

Bundesbank ExtraNet

Customer Documentation

Version 2.18

Content

	Amendments in version 2.18	iv
1	Overview	1
1.1	Basic principles.....	1
1.2	Range of services.....	2
1.2.1	Overview.....	2
1.2.2	Basic services.....	3
1.2.2.1	File transfer.....	3
1.2.2.2	User management.....	3
1.2.2.3	ConTact.....	3
1.2.3	Special interactive services.....	4
1.2.3.1	Bidding systems.....	4
1.2.3.1.1	Bund Bidding System (BBS).....	4
1.2.3.1.2	Open Market Tender Operations System (OMTOS).....	4
1.2.3.1.3	EFSF/ESM Bidding System (EBS).....	4
1.2.3.2	Master data search engine for the reporting system of large exposures and loans of €1 million or more.....	4
1.2.3.3	Reporting platform for large exposures and loans of €1 million or more.....	5
1.2.3.4	Drafting prudential returns pursuant to the Solvency Regulation and Liquidity Regulation, bank levy, monthly returns, HA report.....	5
1.2.3.5	Mobilisation and Administration of Credit Claims (MACCs).....	6
1.2.3.6	Cash Electronic Data Interchange (CashEDI).....	6
1.2.3.7	General statistics reporting portal (AMS).....	6
1.2.3.8	Cash recycling.....	7
1.2.3.9	Collateral Management Access Portal (CAP).....	7
1.2.4	Additional services.....	8
1.2.4.1	Documentation.....	8
1.2.4.2	ExtraNet homepage.....	8
1.2.4.3	Customer Service Centre.....	8
1.2.5	Basic infrastructure.....	9
1.3	Participation.....	10
1.3.1	Participation criteria.....	10
1.3.2	Benefits.....	11
1.4	Security.....	12
2	Infrastructure requirements	13
2.1	Customer access to ExtraNet.....	13
2.2	“Customer’s PC – system requirements”.....	14
2.3	Customer’s PC – technical connection.....	15
3	Basic services	16
3.1	Overview.....	16
3.2	File transfer.....	17
3.2.1	File transfer via browser.....	17
3.2.1.1	Basic features.....	17
3.2.1.2	File upload.....	17
3.2.1.3	Uploads of the last 10 days.....	18

3.2.1.4	Uploads of the last 100 days	18
3.2.1.5	File download	18
3.2.1.6	Confirm download	19
3.2.2	File transfer via automated access.....	21
3.2.2.1	Basic features	21
3.2.2.2	General procedure	21
3.2.2.3	File upload	23
3.2.2.4	Upload list.....	25
3.2.2.5	File download	27
3.2.2.6	Confirm download	28
3.3	User management.....	29
3.3.1	Access to user management.....	29
3.3.2	User registration	30
3.3.2.1	Basic features	30
3.3.2.2	Online registration with written application	32
3.3.2.3	Registration through personal contact	33
3.3.3	Changing user data	34
3.3.3.1	Basic features	34
3.3.3.2	Data changes by user	34
3.3.3.3	Data changes by business unit.....	35
3.3.4	Blocking users	37
3.3.4.1	Basic features	37
3.3.4.2	Blocking by the customer	37
3.3.4.3	Blocking by the business unit.....	39
3.3.5	Unblocking users.....	40
3.3.5.1	Basic features	40
3.3.5.2	Unblocking by the customer.....	40
3.3.5.3	Unblocking by the business unit	41
3.3.6	Resetting user password.....	42
3.3.6.1	Basic features	42
3.3.6.2	Standard procedure.....	42
3.3.6.3	Special procedure.....	44
3.3.7	Deleting users	45
3.3.7.1	Basic features	45
3.3.7.2	User deletes themselves as a user	45
3.3.7.3	User is deleted by ExtraNet administration	46
3.3.8	Verifying user authorisations.....	47
3.3.8.1	Basic features	47
3.3.8.2	User manager for one specialised procedure.....	47
3.3.8.3	User manager for multiple specialised procedures.....	48
3.4	ConTact	49
3.4.1	Basic features	49
3.4.2	Requirements for participation.....	50

3.4.3	Procedures	51
3.4.3.1	General procedure	51
3.4.3.2	Screen structure	51
3.4.3.3	Procedure for responding to a query	52
3.4.3.3.1	Using the link sent via email message	52
3.4.3.3.2	Using user management.....	53
3.4.3.4	Status.....	54
4	Technical specifications	55
4.1	File transfer	55
4.1.1	Error messages	55
4.1.2	Order identifier and type	56
4.1.2.1	Order identifier	56
4.1.2.2	Order type.....	56
4.2	Implementing automated access to file transfer	57
4.2.1	Requirements	57
4.2.2	Use of Java	58
4.2.3	Certificates in JSSE.....	59
4.2.4	Login form	60
4.2.5	Treatment of cookies.....	61
4.2.6	HttpsURLConnection	62
4.2.7	Local proxy servers/firewalls.....	63
	Glossary	64
	Index.....	68

Amendments in version 2.18

General information

Amendments of the content in version 2.18 of the ExtraNet documentation compared to version 2.17 are shown in this chapter. This section does not generally list any rephrasing or rewording that has no bearing on the content.

Amendments to the content

In addition to editorial changes, the following content changes have been made:

Chapter	Block	Amendment
1.2.3.5 Mobilisation and Administration of Credit Claims	-	Title and "KEV" changed to "MACCs".

1 Overview

1.1 Basic principles

ExtraNet

ExtraNet is an e-business platform at the disposal of all business 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 storage media are now fully automated and streamlined.

Note: ExtraNet documentation only provides details of the infrastructure and the services offered by ExtraNet. Details about individual ExtraNet services (business unit applications) are available on the Deutsche Bundesbank's website (<http://www.bundesbank.de/>) under the heading of the desired business unit (e.g. Tasks/Banking supervision).

1.2 Range of services

1.2.1 Overview

Overview of ExtraNet

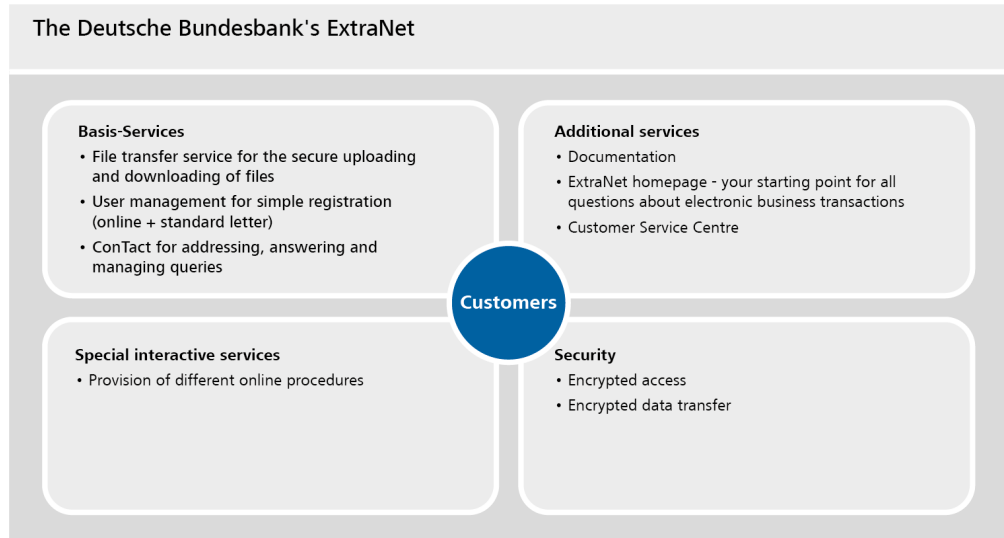


Illustration 1: ExtraNet: Basic services, additional services, special interactive service and security

1.2.2 Basic services

1.2.2.1 File transfer

Purpose

The file transfer service is used to transfer files between customers and business units. This service can be used by the customer in two ways:

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

Functions

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

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

1.2.2.2 User management

Purpose

User management enables administration of the users of the system, i.e. customers' staff.

Functions

User management provides the following functions:

- registering users;
- changing user data;
- blocking users;
- unblocking users;
- resetting user passwords;
- deleting users.

In addition, a designated user manager has an overview of the users set up for each specialised procedure.

1.2.2.3 ConTact

Purpose

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

ConTact has been integrated into ExtraNet's user management.

1.2.3 Special interactive services

1.2.3.1 Bidding systems

1.2.3.1.1 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 about the purpose and functions of BBS are available on the Deutsche Bundesbank's website (<http://www.bundesbank.de>) under Service/Banks and companies/ BBS and in the BBS documentation.

1.2.3.1.2 Open Market Tender Operations 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 about the purpose and functions of OMTOS are available on the Deutsche Bundesbank's website (<http://www.bundesbank.de>) under Service/Banks and companies/ OMTOS and in the OMTOS documentation.

1.2.3.1.3 EFSF/ESM 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 about the purpose and functions of EBS are available on the Deutsche Bundesbank's website (<http://www.bundesbank.de>) under Service/Banks and companies/ EBS and in the EBS documentation.

1.2.3.2 Master data search engine for the reporting system of large exposures and loans of €1 million or more

Definition The Deutsche Bundesbank's master data search engine for the reporting system of large exposures and loans of €1 million or more enables reporting lending institutions to obtain information online at any time via the stored master data sets of borrowers, single borrower units and lending institutions at the Deutsche Bundesbank. These master data are comprised of the information that helps to identify borrowers (e.g. first name, surname, company name, domicile, register number).

Further details

Further details about the purpose and functions of the master data search engine for the reporting system of large exposures and loans of €1 million or more are available on the Deutsche Bundesbank's website (<http://www.bundesbank.de>) under Tasks/Banking supervision/Lending business.

