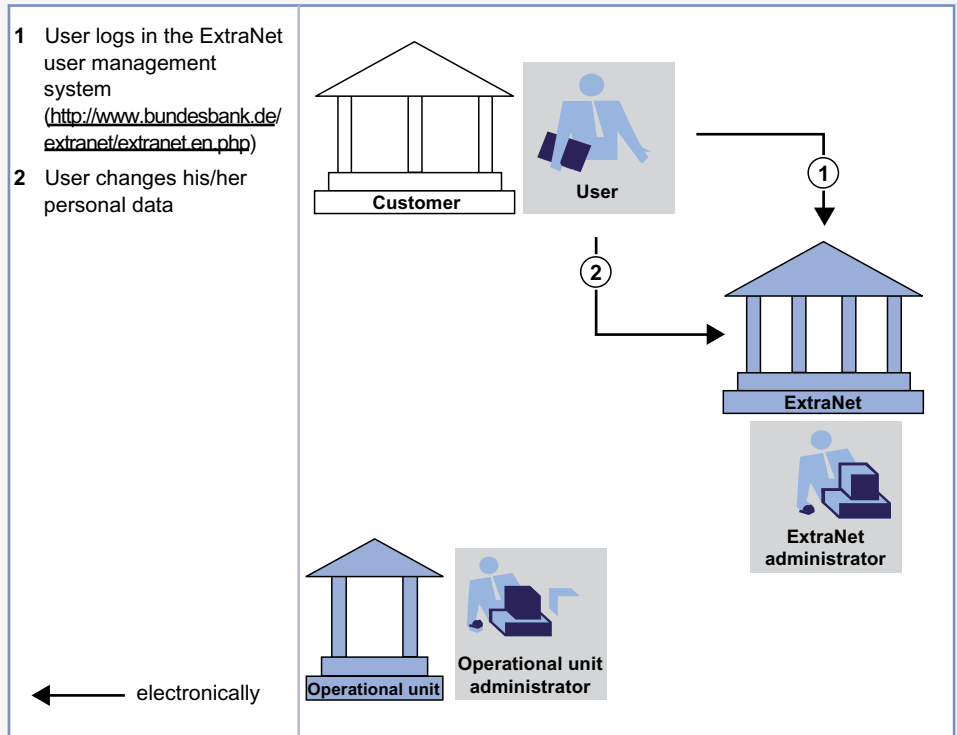
- change the following data:
 - Name
 - First name
 - Street/PO Box
 - Postcode
 - Place
 - Telephone
 - Fax
 - E-mail address

III Basic services

- 3 User management
- 3.3 Changing user data

- Question/answer
- Password
- **not** change the following data:
 - Institution name
 - Customer's master data

Flow chart



Data that can/cannot be changed by the operational unit

3.3.3 Data changes by operational unit

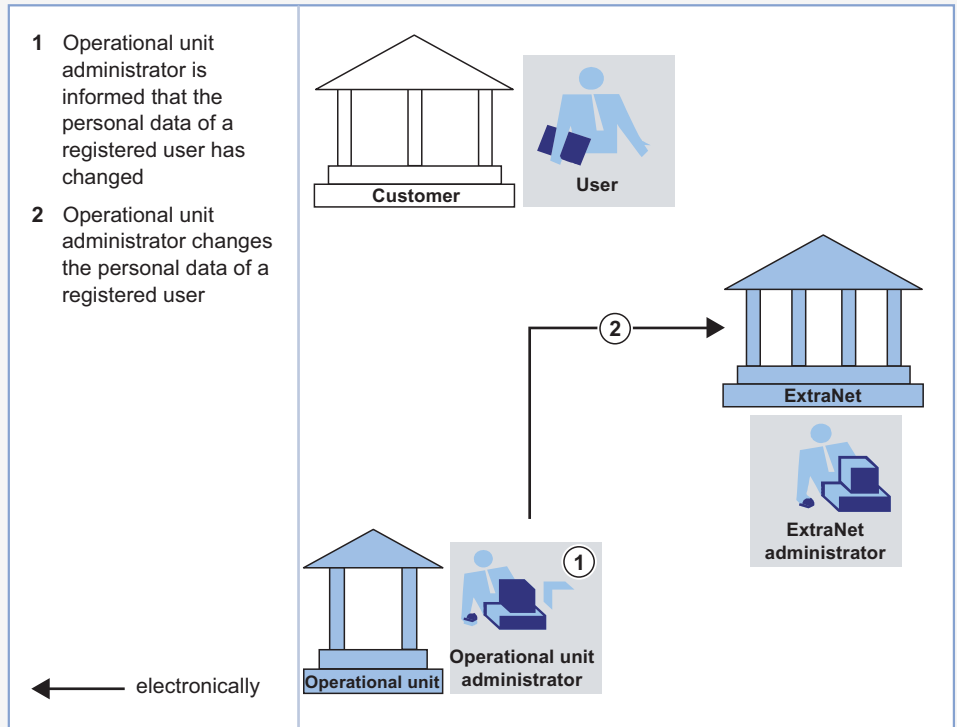
An *operational unit administrator* may

- change the following personal user data according the information supplied:
 - Name
 - First name
 - Street/PO Box
 - Postcode
 - Place
 - Telephone
 - Fax
 - E-mail address
- **not** change the following personal user data:
 - Institution name
 - Customer's master data
 - Question/answer
 - Password

III Basic services

- 3 User management
- 3.3 Changing user data

Flow chart



3.4 Blocking users

3.4.1 Basic features

Effects

Blocking a user means that the blocked user has no access to ExtraNet, ie that s/he can no longer use the specialised applications for which s/he is registered. This applies to all operational units for which the user has obtained authorisation.

The user's personal data are still held in the ExtraNet system.

Reasons

Reasons for blocking a user's access to ExtraNet may include for example:

- entering the wrong password three times
- improper use of ExtraNet
- doubt surrounding the integrity of the user
- suspicion that the user has placed ExtraNet in a compromising situation

3.4.2 Blocking by the customer

Objective

A *customer* no longer wants one of his employees (user) to have access to the ExtraNet specialised applications for which s/he is registered.

Procedure

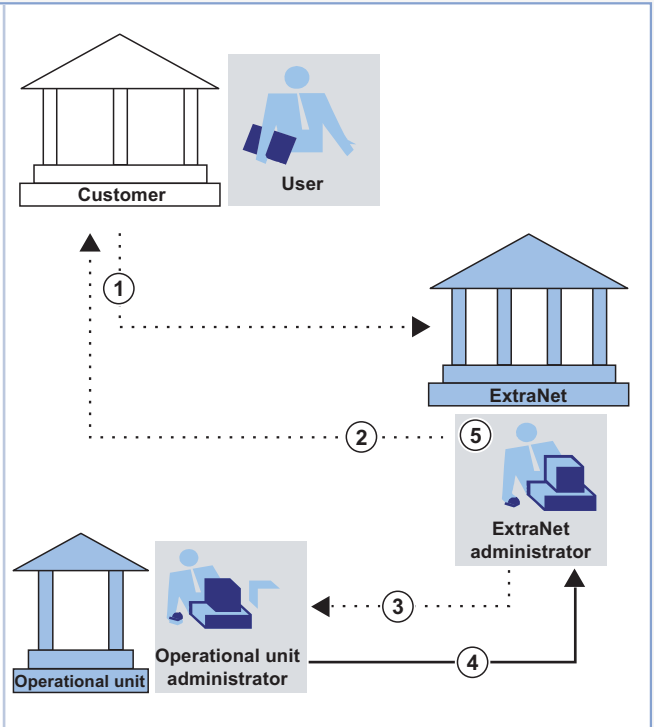
An application to block a user may be made by

- telephone (immediate written confirmation is required)
- fax (signed by an *authorised BBk signatory*)
- letter (signed by an authorised BBk signatory)

Flow chart (by telephone)

- 1 Customer phones the ExtraNet Call Centre and asks for a particular user to be blocked
- 2 ExtraNet administrator phones the customer back to check that the call was actually made by the customer
- 3 ExtraNet administrator informs the relevant operational unit administrator of the requested blocking
- 4 Operational unit administrator gives the order for blocking the user via the web interface
- 5 ExtraNet administrator blocks the user

← electronically
◄ personally

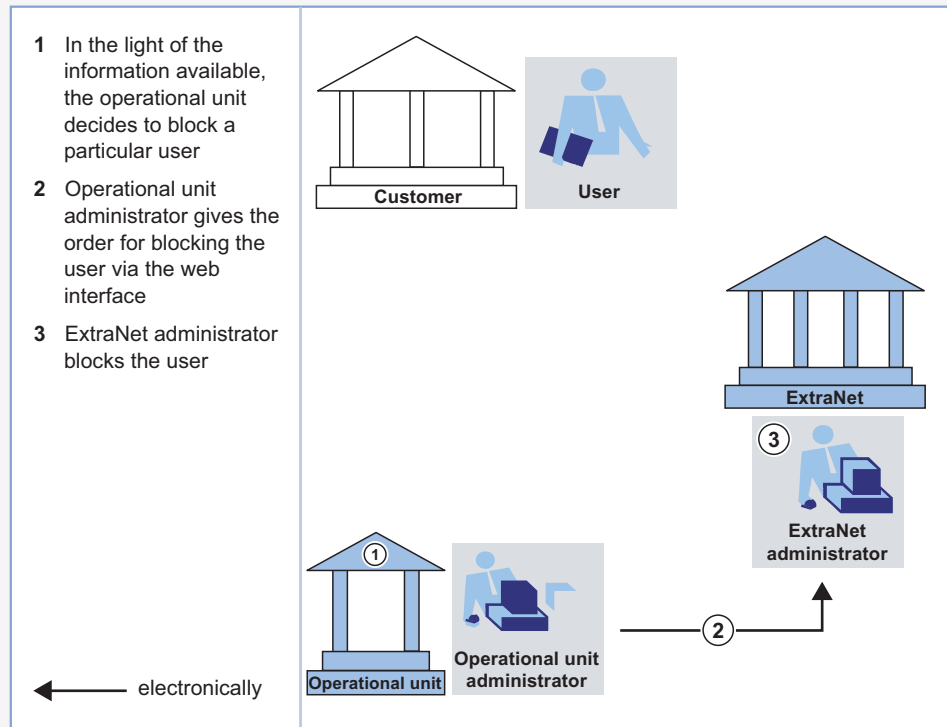


3.4.3 Blocking by the operational unit

If there is good reason to do so, an operational unit is entitled to block a user's access to ExtraNet.

Authorisation

Flow chart



3.5 Unblocking users

3.5.1 Basic features

Effect Unblocked users regain access to ExtraNet, meaning that they may once again use all the ExtraNet specialised applications for which they are registered.

Requirements Users may only be unblocked following a thorough investigation.

3.5.2 Unblocking by the customer

Objective A *customer* wants one of his employees (user), who has been blocked, to once again be able to access to the ExtraNet specialised applications for which s/he is registered.

Procedure An application to unblock a user may be made by

- telephone (immediate written confirmation is required)
- fax (signed by an *authorised BBk signatory*)
- letter (signed by an authorised BBk signatory)

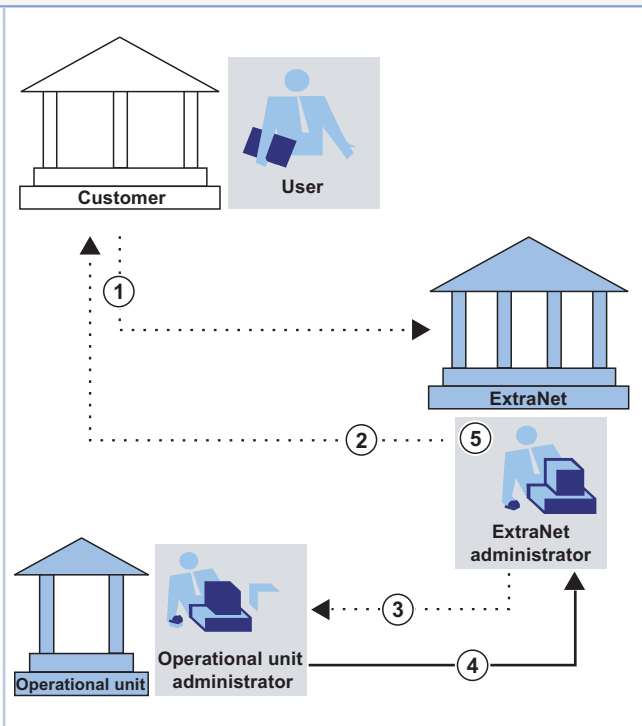
III Basic services

- 3 User management
- 3.5 Unblocking users

Flow chart (by telephone)

- 1 Customer phones the ExtraNet Call Centre and asks for a particular user to be unblocked
- 2 ExtraNet administrator phones the customer back to check that the call was actually made by the customer
- 3 ExtraNet administrator informs the relevant operational unit administrator of the requested unblocking
- 4 Operational unit administrator gives the order for unblocking the user via the web interface
- 5 ExtraNet administrator unblocks the user

← electronically
◄ personally

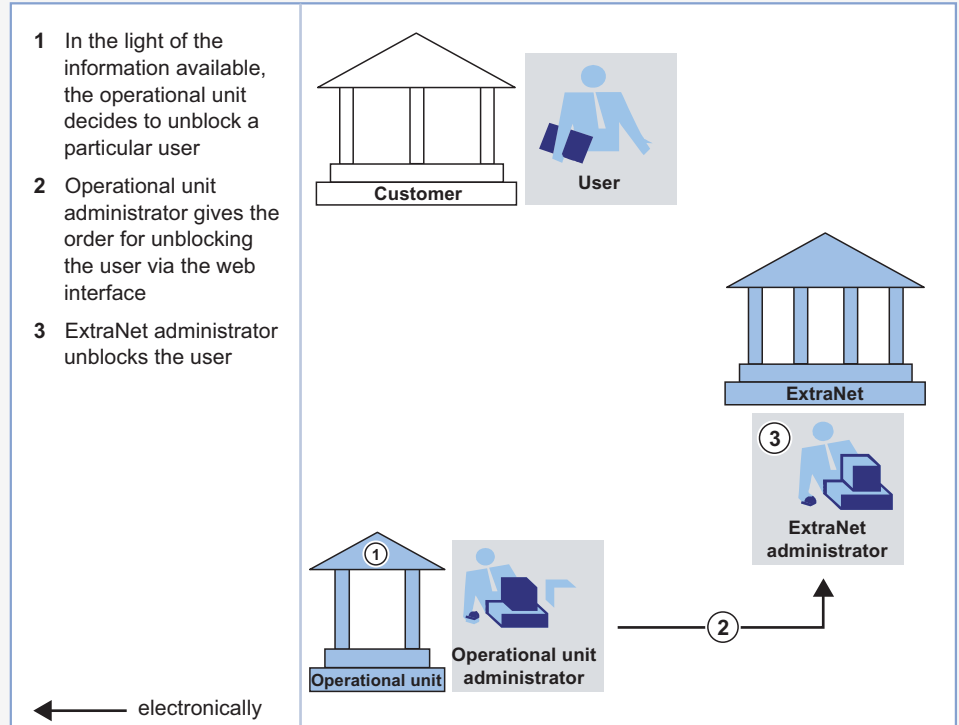


3.5.3 Unblocking by the operational unit

Each operational unit, for whose specialised application a blocked user is registered, may commission the *ExtraNet administration* to unblock the user.