1.2.3.3 Reporting platform for large exposures and loans of €1 million or more

Definition

The new Regulation Governing Large Exposures and Loans of €1 Million or More (Large Exposures Regulation (Großkredit- und Millionenkreditverordnung)) came into force on 1 January 2007. Pursuant to section 8(1) of the Large Exposures Regulation, the amount details of credit reports according to sections 13 to 13b and 14 of the German Banking Act (Kreditwesengesetz) are, as of the 31 March 2008 reporting date, 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, 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 Large Exposures Regulation using the new ExtraNet function "Reporting platform for large exposures and loans of €1 million or more pursuant to sections 13 to 13b and 14 of the Banking Act".

Further details

Further details about the Reporting platform for large exposures and loans of €1 million or more pursuant to sections 13 to 13b and 14 of the Banking Act are available on the Deutsche Bundesbank's website (<http://www.bundesbank.de>) under Tasks/Banking supervision/Lending business as well as in the online help section.

1.2.3.4 Drafting prudential returns pursuant to the Solvency Regulation and 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 returns, the Deutsche Bundesbank also offers the option of manual entry as a supplementary means of electronic submission alongside data submission in XML and XBRL format. Using this new ExtraNet function, it is currently possible to submit returns pursuant to the German Solvency Regulation and to the Liquidity Regulation, Monthly Returns Regulation and summarised Monthly Returns Regulation as well as HA reports relating to the Large Exposures Regulation. In addition, the entry portal also accommodates reports on the bank levy.

Further details

Further details about the data entry portal are available on the Deutsche Bundesbank's website (<http://www.bundesbank.de>) under Service/Reporting systems/Banking Supervision as well as in the online help section.

1.2.3.5 Mobilisation and Administration of Credit Claims (MACCs)

Definition

MACCs is a convenient and secure procedure for submitting credit claims as eligible assets. MACCs can be accessed via interactive online entry or file transfer.

Further details

Further details about the purpose and functions of MACCs are available on the Deutsche Bundesbank's website (<http://www.bundesbank.de>) under Service/Banks and companies/Mobilisation and Administration of Credit Claims (MACCs).

1.2.3.6 Cash Electronic Data Interchange (CashEDI)

Definition

Through CashEDI, the Deutsche Bundesbank offers its customers the option carry out transactions electronically using standardised electronic data exchanges. CashEDI can be accessed via WebEDI (online entry) or file transfer.

Further details

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

1.2.3.7 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 field of foreign trade and payments.

When using AMS, you can enter the reporting data directly into the input screen using an internet browser (for foreign trade and payments reports, data may also be imported in a predefined format from another data source into the AMS input screen, which will save the time and effort of typing in the data). AMS provides a range of auxiliary functions and plausibility checks that simplify the process of submitting reports. The data entered are automatically checked and any errors are identified. Drop-down lists show you valid input options. 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 lawyer's offices or computer centres – to create reports for multiple reporting entities.

Individual AMS functionalities can also be used to submit reporting data for financial vehicle corporation statistics.

Preparations are in progress to enable the use of this reporting portal as a "back-up" facility for submitting selected types of banking statistics reports.

Further details

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

■ 1.2.3.8 Cash recycling

Definition

Credit institutions are currently able 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 about the purpose and functions of cash recycling are available on the Deutsche Bundesbank's website (<http://www.bundesbank.de>) under Tasks/Cash management/Banknote recycling.

■ 1.2.3.9 Collateral Management Access Portal (CAP)

Definition

The CAP user interface enables monetary policy counterparties of the Deutsche Bundesbank to manage their collateral account. As well as viewing their collateral account and accessing messages in their ExtraNet mailbox, they can also take advantage of other collateral management functions. CAP replaces the IPS (Integrated Collateral Pooling System) specialised procedure and offers an expanded range of functions.

Further details

Further details about CAP are available on the Deutsche Bundesbank's website (<http://www.bundesbank.de>) under Service/Banks and companies/CAP.

1.2.4 Additional services

1.2.4.1 Documentation

Purpose The documentation service provides a description of ExtraNet's entire range of services.

Structure of documentation The documentation provides details of the infrastructure and the services offered by ExtraNet:

- for customers;
- with additional information for the Deutsche Bundesbank's business units.

1.2.4.2 ExtraNet homepage

Address The Extranet homepage service is part of the Deutsche Bundesbank's website. The ExtraNet pages are available on the Deutsche Bundesbank's website at <http://www.bundesbank.de/extranet>.

Purpose and functions The ExtraNet homepage is the first port of call for questions regarding electronic business operations.

Moreover, the ExtraNet homepage provides the following functions:

- initial registration/new registration;
- access to ExtraNet and to ExtraNet user management for registered users;
- download ExtraNet documentation;
- information on:
 - operating hours;
 - services and business unit contact persons.

1.2.4.3 Customer Service Centre

Purpose The Customer Service Centre is a hotline for external customers and business units.

Function It handles any technical and user-related queries which crop up when customers are using basic and special interactive services.

Queries are dealt with in the following manner:

- **technical** queries are answered directly;
- **user-related** queries are referred to the business units for response.

■ 1.2.5 Basic infrastructure

Characteristics

The procedures operated in the ExtraNet e-business platform:

- are highly available;
- meet technically and economically feasible security standards;
- can be adapted to new business unit specifications.

These characteristics are designed to ensure the protection of customer data.

Availability

Messages with customers are exchanged with customers via the internet. As the internet is a public communications network, ExtraNet has no influence over its availability.

1.3 Participation

1.3.1 Participation criteria

Business unit requirements

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

Further details about the user requirements of the individual business unit applications offered through ExtraNet, such as data record formats, are available on the Deutsche Bundesbank's website (<http://www.bundesbank.de/>) under the heading of the desired business unit (e.g. Tasks/Banking supervision).

General requirements

There are no generally applicable criteria.

■ 1.3.2 Benefits

Benefits

Customers who use services provided through ExtraNet enjoy the following benefits:

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

1.4 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 a cyberattack is, from a technical point of view, minimal. The aim is to ensure the protection of customer data.
- Technical measures** The security technology used to protect the e-business platform is in line with the current standard and is constantly being updated. The following measures are taken to guarantee security.
- Up-to-date and reliable encryption technology (HTTPS) is used for transmitting data during the file transfer process, 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, thereby ensuring that no unauthorised person has access to ExtraNet.
 - Communication via the Bundesbank's network is analysed and protected through IDS systems and firewalls.
 - ExtraNet processes are protected by a web application firewall.
 - Regular checks are made to ensure that the security measures are state of the art.
- Organisational measures** In addition, access to ExtraNet during file transfer as well as access to business unit applications are protected through organisational measures.
- Access to ExtraNet is only possible if the appropriate authorisation has been given by the business unit. Provided that the access credentials (user ID/password) are used carefully by the customers, this ensures that no unauthorised party 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 business unit** It is the task of the relevant business unit to give ExtraNet authorisation to:
- individual customers (e.g. a bank or firm);
 - individual users upon registration.

2 Infrastructure requirements

2.1 Customer access to ExtraNet

Diagram

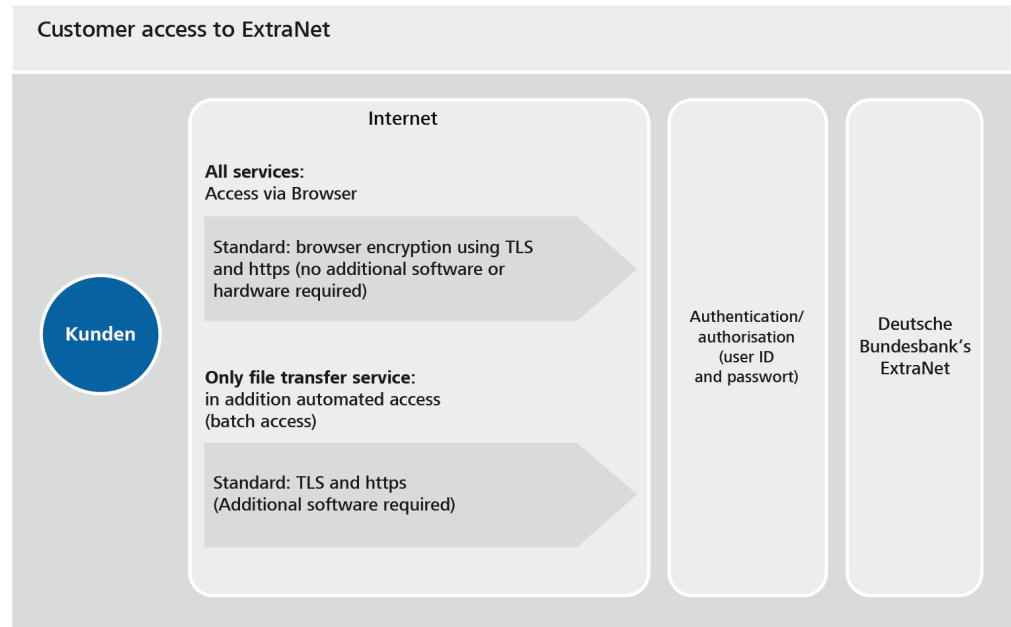


Illustration 2: Customer access to ExtraNet via the internet and authentication/authorisation

General information	The Deutsche Bundesbank's ExtraNet is accessed via the internet.
Access via browser	Conventional web browsers can be used to access ExtraNet (see chapter 2.2 "Customer's PC – system requirements" , page 14). TLS and HTTPS encryption is used. No additional software or hardware is required.
Automated access (batch access)	Automated access (batch access) is also encrypted using TLS and HTTPS. Special software is required (see chapter 4.2 Implementing automated access to file transfer , page 57).
Authentication/authorisation	Regardless of the method of access, users must be authenticated/authorised before they can access ExtraNet. This is done by entering: <ul style="list-style-type: none"> • a user ID, and; • a password.