Authorisation

Flow chart



3.6 Resetting user password

3.6.1 Basic features

Purpose

The user may request a new initial password. This may be necessary if, for example,

- the user has forgotten his/her password.
- the user has entered a wrong password three times.
- the user does not receive the *PIN letter* sent by the *ExtraNet administration* as part of the registration procedure.

The new password must be converted into a personal password when the user logs in for the first time.

Resetting procedures

There are two procedures for resetting the user password:

- standard procedure
- special procedure

3.6.2 Standard procedure

Definition

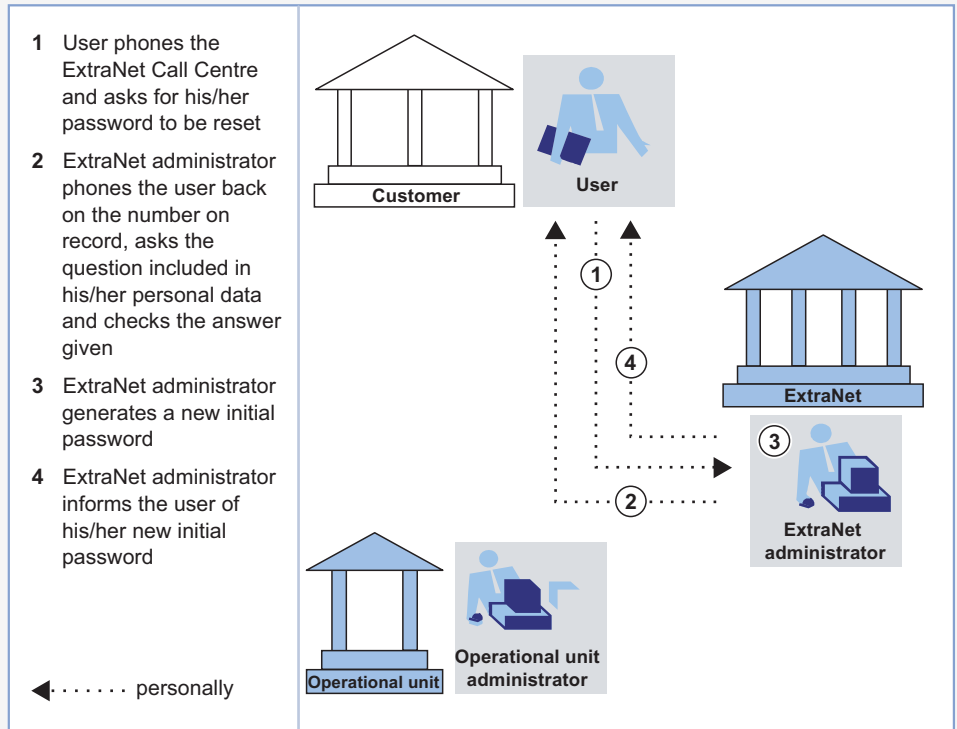
The standard procedure consists of a telephone call.

Requirement

For the standard procedure, the user must have opted to take part in the simplified password resetting procedure and therefore have included a “question and answer” in his/her personal data.

The “question and answer” serve as an extra security component to prevent unauthorised persons who know a user’s *user ID* - but not his/her password - from accessing the ExtraNet specialised applications.

Flow chart



3.6.3 Special procedure

Procedure

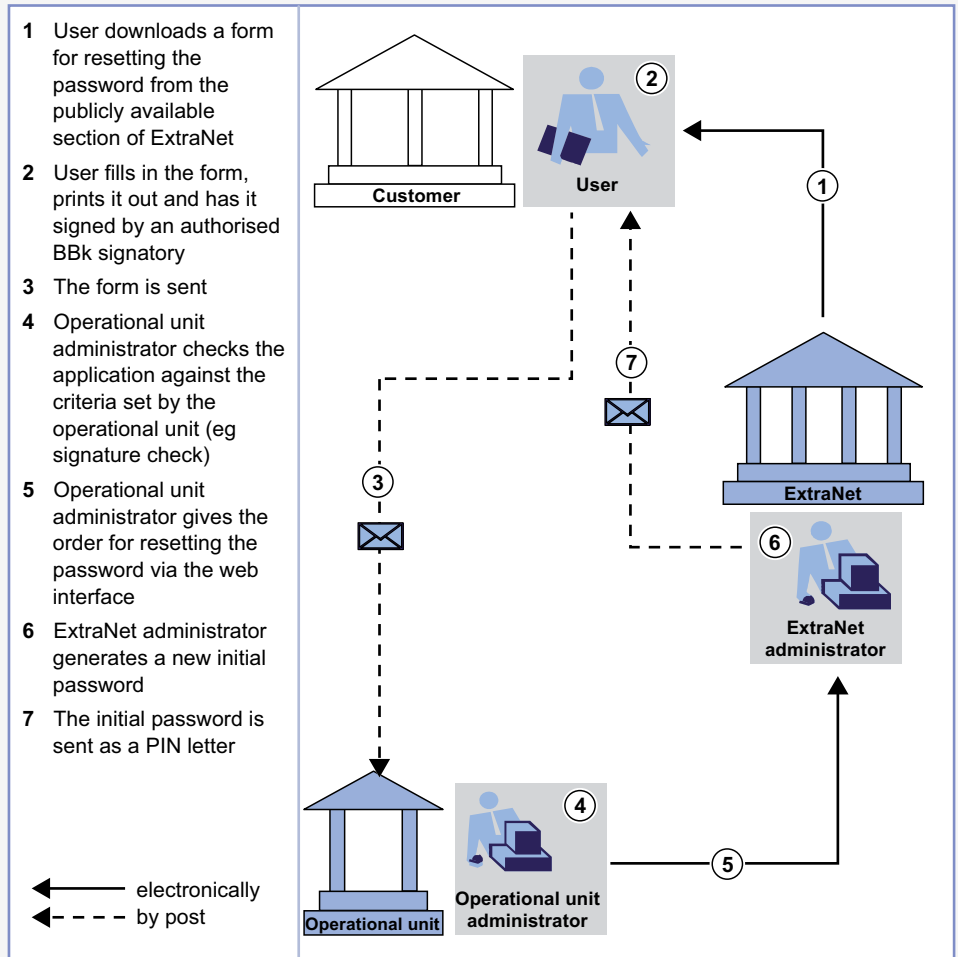
The special procedure takes longer, as the new password is applied for by post and sent out in a *PIN letter*.

The special procedure is only used if the user has not opted to take part in the simplified password resetting procedure and has therefore not included a “question and answer” in his/her personal data.

III Basic services

- 3 User management
- 3.6 Resetting user password

Flow chart



3.7 Deleting users

3.7.1 Basic features

Effect

Deleting a user means that his/her data recorded as part of the registration procedure are marked as deleted in ExtraNet.

Once the data have been deleted, the user can no longer access the specialised applications for which s/he was registered.

Deletion of a user is irrevocable. If, after having been deleted, a user wishes to work with one of the specialised applications offered through ExtraNet, s/he must reregister.

3.7.2 User deletes him-/herself as a user

Authorisation

Every user who has registered in ExtraNet may delete his/her data and therefore him-/herself as a user.

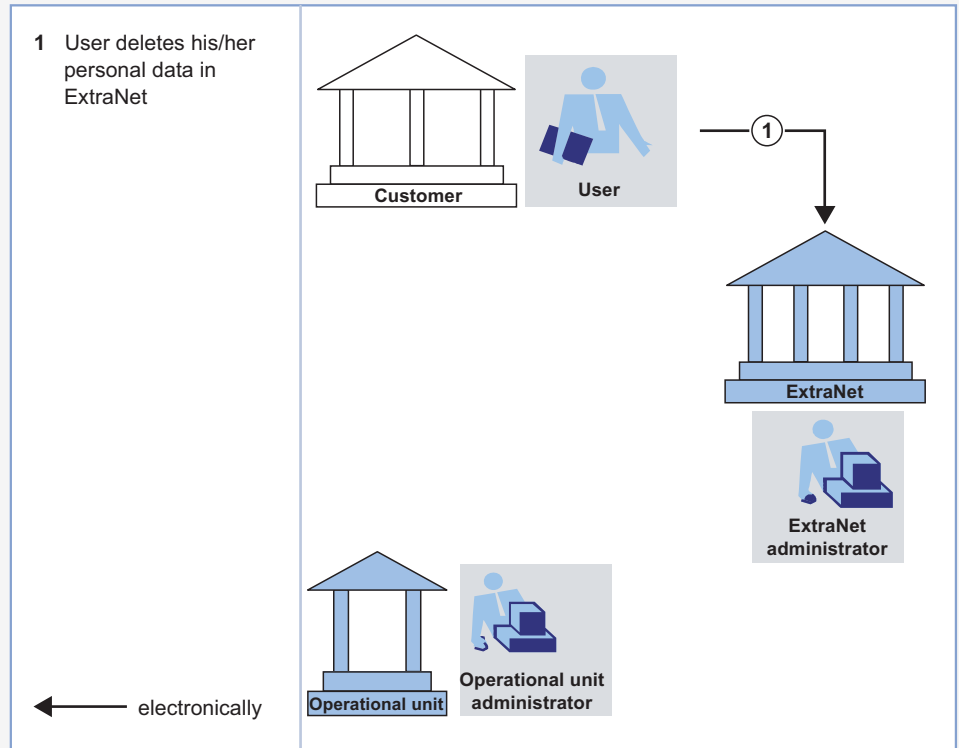
Requirements

In order to delete his/her data, the user must

- have logged in the ExtraNet user management.
- call up the “initiate deletion“ function.

Note: To initiate the deletion, the user must enter his/her password. This avoids any inadvertent deletions.

Flow chart



3.7.3 User is deleted by ExtraNet administration

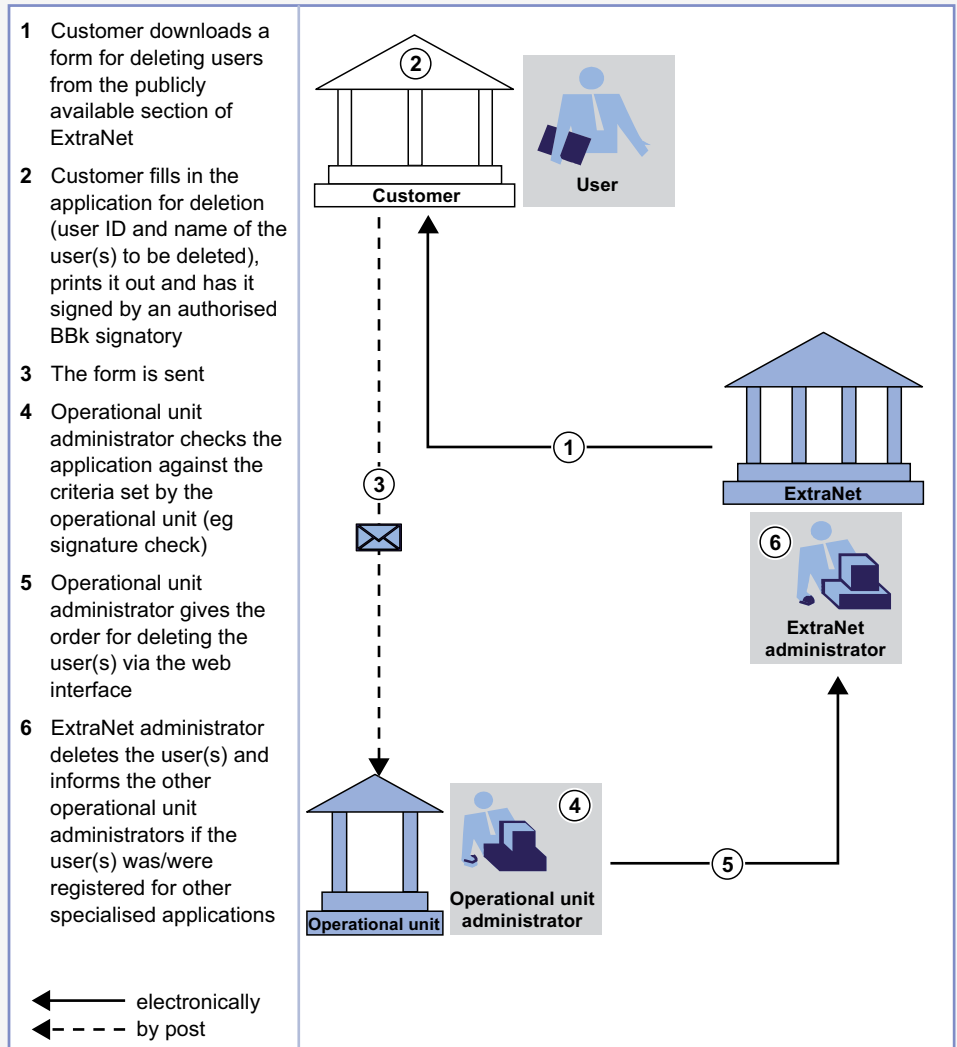
Procedure

Users who are registered in ExtraNet can be deleted by the *ExtraNet administration* as requested by the customer. Several users can be deleted at one time.

III Basic services

- 3 User management
- 3.7 Deleting users

Flow chart



3.8 Verifying user authorisations

3.8.1 Basic features

Purpose

Authorised users (user managers) are able to call up/print a list of the authorisations granted to their co-workers.

Requirements

Each specialised procedure contains a standard user manager function. In order to be able to use this function, the user has to be registered for at least one specialised procedure (see [chapter 3.2.1 Basic features, page 41](#) for more details on initial/secondary registration).

3.8.2 User manager for one specialised procedure

Requirements

The logged-in user is registered for the standard user manager function in one specialised procedure only.