2.2 "Customer's PC – system requirements"

Screen resolution	ExtraNet applications require a screen resolution of at least 1024 × 768 pixels in order to run.
Graphics card	The graphics card used by the client must support at least 24-bit colour depth at a screen resolution of 1024 × 768 pixels.
Browser type	Browsers that fulfil the following requirements be used: <ul style="list-style-type: none">• Specifications: XHTML 1.0 and CSS2• Support: TLS 1.2 <p>Note: For security reasons, we recommend that you use only the latest version of your browser.</p>
Use of cookies	The browser must be set to accept cookies.
Use of JavaScript	JavaScript must be enabled in your browser.
Special features for bidding systems	In addition to the general system requirements for ExtraNet, there may be special requirements particularly for the BBS, OMTOS and EBS bidding systems (see chapter 1.2.3.1 Bidding systems, page 4). These special system requirements are described in the relevant system's documentation.

■ 2.3 Customer's PC – technical connection

Connection

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

Firewall

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

- port 80 for HTTP;
- port 443 for HTTPS.

Interruption

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

3 Basic services

3.1 Overview

Overview of basic services

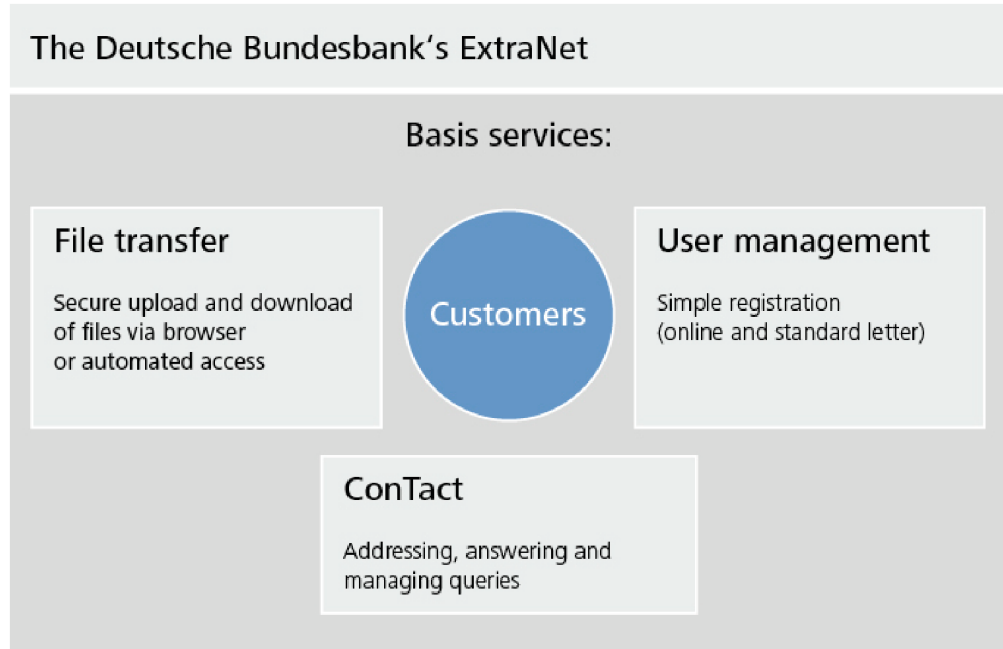


Illustration 3: File transfer, user management and ConTact as basic services in ExtraNet

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 (<https://www.bundesbank.de/en/service/extranet>).

However, before initial registration and applying for authorisation, we recommend that you follow the link on the Deutsche Bundesbank's website (<http://www.bundesbank.de/en>) to the business unit of interest to you (e.g. Tasks/Banking supervision) and take a look at the additional information that may be available there regarding the way in which ExtraNet services are incorporated into the business unit's processes.

3.2 File transfer

- 3.2.1 File transfer via browser
- 3.2.1.1 Basic features

Functions

The following file transfer functions are available:

Name	Purpose
File upload	To transfer files from the customer 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 download	To transfer files from the Deutsche Bundesbank to the customer
Confirm download	For the customer to confirm download was successful

Access to file transfer functions

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

<https://www.bundesbank.de/en/service/extranet>

3.2.1.2 File upload

Purpose of the function

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

The customer initiates the transfer.

Flow chart

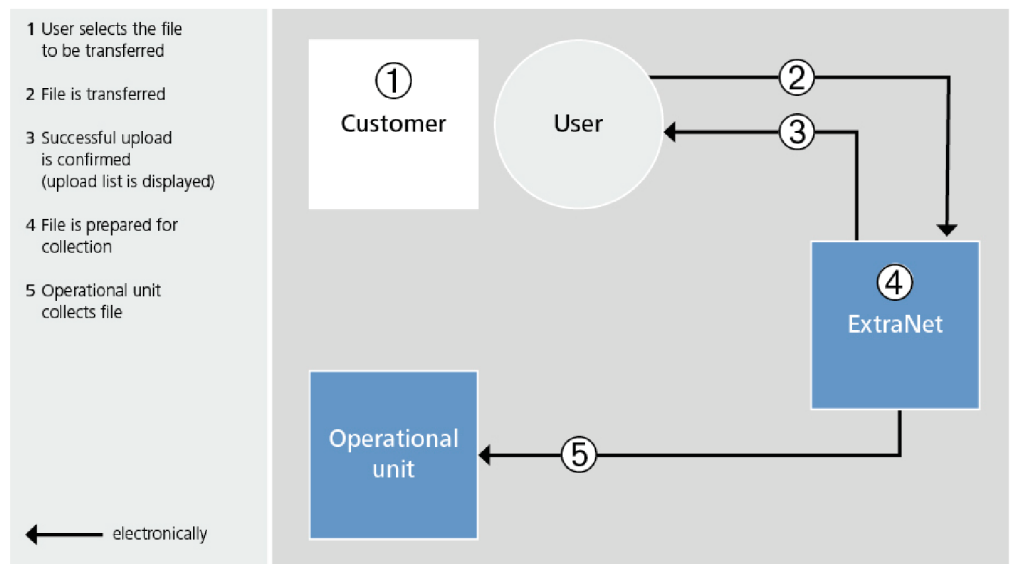


Illustration 4: Procedure for uploading a file

File properties to be maintained

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

The filename should:

- contain no relative file paths;

- contain no control characters or special characters;
- be no more than 80 characters long including the filename extension.

To find additional specifications for the individual specialised applications offered through ExtraNet on the Deutsche Bundesbank's website (<https://www.bundesbank.de/en/service/extranet>), click on the business unit of interest to you (e.g. Tasks/Banking supervision).

■ 3.2.1.3 Uploads of the last 10 days

Purpose of the function

The customer can display all files that they have submitted for a business unit within the last 10 calendar days.

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

■ 3.2.1.4 Uploads of the last 100 days

Purpose of the function

The customer can display all files that they have submitted for a business unit within the last 100 calendar days.

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

■ 3.2.1.5 File download

Purpose of the function

The business unit provides its customers with one or more files that the customer can collect electronically. The customer is automatically informed of the available data by email if this function is generally activated for the specialised procedure.

The customer initiates the collection. Customers can select the files they wish to download. In addition, each individual user can deactivate and reactivate the automated email service by clicking the "Email notification" box on the download page of the file transfer application.

Flow chart

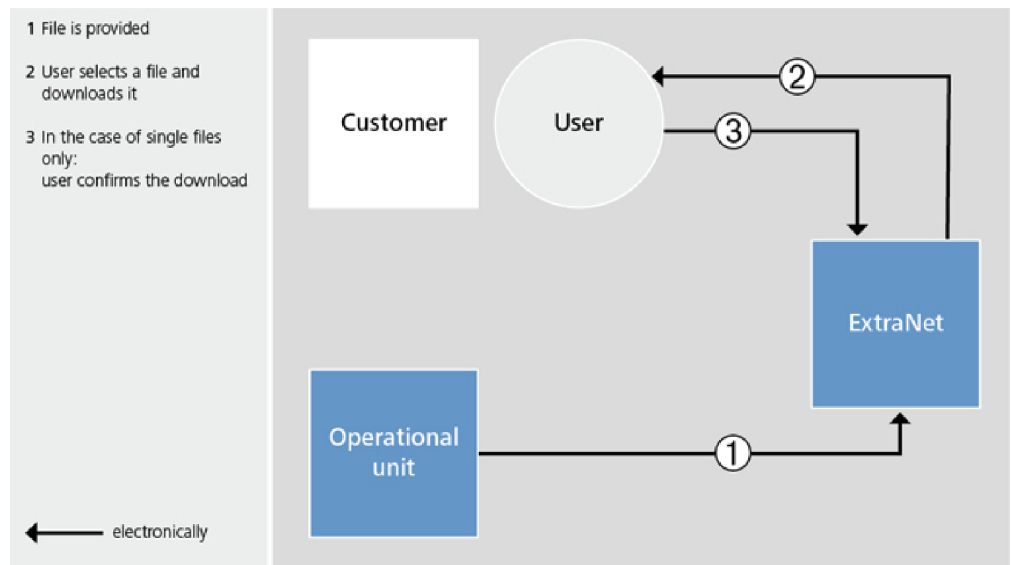


Illustration 5: Procedure for downloading a file

File categories

The files provided belong to one of the following categories:

File	Explanation
Single file (SF)	<ul style="list-style-type: none"> • File that is individually designed for one customer. • It is displayed for download until the download has been confirmed (default). • If the business unit forgoes customer confirmation of the download, the file is displayed for as long as has been specified by the business unit (exception). • However, the customer can first confirm the file to keep it from being redisplayed for download.
Multiple file (MF)	<ul style="list-style-type: none"> • File that is available to all customers with access to the specialised application. • It is displayed for download until the business unit: <ul style="list-style-type: none"> – replaces it with a new version, or; – deletes it. • The download of multiple files cannot be confirmed.

3.2.1.6 Confirm download

Purpose of the function

Confirming the successful download of a file in ExtraNet results in the file being deleted from the download area.

Note: Only the download of single files (SF) can be confirmed.

Procedure

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

- that they have already downloaded using the file download function, and;
- for which the download has not yet been confirmed.

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

Note: If users are authorised to access multiple ExtraNet institutions, the list comprises the files of all of the 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.

3.2.2 File transfer via automated access

3.2.2.1 Basic features

Functions

The following file transfer functions are available via automated access:

Name	Purpose
File upload	To transfer files from the customer to the Deutsche Bundesbank
Upload list	To display files in upload list
File download	To transfer files from the Deutsche Bundesbank to the customer
Confirm download	For the customer to confirm download was successful

Requirements for use

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

Before an automated client is put into operation, customer tests should be set up in consultation with the ExtraNet Customer Service 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

Servlet output is parameter-controlled in XML format.

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

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

Use of TLS

Secure communication between application programs and file transfer is usually only possible via TLS 1.2.

3.2.2.2 General procedure

Establishing a connection

The phases of establishing a connection are as follows:

Phase	Description
1	<p>The client connects to the Deutsche Bundesbank's ExtraNet by calling up a URL in the following format:</p> <ul style="list-style-type: none"> https://extranet.bundesbank.de/<Application name>/<Resource>[?Parameter] <p>The server uses a certificate created by the root CA of a public certification authority.</p> <p>Note: HTTPS (TLS 1.2) is the only protocol that may be used.</p>

Phase	Description
2	<p>The client receives a cookie 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 authentication is required.</p>
3	<p>A login form is transmitted to the client. The client must enter their user ID and password and send the form back to the server with the parameter login-form-type=pwd.</p> <p>Note: For automated access, the variables “user name” and “password” are to be filled in and transmitted by POST request 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.

Servlet call-up and parameter passing

The phases of servlet call-up and parameter passing are as follows:

Phase	Description
1	A connection to the desired servlet is established using the URL indicated.
2	The required parameters are sent to the servlet as a string (e.g. “parameter x = value y”) via the output data stream (a POST request) of this connection.
3	The servlet’s response 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 response

The servlet’s response is evaluated as follows:

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

3.2.2.3 File upload

Purpose of the function

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

The customer initiates the transfer.

Flow chart

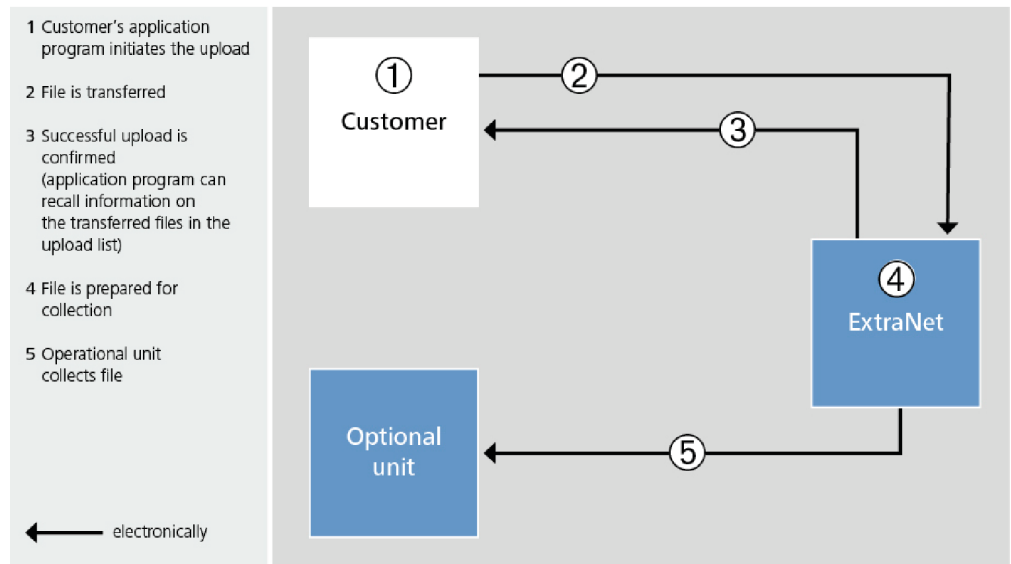


Illustration 6: Procedure for uploading a file

Servlet to use

The upload servlet is used to send a file to the Deutsche Bundesbank. To find the URL to call up the servlet on the Deutsche Bundesbank's website (<http://www.bundesbank.de/en>), click on the business unit of interest to you (e.g. Tasks/Banking supervision).

Parameters for upload servlet

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

Parameter	Definition	From where?
fileName	Path + filename (e.g. C:\temp\test.doc)	Provided by the user
FTPOA	Recipient	-

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) marks the start and the end of the file.

More information can be found at:

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

Structure of XML page After calling up the URL and passing the parameters, the file specified in the fileName parameter 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>
```

Definition of XML tags The individual XML tags are defined as follows:

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	Order type
auftragsid	Order number

3.2.2.4 Upload list

Purpose of the function The upload list displays all files that have been transferred to a business unit within the last 10 days.

Servlet 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 that are ready to be downloaded.
	"DEL"	To call up a list of files that are ready to be confirmed.
	"DIR"	To call up a list of all files that have been transferred from the customer to ExtraNet.

Structure of XML page After calling up the URL and passing the parameters, the list established through the dirKind parameter 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><dateig-
roesse>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 are defined as follows:

Tag	Definition
auftrag	Order element in the list
nr	Number
dateiname	Filename
dateigroesse	File size in bytes
einstellzeit	Time of upload
auftragskennung	Relevant data for upload
sender	Sending application
empfaenger	Application processing the order
typ	Order type
auftragsid	Order number

For orders that 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 in the list (auftragsid, etc.).

3.2.2.5 File download

Purpose of the function

The business 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.

Flow chart

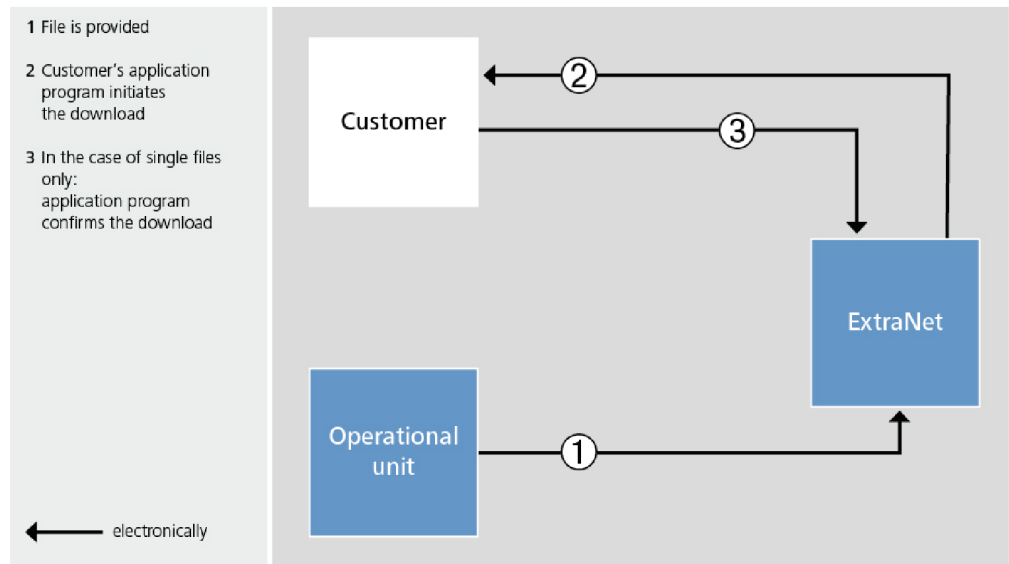


Illustration 7: Procedure for downloading a file

Servlet to use

To download a file from the Deutsche Bundesbank, the Dir servlet must first be called up with the parameter **dirKind = "DOWN"** and the parameter **ftclient = "application"** in order to obtain a list of possible files to be downloaded.

This servlet can be called up using the following URL:

<https://extranet.bundesbank.de/FT/Dir?dirKind=DOWN&ftclient=application>

The download servlet is used to download a file from the Deutsche Bundesbank.

Parameters for download servlet

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

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

In addition, the parameter **ftclient = "application"** is to be used. The servlet can be called up using the following URL:

<https://extranet.bundesbank.de/FT/Download?nr=<nr>&ftclient=application>

The JSESSIONID cookie resulting from the "DIR" call-up is also to be written in the request header.

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

3.2.2.6 Confirm download

Purpose

Confirming the successful download of a file in ExtraNet results in the file being deleted from the download area.

Note: Only the download of single files can be confirmed.

Procedure

The phases of servlet call-up and parameter passing are as follows:

Phase	Description
1	<p>The files that are to be confirmed are identified via the Dir servlet with the parameter dir-Kind = "DEL" and the sender.</p> <p>List of files and their order numbers</p>
2	<p>The URL https://extranet.bundesbank.de/FT/confirm is called up when passing the relevant parameters.</p> <p>The order status of the selected files is changed in the file transfer.</p> <p>The parameter nr is passed to the URL https://extranet.bundesbank.de/FT/confirm as an array.</p> <p>In response, an XML 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.

The 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 are 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.

3.3 User management

3.3.1 Access to user management

Access to user management

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

<https://www.bundesbank.de/en/service/extranet>

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

3.3.2 User registration

3.3.2.1 Basic features

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