Displaying the list of user authorisations

The user manager selects the menu item “List users” to display a list of all the registered users at his/her institution, along with their corresponding authorisations.

Specifically, the user manager is provided with the following general information:

- Description of specialised procedure
- *ID code*
- Name of institution

The accompanying table contains the relevant information:

- User ID
- Surname
- First name
- Functions for which the registered user is authorised

Blocked users are highlighted in the table. The individual columns can be sorted by clicking on them. If a table contains more than 10 entries, it can be displayed in either page or overall view format.

The user manager can use the PDF download option for a printable view of the data.

3.8.3 User manager for several specialised procedures

Requirements

The logged-in user is registered for the standard user manager function in several specialised procedures.

Displaying the list of user authorisations

The user manager selects the menu item “List users” to display a list of all the specialised procedures for which s/he has the role of user manager.

After clicking on the individual specialised procedure for which s/he wishes to see a list of registered users and their authorisations, the user manager will be provided with the information described in [chapter 3.8.2 User manager for one specialised procedure, page 62](#).

4 ConTact

4.1 Basic features

Definition

ConTact is the “secure” interface between a customer and the Deutsche Bundesbank which permits the computer-assisted addressing and managing of queries from the Deutsche Bundesbank to the customer and offers the customer the possibility of responding to these queries online.

Access

Access to ConTact is interactive via a *browser*.

Integration

ConTact has been integrated into ExtraNet’s user management.

4.2 Requirements for participation

Requirements

As a user of the Deutsche Bundesbank's ExtraNet, the *contact person* is registered for the *specialised procedure* (eg BSM) and the function (eg BISTA), for which the operational unit of the Deutsche Bundesbank initiates a query.

Failure to meet requirements

If these requirements are not met, compliance can be obtained as follows:

Contact person is ...	by ...
registered as a user of the Deutsche Bundesbank's ExtraNet for the specialised procedure but not for the function.	Secondary registration (see chapter 3.2 User registration, page 41)
registered as a user of the Deutsche Bundesbank's ExtraNet but not registered for the specialised procedure.	Secondary registration (see chapter 3.2 User registration, page 41)
not registered as a user of the Deutsche Bundesbank's ExtraNet .	Initial registration (see chapter 3.2 User registration, page 41)

4.3 Procedures

4.3.1 General procedure

Using the link received from the Deutsche Bundesbank via an “unsecured” e-mail message, the user can respond to the available query by indicating his/her ExtraNet user ID and password.

Notes:

- Irrespective of the access chosen, a secure internet connection is set up.
- To ensure quick orientation, each entry mask contains information on the mask itself.

Basic features

Access via link

Access via the link sent by the “unsecured” e-mail message takes place as follows:

Phase	Description
1	The user receives a link to the query via an “unsecured” e-mail message.
2	Clicking on this link directs the user to the login screen of the ExtraNet user management.
3	The user logs in the ExtraNet user management system using his/her <i>user ID</i> and password.
4	The user is directed straight to the query.

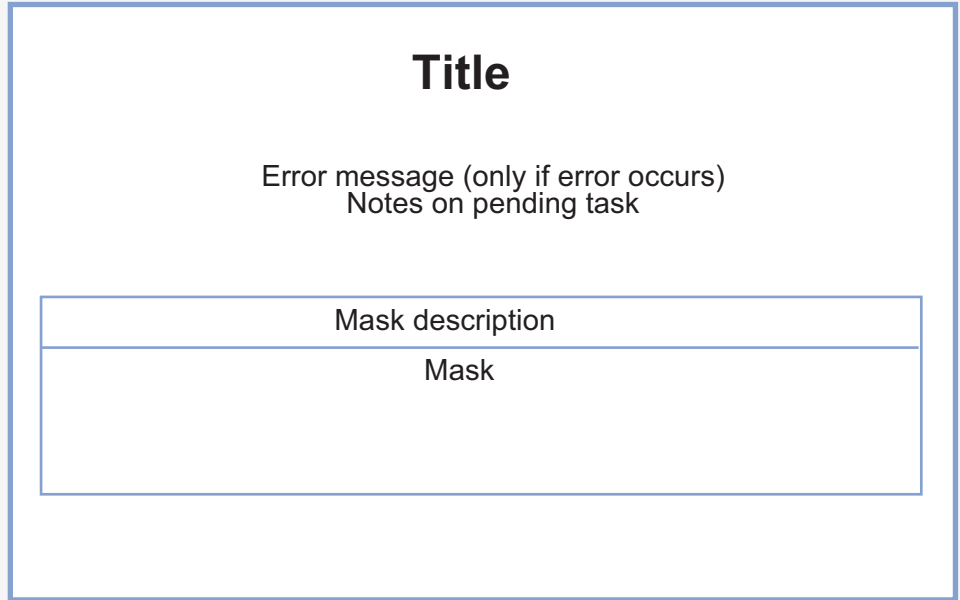
Access via user management

Access via user management takes place as follows:

Phase	Description
1	The user logs in the ExtraNet user management system (http://www.bundesbank.de/extranet/extranet.en.php) using his/her user ID and password.
2	By selecting the link “Display queries” in the navigation bar, the user is shown the queries for which s/he has read and write authorisation.

4.3.2 Mask structure

General structure



Details included in the mask

The following details are included in the mask:

Name	Definition
Identification number/ID	Number under which each query can be definitely identified; application automatically generates a number for each query
Specialised procedure	Superior procedure of the Deutsche Bundesbank generating the query (eg BSM = banking statistics reports)
Function	Unit for which the query was generated (eg BISTA = monthly balance sheet statistics)
Institution	Institution to which the query is addressed
Status	Processing status of the query
Date	Deadline for responding to the query
Topic	Topic of the query

Name	Definition
Question	The specific query
Attachment	File attachment regarding the query (optional)

4.3.3 Procedure of responding to a query

4.3.3.1 Using the link sent via e-mail message

Procedure for responding to a query using the link sent via e-mail message:

Phase	Description
1	A Deutsche Bundesbank staff member generates an online query to one or more contact persons of the customer (user(s)).
2	The application generates an “unsecured” e-mail with a subject heading and the URL directing to the query.
3	The user places the transmitted URL into the browser address window (by clicking on it or copying it into a browser address window) and is then directed to the login screen of the ExtraNet user management.
4	The user logs in the ExtraNet user management system using his/her <i>user ID</i> and password.
5	The application opens the query and shows the user the details (see block Details included in the mask, page 67 , in chapter 4.3.2 Mask structure) of the query. Notes: <ul style="list-style-type: none"> • If the query has already been opened by another user, the name of the other user is displayed. • The user can print out the query and all information on the query by clicking on the link “Print page”.
6	By clicking on the <i>button</i> “Write answer”, the user is directed to a description field in which the user can directly respond to the query. Note: An answer can only be generated for queries bearing the status “Request”, “Received” and “Deadline missed” (see chapter 4.3.4 Status, page 71).

Phase	Description
7	<p>The user enters an answer and clicks on the button “Send answer”.</p> <p>Result: The answer is saved and sent to a staff member at the Deutsche Bundesbank. The user receives confirmation.</p> <p>Note: By clicking on the button “Save answer”, the answer is saved for later processing and not sent. The user receives confirmation.</p>
8	<p>Upon finishing the work session, the user clicks on the button “Logout”.</p>

Note: If the current query is a query to a previously answered query, the links (identification number) to the other query are also indicated.