Requirements To register for a specialised ExtraNet application, the customer needs to know the ID of the business unit concerned.

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

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

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

The relevant business unit also gives the customer the latest dataset descriptions for the file transfer and asks them to submit test files so that formats can be aligned.

Initial registration An employee of a customer registers for specialised ExtraNet applications for the first time. In the course of the 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 a user of one of the specialised ExtraNet applications.

Using their 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 they wish to make use of the standard user manager function.

This standard function enables the user to verify user authorisations within a procedure for their own institution (see [chapter 3.3.8 Verifying user authorisations, page 47](#)).

Note: Use of the standard user manager function requires the approval of the business 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 about the individual user of one of the specialised ExtraNet applications. These data must be kept up to date by the user.

User data include:

- surname;
- first name;
- street/P.O. box;
- postal code;
- town/city;
- institution name;
- telephone;
- fax;
- email address;
- security question/answer if the user has opted for the simplified password reset procedure.

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

Simplified password reset procedure

When registering, the user can indicate whether or not they wish to make use of the simplified password reset procedure. If so, they can reset their password over the phone by contacting the ExtraNet Customer Service Centre.

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

Note: Using the simplified password reset procedure is strongly recommended.

Registration procedures

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

- registration through personal contact with the business unit;
- online registration with written application.

Note: Where explicitly permitted under the special terms and conditions of the specialised procedure, the signed registration form may also be sent by fax or scanned and emailed.

3.3.2.2 Online registration with written application

Procedure

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

Flow chart

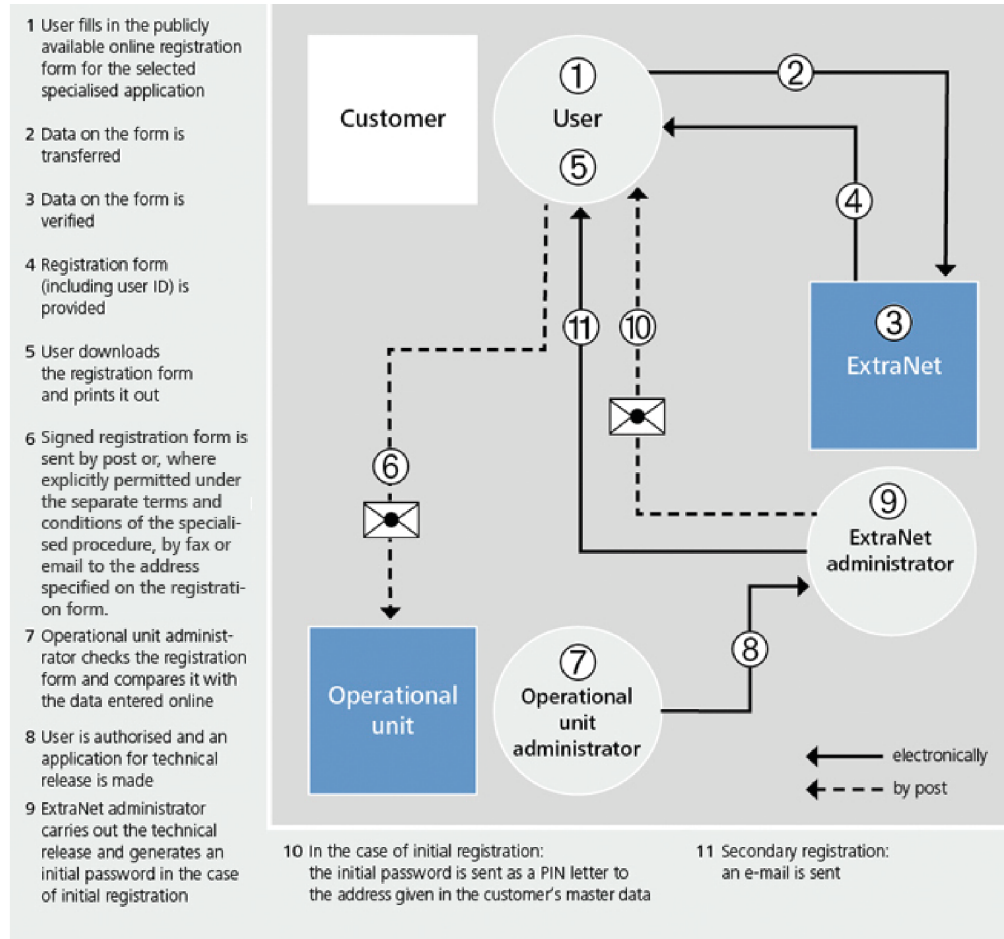


Illustration 8: Procedure for online registration with written application

3.3.2.3 Registration through personal contact

Procedure

Registration is carried out by the business unit administrator.

Flow chart

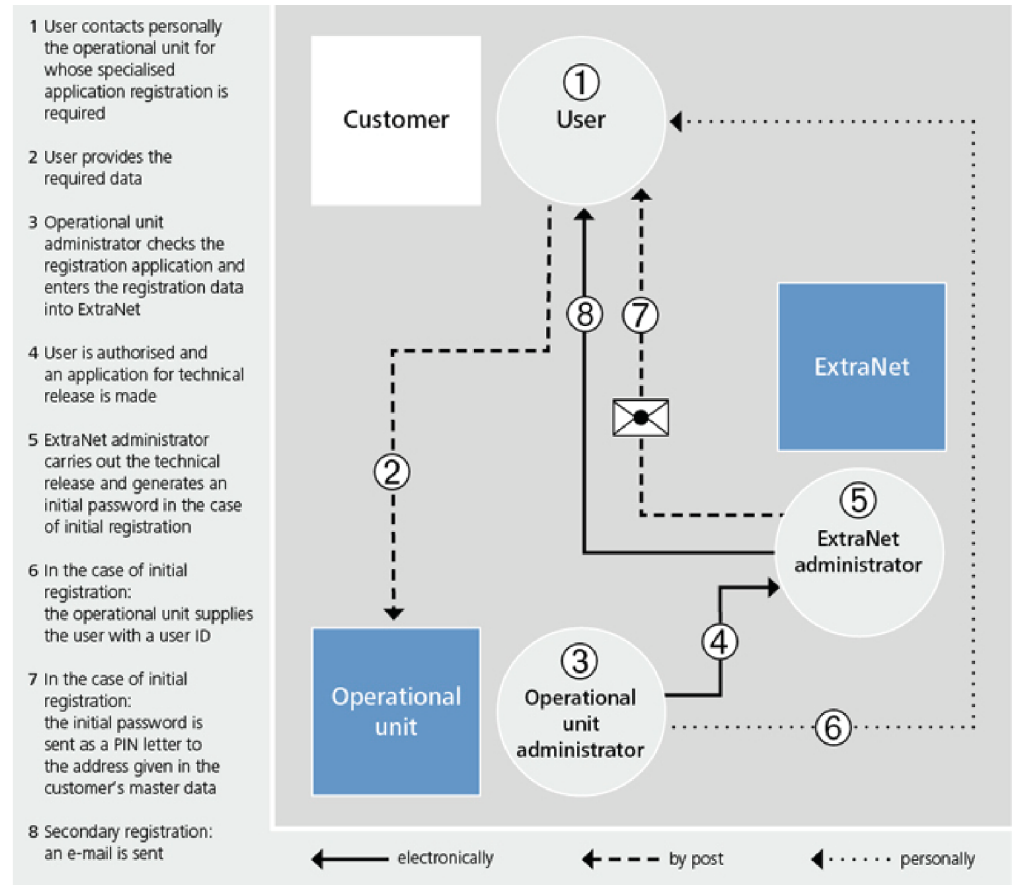


Illustration 9: Procedure for registration through personal contact

3.3.3 Changing user data

3.3.3.1 Basic features

Persons authorised to change user data

The personal data provided by the user during registration can be changed by:

- the user;
- the business unit administrator.

Maintaining 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 business unit of the changes so that the business unit administrator can then update the data (as an exception).

3.3.3.2 Data changes by user

Data that can/cannot be changed by the user

The user can change/cannot change the following personal data.

- The user can change:
 - surname;
 - first name;
 - street/P.O. box;
 - postal code;
 - town/city;
 - telephone;
 - fax;
 - email address;
 - security question/answer;
 - password.
- **The user cannot** change:
 - institution name;
 - customer's master data.

Flow chart

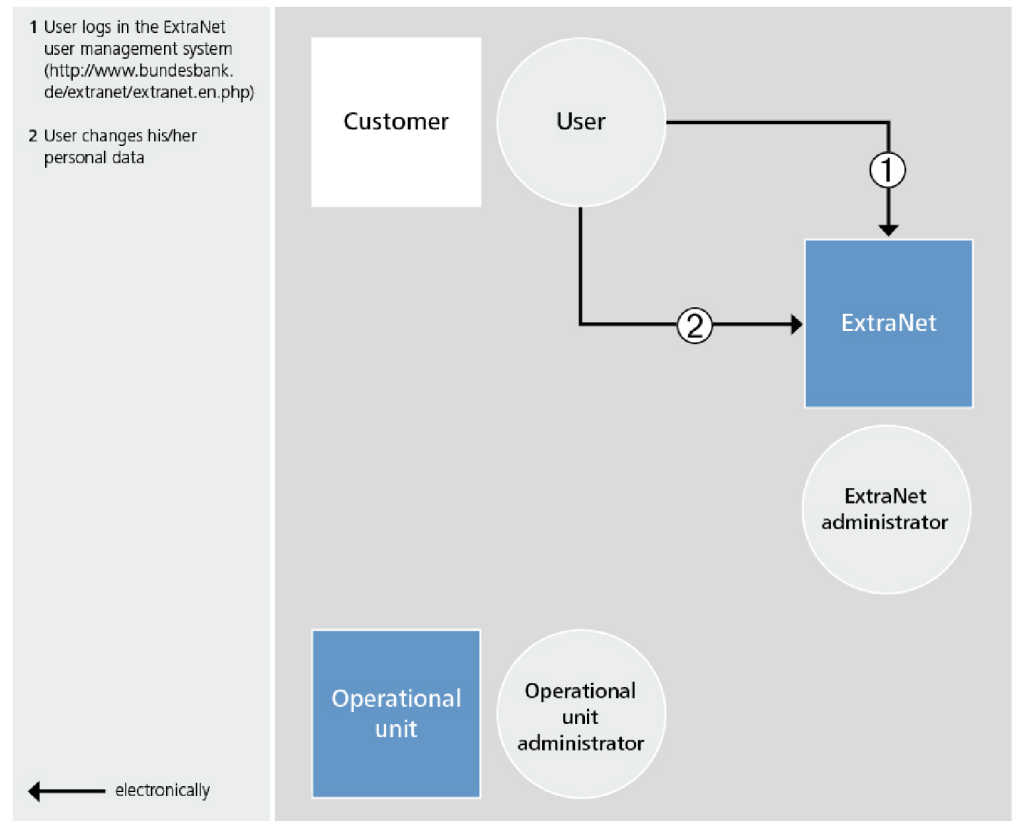


Illustration 10: User data changes by user via ExtraNet's user management service

3.3.3.3 Data changes by business unit

Data that can/cannot be changed by the business unit

A business unit administrator can change certain personal user data according to the information supplied.

- The user can change:
 - surname;
 - first name;
 - street/P.O. box;
 - postal code;
 - town/city;
 - telephone;
 - fax;
 - email address.
- **The user cannot** change:
 - institution name;
 - customer's master data.
 - security question/answer;
 - password.

Flow chart

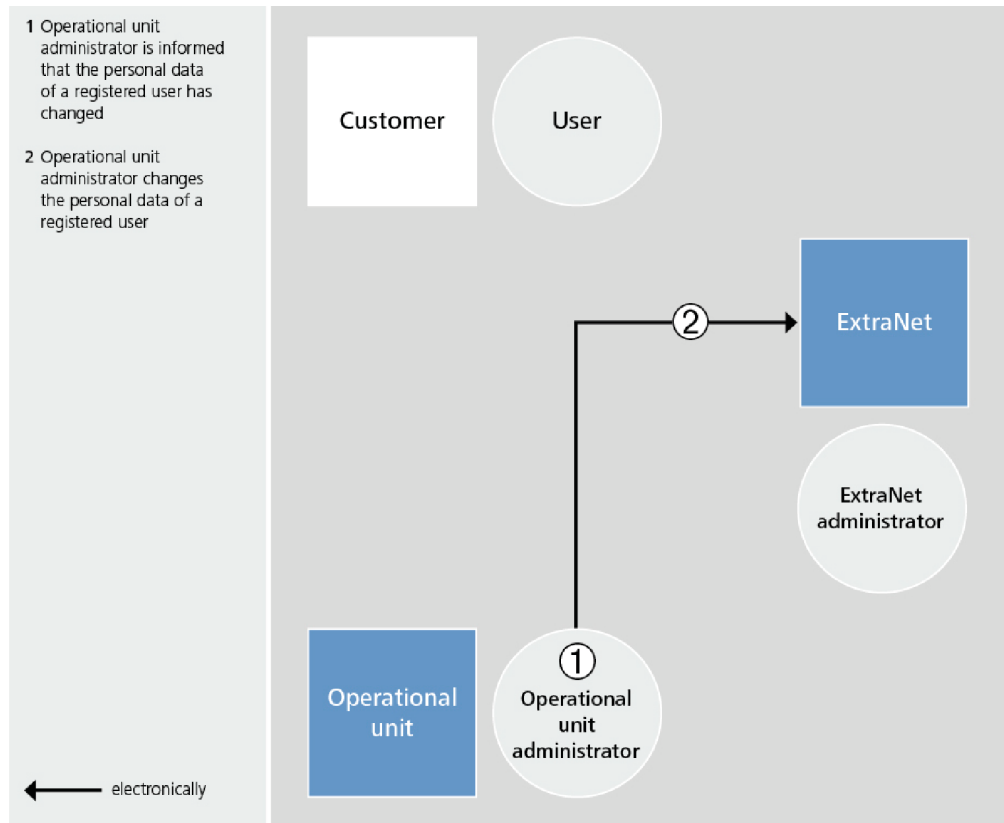


Illustration 11: User data changes by business unit

3.3.4 Blocking users

3.3.4.1 Basic features

Effects

Blocking a user means that the blocked user has no access to Extranet, i.e. they can no longer use the specialised ExtraNet applications for which they are registered. This applies to all business units for which the user has obtained authorisation.

The user's personal data are still stored 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;
- suspicions of user impropriety.

3.3.4.2 Blocking by the customer

Objective

A customer no longer wants one of its employees (users) to have access to the specialised ExtraNet applications for which they are registered.

Procedure

An application to block a user can be made by:

- telephone;
- fax;
- post.

Flow chart (by telephone)

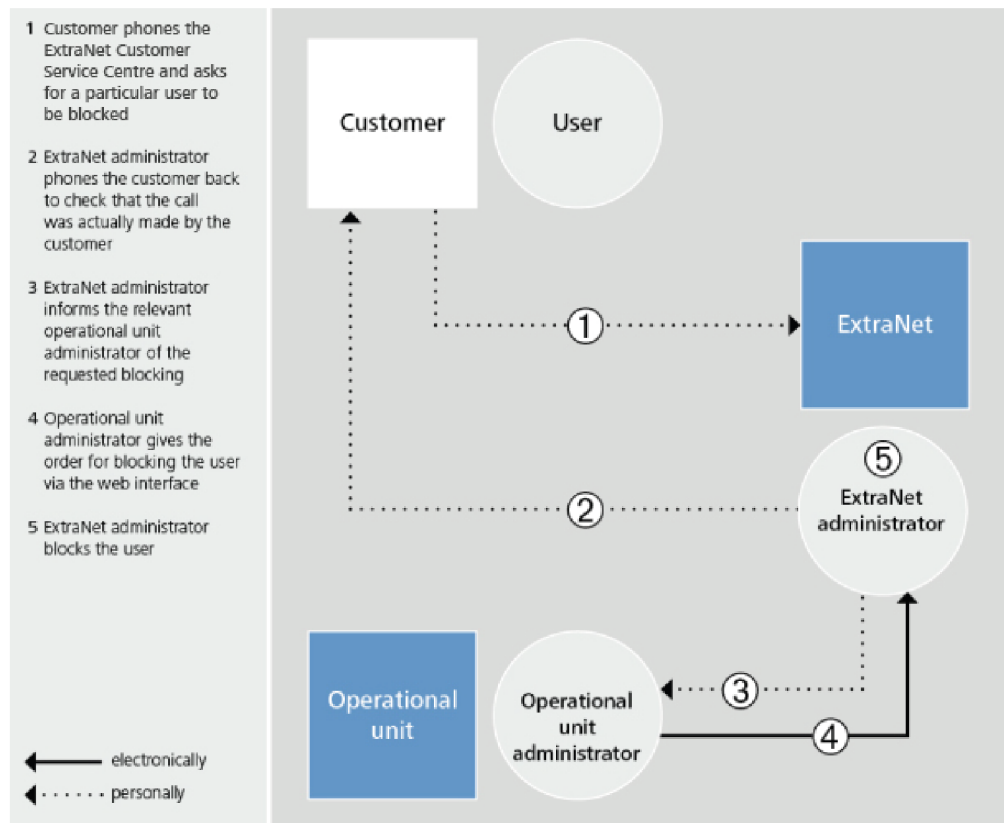


Illustration 12: User blocking by the customer via the ExtraNet Customer Service Centre

3.3.4.3 Blocking by the business unit

Authorisation

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

Flow chart

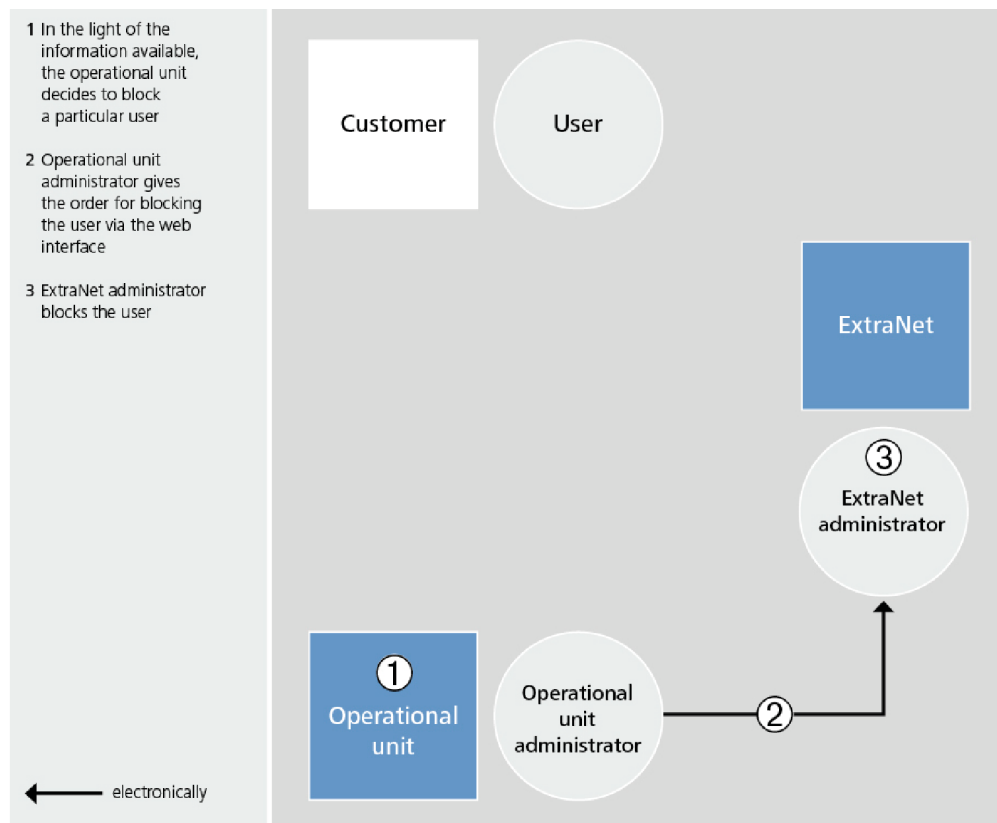


Illustration 13: User blocking by the business unit on the strength of available information

3.3.5 Unlocking users

3.3.5.1 Basic features

Effect Unblocked users regain access to ExtraNet, i.e. they can once again use all the specialised ExtraNet applications for which they are registered.

Requirements Users may only be unblocked following a thorough investigation.

3.3.5.2 Unlocking by the customer

Objective A customer wants one of its employees (users), who has been blocked, to once again be able to access the specialised ExtraNet applications for which they are registered.

Procedure An application to unblock a user may be made by:

- telephone;
- fax;
- post.

Flow chart (by telephone)

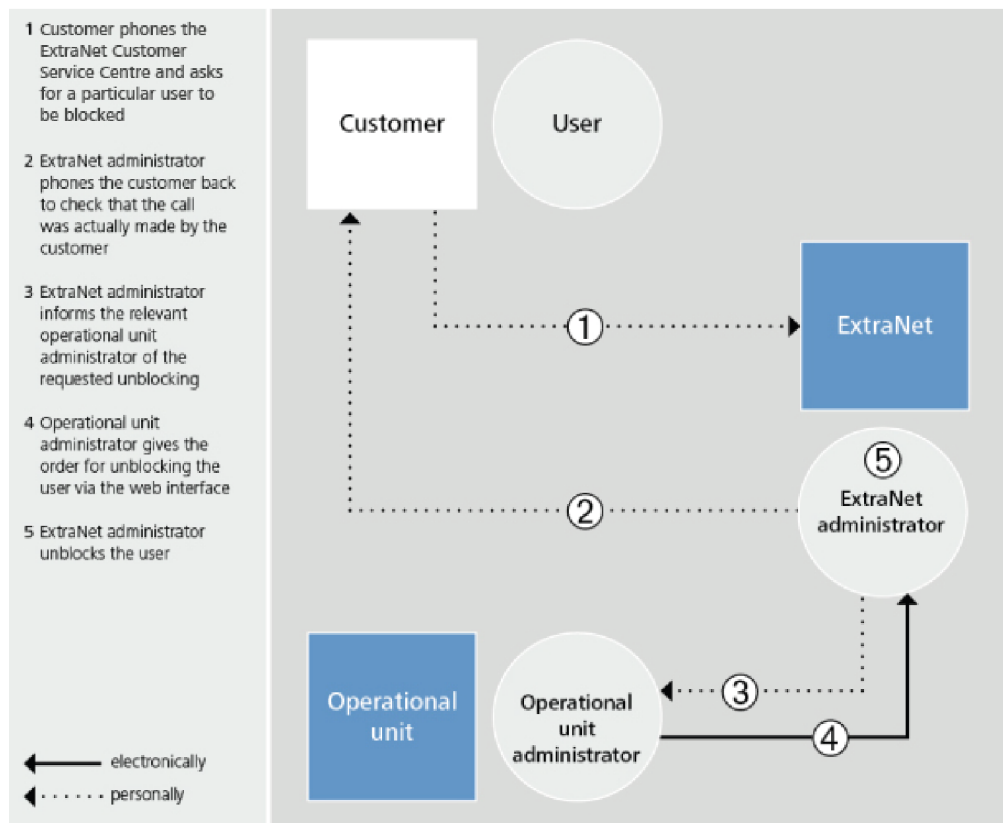


Illustration 14: Unlocking by the customer via the ExtraNet Customer Service Centre

3.3.5.3 Unlocking by the business unit

Authorisation

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

Flow chart

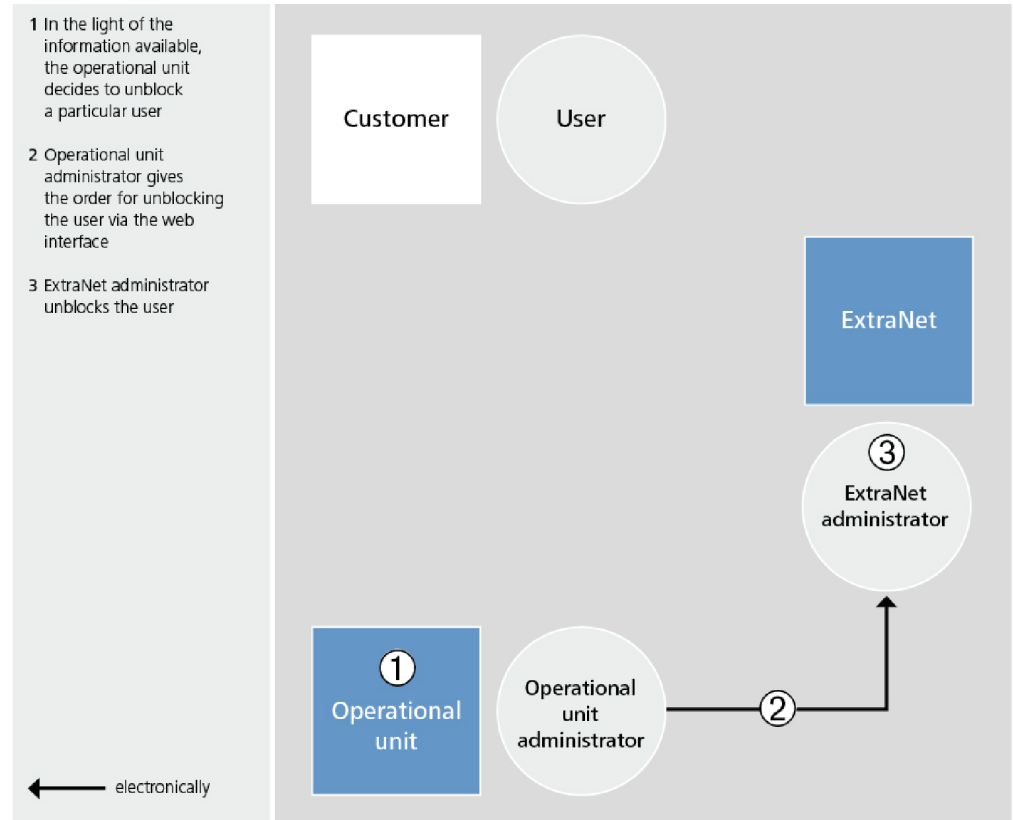


Illustration 15: Unlocking by the business unit on the strength of available information

3.3.6 Resetting user password

3.3.6.1 Basic features

Purpose

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

- the user has forgotten their password;
- the user has entered the 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 changed to a personal password when the user logs in for the first time.

Reset procedures

There are two procedures for resetting the user password:

- standard procedure;
- special procedure.

3.3.6.2 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 reset procedure and therefore have included a security question and answer in their personal data.

The security question and answer serve as an extra security component to prevent unauthorised persons who know a user's user ID – but not their password – from accessing the specialised ExtraNet applications.

Flow chart

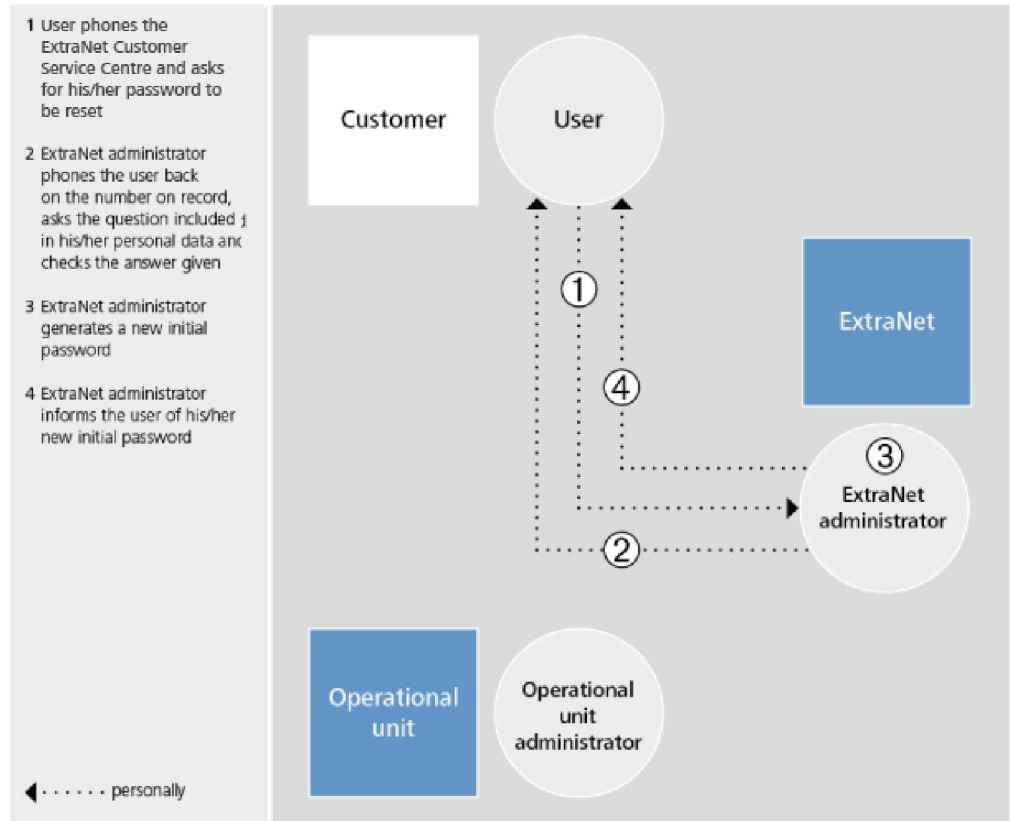


Illustration 16: Password reset by the user via the ExtraNet Customer Service Centre

3.3.6.3 Special procedure

Procedure

The special procedure takes longer, as the new password is requested 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 reset procedure and has therefore not included a security question and answer in their personal data.

Flow chart

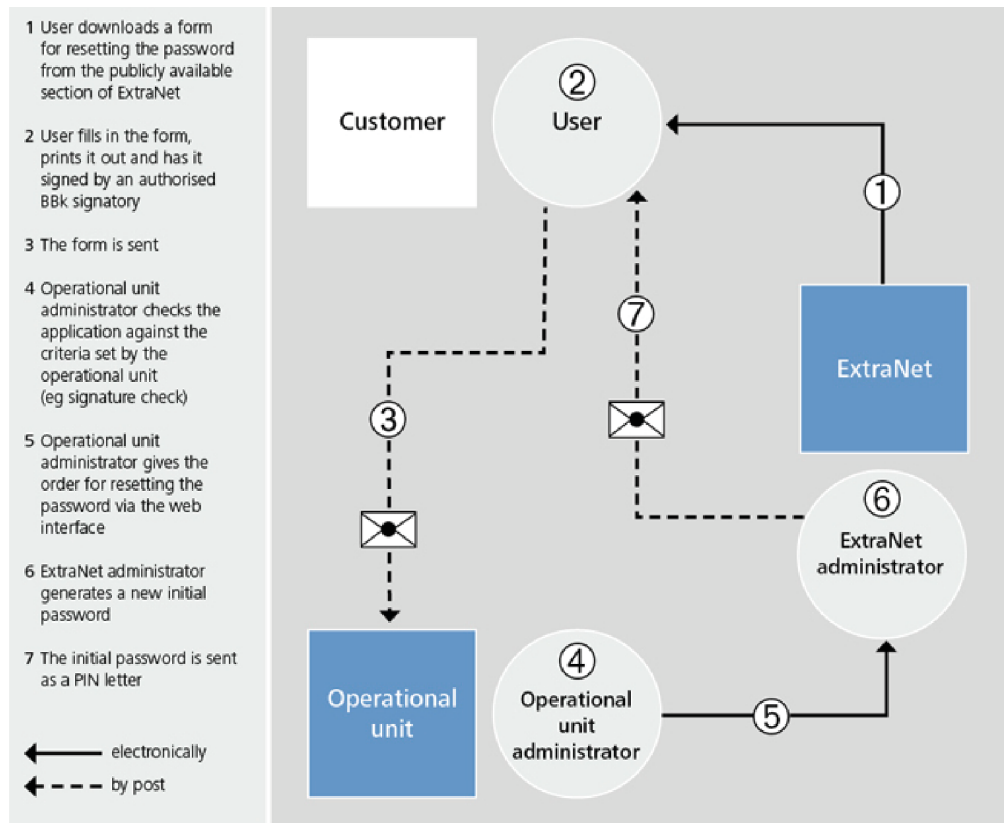


Illustration 17: Password reset by the user via the password reset form

3.3.7 Deleting users
3.3.7.1 Basic features

Effects

Deleting a user means that their 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 they were 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, they must re-register.