4.3.3.2 Using user management

Procedure for responding to a query using user management:

Phase	Description
1	<p>A Deutsche Bundesbank staff member generates an online query to one or more contact persons of the customer (user(s)).</p>
2	<p>The application generates an “unsecured” e-mail with a subject heading and the URL directing to the query.</p>
3	<p>The user calls up the ExtraNet user management (see chapter 3.1 Access to user management, page 40).</p>
4	<p>The user logs in the ExtraNet user management system using his/her <i>user ID</i> and password.</p>
5	<p>The user selects the function “Display queries” listed on the entry screen of the user management.</p> <p>Result: A search form is displayed.</p>

Procedure

Phase	Description
6	<p>The user launches a search by clicking on the <i>button</i> “Start search”.</p> <p>Note: The user can refine the search using the following search criteria:</p> <ul style="list-style-type: none"> • Specialised procedure • Function (only if a specialised procedure has been selected) • Identification number • Name of the institution • Status <p>If the search is not restricted, all queries for that institution will be displayed.</p> <p>Result: A list of queries containing all of the selected criteria is displayed. The following information is displayed:</p> <ul style="list-style-type: none"> • Identification number • Institution • Name of the institution • Status • Date • Details <p>Only ten hits are displayed per answer page. If additional search results exist, the answer page contains a button which enables the user to display the next set of results.</p>
7	<p>The user selects the query that s/he wants to process by clicking the appropriate button under “Details”.</p> <p>Result: The application opens the query and shows the user the details (see block Details included in the mask, page 67, in chapter 4.3.2 Mask structure) of the query as well as the possible existing answer to it.</p> <p>Notes:</p> <ul style="list-style-type: none"> • If the query has already been opened by another user, the name of the other user is displayed. • The user can print out the query and all information on the query by clicking on the link “Print page”.
8	<p>By clicking on the button “Edit answer”, the user is directed to a description field in which the user can directly respond to the query.</p> <p>Note: An answer can only be generated for queries bearing the status “Request”, “Received” and “Deadline missed” (see chapter 4.3.4 Status, page 71).</p>

Phase	Description
9	<p>The user enters an answer and clicks on the button “Send answer”.</p> <p>Result: The answer is saved and sent to a staff member at the Deutsche Bundesbank. The user receives confirmation.</p> <p>Note: By clicking on the button “Save answer”, the answer is saved for later processing and not sent. The user receives confirmation.</p>
10	Upon finishing the work session, the user clicks on the button “Logout”.

Note: If the current query is a query to a previously answered query, the links (identification number) to the other query are also indicated.

4.3.4 Status

The status indicates the processing status of a query.

The following table shows the respective status and its definition:

Status	Definition
Request	The query was generated by a staff member at the Deutsche Bundesbank, saved and sent to a customer’s <i>contact person</i> (user).
Received	A user has accessed the query for the first time.
Answered	A user has answered the query.
Completed	The query has been processed.
Deadline missed	The query was not answered on time.

Basic features

Status

IV Technical specifications

- 1 File transfer
- 1.1 Error messages

IV Technical specifications

1 File transfer

1.1 Error messages

Error messages

The following table shows the error codes and their definitions:

Error code	Definition
100	Orders confirmed.
200	No files selected for confirmation.
-100	No orders found!
-200	You are not authorised to process this file!
-205	No order available - please log in once again!
-206	Timeout! Your session has expired. Please log in again!
-210	No data available - please log in once again!
-212	File parameter missing!
-213	Missing parameters!
-215	No <i>client</i> information available!
-216	An incorrect value was specified for the parameter <i>dirKind</i> !
-220	Invalid special characters in file name!
-230	File not found!
-300	Error in order component!
-305	File storage aborted!
-310	Transfer aborted!
-1000	Unexpected error!

IV Technical specifications

- 1 File transfer
- 1.1 Error messages

Generation of error message

Generation of the error code via the *servlet* depends on the type of access:

Type of access	Generation of error code
Browser	<i>HTML</i> page
Automated access	<i>XML</i> code or string <pre><?xml version="1.0" ?> <!DOCTYPE error [<!ELEMENT error (message)> <!ELEMENT message (#PCDATA)>]> <error> <message> Es trat ein unerwarteter Fehler auf!</message> </error></pre>

IV Technical specifications

- 1 File transfer
- 1.2 Order identification and type

1.2 Order identification and type

1.2.1 Order identification

Basic features

During the processing via ExtraNet, the order identification will be added to the original file name.

Example:

Original file name:	Test file.txt
Technical file name after processing via ExtraNet:	R.FTSEX.STA01.5.<FB-Code> <Institution key> .SD.Test file.txt

Structure

The order identification consists of the following components:

Component	Definition
FTSEX	Sender (during <i>upload</i> always FTSEX)
STA01	Recipient of the file (during <i>download</i> always FTSEX)
5	Order ID
SD	Order type (single file (SD) or multiple file (MD))

Note: Customers may only submit single files (SD).

1.2.2 Order type

Order types in use

The following order types are in use:

Order type	Definition
SD	Single file (file is only available to one <i>customer</i>)
MD	Multiple file (file is available to several customers)

2 Implementing automated access to file transfer

2.1 Requirements

Requirements

The use of an electronic client has to be flagged to the ExtraNet Call Centre so that customers can be informed as soon as possible of any changes to the interface.

Before an electronic client is put into operation, customer tests should be set up in consultation with the ExtraNet Call Centre.

Basic features

2.2 Use of Java

In order to be able to access the file transfer functions with a *Java application* the following must apply:

- Server's URLs has to accessible.
- Communication via SSL (SSL V3.x/TLS V1.0) has to be possible.

This is achieved by using the Java Secure Socket Extension (JSSE). Commencing with *JDK 1.4*, JSSE is included in JDK.

JSSE.jar must be in the classpath of the application.

The class `HttpsURLConnection`, which is contained in JSSE, offers the functionality needed to access the corresponding URLs (FT servlets) via SSL.

Basic features

Determining the keystore used

2.3 Certificates in JSSE

Applications in ExtraNet are secured by a server certificate which was created by a certification authority (eg *TC TrustCenter GmbH*).

We recommend importing the root certification authority's (Root CA) certificate.

To identify the certificate, go to

- <https://extranet.bundesbank.de> (production environment) or
- <https://extranet-t.bundesbank.de> (test environment)

in your internet browser and call up the required information from "Tools ® Internet Options".

The keystore used in the *Java application* can be determined as follows:

Step	Action
1	<p>Call up the JSSE application with the debug option as follows:</p> <pre>java -Djavax.net.debug.=ssl <application name></pre> <p>Result: The file name including absolute path information of the keystore used is reproduced in the first line of the output.</p> <p>Note: Further details are given in the JSSE reference guide at the following link: http://download.oracle.com/javase/1.4.2/docs/guide/security/jsse/JSSERef-Guide.html</p>

IV Technical specifications

- 2 Implementing automated access to file transfer
- 2.3 Certificates in JSSE

Importing the certificate using the example of the Microsoft Internet Explorer

The relevant certificate for the Root CA can be imported into the keystore via Microsoft Internet Explorer (version 7) as follows:

Step	Action
1	Open the Microsoft Internet Explorer.
2	<p>Go to “Tools → Internet options → “Content“ tab → “Certificates“ button → “Trusted Root Certification Authorities“ tab. Select the application’s current root certificate and export it in the format “Base64 encoded X509“.</p> <p>Result: The certificate is exported in a <i>base64 encoded format</i>.</p> <p>Note: Once the root CA certificate has been identified, it can also be downloaded from the CA’s internet site and imported into your automated client keystore.</p>
3	<p>Import the certificate with the <i>JDK tool</i> <code>keytool</code> into the Java keystore used as follows:</p> <pre>keytool -import -file "d:\jsse\tc.cer" -keystore"D:\jdk1.4\jre\lib\security\cacerts"</pre> <p>Note: The default password is “changeit”. If importing is omitted, JSSE generates the following error message: “untrusted server cert chain”</p>

Login form when using browsers

2.4 Login form

When accessing the ExtraNet applications in the password-protected area via the *browser*, the non-authenticated user receives an *HTML* form, on which the following should be entered:

- User ID
- Password

This form is then sent with the parameter `login-form-type=pwd` to the following *URL* via *POST request*:

<https://ExtraNet.bundesbank.de/pkmslogin.form>

Transfer to automated access

When accessing via a *batch application* the browser behaviour must be reproduced. In order to emulate the browser functionality, the following procedure must be followed:

Stage	Description
1	Client → server : GET protocol://hostname/your-contents-name
2	Client ← server : FORM is sent with the session <i>cookie</i> (PD-S-SESSION-ID in the case of HTTPs)
3	Client → server : POST protocol://hostname/pkmslogin.form with session cookie and <code>userid&password&login-form-type</code>
4	Client ← server : 302 redirect to requested page
5	Client → server : GET protocol://hostname/your-contents-name with session cookie
6	Client ← server : Requested page is sent

2.5 Treatment of cookies

Cookies used

Four different cookies can be sent by the server:

- PD-S-SESSION-ID
- PD-ID
- PD-STATEFUL_x
- JSESSIONID

Caution: All cookies sent in the response have always to be returned with each request. Also session ID cookies should be read from the response each time because even session IDs may change during a session!

2.6 HttpURLConnection

Setting up an SSL connection

An *SSL* connection to a *URL* is set up as follows (Get request):

```
URL url = new URL("https://servername/content?param=value")
HttpsURLConnection httpsCon = (HttpsURLConnection)
url.openConnection();
```

The following properties can be set additionally:

```
httpsCon.setDoOutput(true);
httpsCon.setUseCaches(false);
// set some cookies
httpsCon.setRequestProperty("Cookie", cookieString);
```

Caution: The following request is only sent when the *HTTP* response is requested:

```
int rc = httpsCon.getResponseCode();
String msg = httpsCon.getResponseMessage();
```

Reading sent HTML/XML pages

The sent *HTML/XML* pages are read as follows:

```
InputStream in = httpsCon.getInputStream();
BufferedReader result = new BufferedReader(new InputStreamReader(in));
```

Request body for POST request

The following request body is written for a *POST request*:

```
DataOutputStream out = new DataOutputStream( httpsCon.getOutputStream());
out.writeBytes("param1=value&param2=value");
```

Note: The method `setRequestMethod()` of the connection has no effect on the type of the request generated. If the request body is not recorded, a GET request is sent, otherwise a POST request.

Setting of local proxy servers

Access to the public internet

2.7 Local proxy servers/firewalls

Local proxy servers can be set in *JSSE* by the following system properties:

- `https.proxyHost`
- `https.proxyPort`

Note: See also

<http://download.oracle.com/javase/1.4.2/docs/guide/security/jsse/JSSERefGuide.html>

Every *customer* is responsible for accessing the public internet with his application via the local proxy server or *firewall* installed. One way of regulating access of an application in the private intranet to the public internet, is to implement a socks server.

Glossary

A

application server	Computer on which a Web application is run.
array	A list of data with the same attributes
authentication	A means of ensuring that the person or institution sending really is the person or institution claiming to be the sender of the data.
authorisation	A means of checking whether a user is entitled to access specific data with defined functions (only), such as read, change, add or delete.
authorised BBk signatory	Person who is legally authorised to sign business documents in the business connections with the Deutsche Bundesbank.

B

base64 encoded format	Encryption algorithm or data coding
batch application	Background application
boundary	A boundary marks the beginning and end of a POST request.

browser	A program that can retrieve data from the internet and then process and display them on a computer (client).
button	A defined area within the screen form that can be selected with the mouse, for example. Clicking on a button launches a specific action (eg calling up another screen).
	C
Call Centre	Organisational unit which is the central point for dealing with customer queries.
client	<p>Term from the network field</p> <p>A client calls on services, thus a workstation connected to a server is referred to as client.</p> <p>The client sends users' requests to the server using a special protocol and displays the answers in such a way that they can be read on screen.</p>
contact person	Employee of the customer who is authorised to answer queries in the ConTact service.
content type	Content type is the format of the data to be transferred.

cookie	<p>Small file containing text information which must be initiated by the Web author of the sending website and is then transferred regularly from the Web server to the local Web browser.</p> <p>In the internet environment, a cookie is a small file</p> <ul style="list-style-type: none">– which is stored locally on the surfer's computer and– in which data related to the current website is stored. <p>Cookies are usually given a "lifespan". Some remain active only during the browser session, while others have a lifespan of several days or weeks.</p>
customer	<p>Institution, respondent etc.</p>
D	
Dir servlet	<p>Component of the file transfer service program code, which is used to present a file transfer list on a Web server.</p>
download	<p>Download is the term used to describe the transfer of data from a communications system such as the internet.</p> <p>With a download, programs or files are transferred to one's own computer.</p>
download servlet	<p>Component of the file transfer service, which runs on a Web server and enables data to be downloaded from the Deutsche Bundesbank.</p>

E

extension

The extension is what appears after the full stop in file names.

Many programs use the extension to attribute files to an application, eg:

- TXT - ASCII text file
- DOC - WinWord text file
- HTM or HTML - HTML documents

ExtraNet administration

Organisational unit at the Deutsche Bundesbank which deals with the technical day-to-day operation of ExtraNet.

F

firewall

Hardware and/or software which controls the flow of data between a private and an unprotected network (ie Local Area Network (LAN) and internet) and which protects an internal network against attacks from the internet.

Therefore a firewall compares, for example, the IP address of the computer from which a data packet is received with a list of permitted senders and only their data are allowed through.

FTPOA

File Transfer Point of Access

Point of transfer for specialised data between the operational unit and ExtraNet or a sub-segment of a specialised procedure. A specialised procedure can have several FTPOAs.

FTSext

Component of the file transfer service enabling data to be transferred between ExtraNet and the operational unit's customers.

H

HTML	<p>Hypertext Markup Language</p> <p>Standardised set of markup symbols or codes for websites in the internet or intranet.</p> <p>It defines the layout, the contents and the graphics on the page as well as the links to the user's own or others' websites.</p>
HTTP	<p>Hypertext Transfer Protocol</p> <p>Communications protocol between a Web server and a Web browser enabling HTML data to be transferred.</p>

I

ID code	Unique identification code for master data records
----------------	----------------------------------------------------

IDS	<p>Intrusion Detection System</p> <p>An Intrusion Detection System (IDS) recognises attacks against a computer system or computer network. An IDS can supplement a firewall or also run directly on the monitored computer system, increasing network security.</p>
------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

J

Java application	<p>JavaScript is a programming language developed by SUN.</p> <p>A "Java Virtual Machine" is needed in order to run Java programs. Nowadays this is built in to standard browsers, meaning that Java programs can be run on virtually every computer, regardless of the hardware or operating system it uses.</p>
-------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

JavaScript

JavaScript is an object-oriented scripting language.

It is used mainly for programs that are run in web browsers. The source text of these programs is embedded in individual websites. In addition, there are also programs written in JavaScript that run directly on a web server, eg as Active Server Pages. JavaScript must be enabled on your browser in order to use websites that contain JavaScript.

JDK

Java Development Kit

Development environment for Java programming

JDK tool

Program which is part of the Java Development Kit.

JSSE

Java Secure Socket Extension

Security package in JDK V1.4 which supports among other things SSL communication.

K

keystore

A database used to store confidential certificates and issuer certificates.

O

operational unit administrator

Employee of an operational unit who, in managing the user data and master data,

- can retrieve information on customers and users.
- carries out tasks in the workflow of user data and master data management.

P

parser	Parsers are software modules which break up documents or source texts syntactically in accordance with predetermined criteria and prepare them for further processing.
PIN letter	Specially secure letter used to inform the user of his/her initial password.
pixels	The smallest elements of digital image with defined location and colour coordinates.
port	TCP/IP applications address the communication partner (a) via an IP address and (b) via a port number, which specifies the service on the target computer.
POST request	One way of transferring data from the browser to the Web server

R

Root CA	Main directory of the Trust Center which has carried out the certification.
----------------	-----------------------------------------------------------------------------

S

servlet	A program code running on a Web server.
specialised procedure	Generic term for several specialised applications which use the same customer's master data.

SSL

Secure Socket Layer

Technology used to enable server authentication by a Web client and the encryption of data exchanged between the two.

T

TC TrustCenter GmbH

Certification authority

TC TrustCenter GmbH is an independent institution responsible for issuing certificates.

U

upload

Upload is the term used to describe the transfer of data in a communications system such as the internet.

With an upload, programs or files are transferred to a server or a mailbox.

upload servlet

Component of the file transfer service, which runs on a Web server and enables customers to make data available to the Deutsche Bundesbank.

URL

Uniform Resource Locator

A URL is the address of a website.

user ID

User name

Not secret identifier of a user which is assigned to the user by ExtraNet as part of the registration procedure.

X

XBRL

Extensible Business Reporting Language

XBRL constitutes a freely available electronic language used for financial reporting purposes, meaning the exchange of information by and about enterprises, with a particular focus on their annual financial statements. It offers a benchmark for the creation, dissemination/publication, evaluation and comparison of information of this kind. The technical basis for XBRL is the language XML (Extensible Markup Language).

At present, certain prudential reports can be submitted in XBRL format.

XML

Extensible Markup Language

XML is a method of presenting structured data - eg calculation tables, address books, configuration parameters, financial transactions, technical drawings etc - in a text file.

Index

A

- Access 19
- Additional services 2, 12
- Advantages 16
- Appraisal factors for participation 15
- Authentication 20
- Authorisation 20

B

- Basic infrastructure 14
- Basic services 2, 3, 23
- BBS 5
- Bidding systems 5, 21
- Blocking users 50
 - by the customer 50
 - by the operational unit 52

C

- Call Centre 2, 13
- CashEDI 9
- CashRecycling 11
- Certificates in JSSE 77, 78
- Changing user data 46
 - by operational unit 48
 - by user 46
- ConTact 4, 64
 - Procedures 66
 - Query 68
 - Status 71
- Cookies 80
- Customer access 19

D

- Deleting users 59
 - by ExtraNet administration 60
 - by user him-/herself 59
- Displaying uploads of the last 10 days 26
- Displaying uploads of the last 100 days 26
- Documentation 2, 12

Download

- Multiple file 27
- Single file 27
- via automated access 36
- via browser 26

Drafting of prudential reports 8

E

- EBS 5
- Error messages file transfer 72, 73
- Europe request procedure 6
- ExtraNet 1
 - Homepage 12

F

- File name
 - for file transfer 25
 - for upload 25
- File transfer 24
 - Error messages 72, 73
 - Order identification 74
 - Order type 74
- File transfer via automated access 29
 - Confirm download 38
 - File download 36
 - File upload 31
 - Functions 29
 - Implementing 75
 - Parameter processing 31
 - Parameters for Dir servlet 34
 - Parameters for download servlet 38
 - Parameters for upload servlet 32
 - Procedure 30
 - Servlets 29, 31
 - Setting up a connection 30
 - SSL 30
 - Upload list 34
 - XML output at Dir servlet 35
 - XML output at upload servlet 33, 34

- File transfer via browser 24
 - Confirm download 28
 - File download 26
 - File name 25
 - File upload 24
 - Functions 24
 - Uploads of the last 10 days 26
 - Uploads of the last 100 days 26
- Firewalls 82
- Functions
 - File transfer via automated access 29
 - File transfer via browser 24
 - User management 3

G
General statistics reporting portal (AMS)
10

H
HttpsURLConnection 81

I
Implementing automated access to file
transfer 75

- Certificates in JSSE 77, 78
- Firewalls 82
- HttpsURLConnection 81
- Java application 76
- Local proxy servers 82
- Login form 79
- Treatment of cookies 80

Initial registration 41
IPS 9

J
Java application 76
JavaScript 21
JSSE 77, 78

K
KEV 8

L
Local proxy servers 82
Login 79
Login form 79

M
Maintaining the user data 46
Master data search engine 6
Multiple file 27

O
OMTOS 5
Online registration 43
Organisational measures
Security 18

P
Parameter processing

- File transfer via automated access 31

Participation 15

- Appraisal factors 15

Password

- Resetting 43, 56

Password resetting procedure, simplified
43, 56

R
Registration

- online 43
- Procedures 43
- through personal contact 45

Reporting platform 7
Resetting

- Password 43, 56

Resetting user password 56

- Special procedure 57
- Standard procedure 56

S

- Secondary registration 42
- Security 17
 - organisational measures 18
- Security technology 17
- Services
 - Additional 2, 12
 - Basic 2, 3, 14
 - Overview 2
 - Special interactive 5
- Servlets
 - File transfer via automated access 29, 31
- Setting up a connection
 - File transfer via automated access 30
- Simplified password resetting procedure 43, 56
- Single file 27
- Special interactive services 5
- SSL
 - File transfer via automated access 30
- SSL-URL connection 81
- System requirements customer's PC 21

T

- Technical connections customer's PC 22
- Treatment of cookies 80

U

- Unblocking users 53
 - by the customer 53
 - by the operational unit 55
- Upload
 - File name 25
 - via automated access 31
 - via browser 24
- Upload list 34
- Uploads of the last 10 days 26
- Uploads of the last 100 days 26
- User
 - blocking 50
 - blocking by the customer 50

- blocking by the operational unit 52
- deleting 59
- deleting by ExtraNet administration 60
- deleting by user him-/herself 59
- unblocking 53
- unblocking by the customer 53
- unblocking by the operational unit 55

User authorisations

- verifying 62

User data 42

- changing by operational unit 48
- changing by user 46

User management 40

- Functions 3
- Initial registration 41
- Secondary registration 42

User manager 42

- User password
 - resetting 56

User registration 41

V

- Verifying user authorisations 62