3.3.7.2 User deletes themselves as a user

Authorisation

Every user who has registered in ExtraNet may delete their data and therefore themselves as a user.

Requirements

In order to delete their data, the user must:

- have logged in to ExtraNet’s user management;
- call up the “Initiate deletion” function.

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

Flow chart

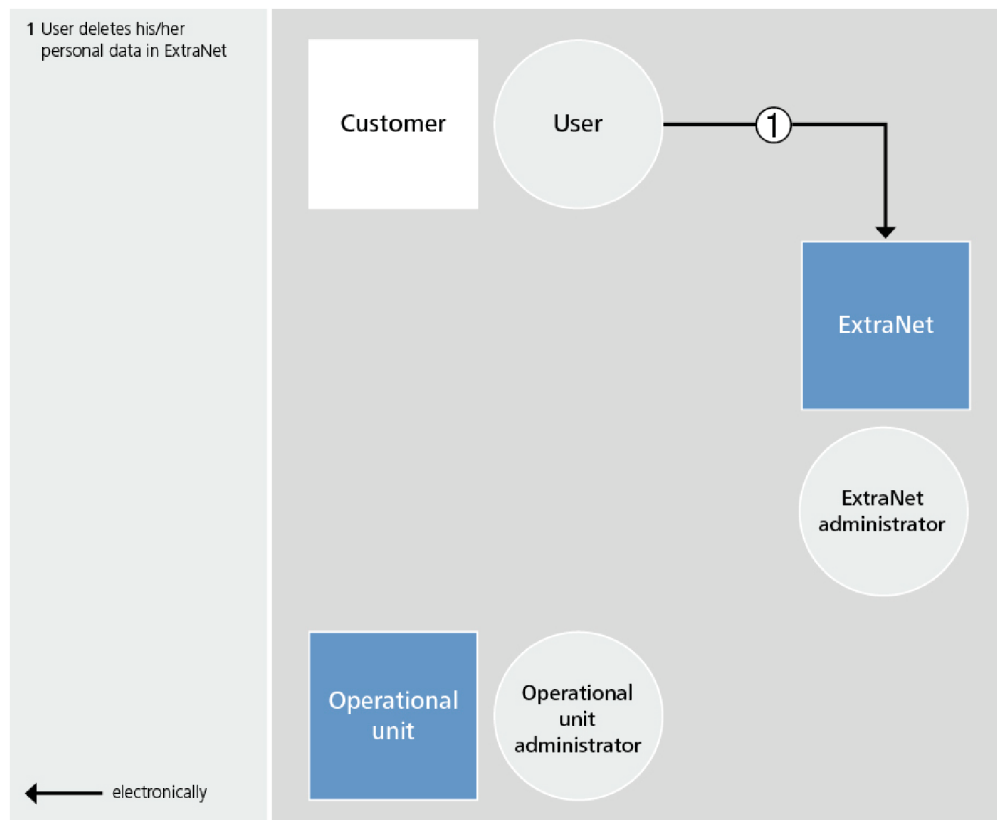


Illustration 18: ExtraNet user deletes themselves as a user

3.3.7.3 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.

Flow chart

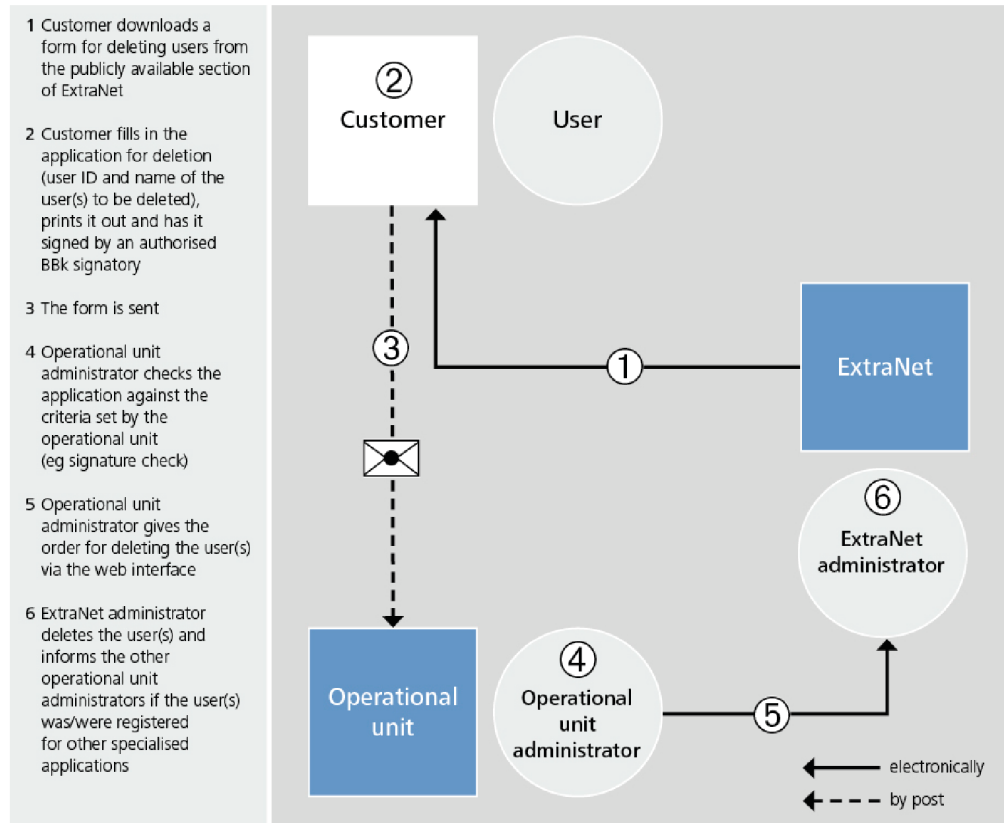


Illustration 19: User deletion upon customer request via the deletion form

3.3.8 Verifying user authorisations

3.3.8.1 Basic features

Purpose

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

The user manager is not able to carry out further functions for individual users.

Requirements

Each specialised procedure includes a standard user manager function. In order to be able to use this function, the user must be registered for at least one specialised procedure (see [chapter 3.3.3.1 Basic features, page 34](#) for more details on initial/secondary registration).

3.3.8.2 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 their institution, along with their corresponding authorisations.

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

- description of specialised procedure;
- ID code;
- institution name.

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 over-all view format.

The user manager can use the CSV, Excel and PDF download links for exporting data.

■ 3.3.8.3 User manager for multiple specialised procedures

Requirements

The logged-in user is registered for the standard user manager function in multiple 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 they have the role of user manager.

After clicking on the individual specialised procedure for which they wish to see a list of registered users and their authorisations, the user manager will be provided with the information described in [chapter 3.3.8.2 User manager for one specialised procedure, page 47](#).

3.4 ConTact

3.4.1 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.

3.4.2 Requirements for participation

Requirements

As a user of the Deutsche Bundesbank's ExtraNet, the contact person is registered for the specialised procedure (e.g. BSM) and the function (e.g. BISTA) for which the business 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 3.3.2 User registration, page 30)
registered as a user of the Deutsche Bundesbank's ExtraNet but not registered for the specialised procedure.	secondary registration (see chapter 3.3.2 User registration, page 30)
not registered as a user of the Deutsche Bundesbank's ExtraNet.	initial registration (see chapter 3.3.2 User registration, page 30)

3.4.3 Procedures
3.4.3.1 General procedure

Basic features

Using the link received from the Deutsche Bundesbank via an unsecured email message, the user can respond to the query by providing their ExtraNet user ID and password.

Notes:

- Irrespective of the method of access chosen, a secure internet connection is established.
- To ensure quick familiarisation, each input screen contains information on the screen itself.

Access via link

Access via the link sent by the unsecured email message takes place as follows:

Phase	Description
1	The user receives a link to the query via an unsecured email message.
2	Clicking on this link directs the user to the login screen of ExtraNet’s user management.
3	The user logs in to ExtraNet’s user management using their user ID 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 to ExtraNet’s user management (https://www.bundesbank.de/en/service/extranet) using their user ID and password.
2	By selecting the link “Display queries” in the navigation tool bar, the user is shown the queries for which they have read and write authorisation.

3.4.3.2 Screen structure

General structure

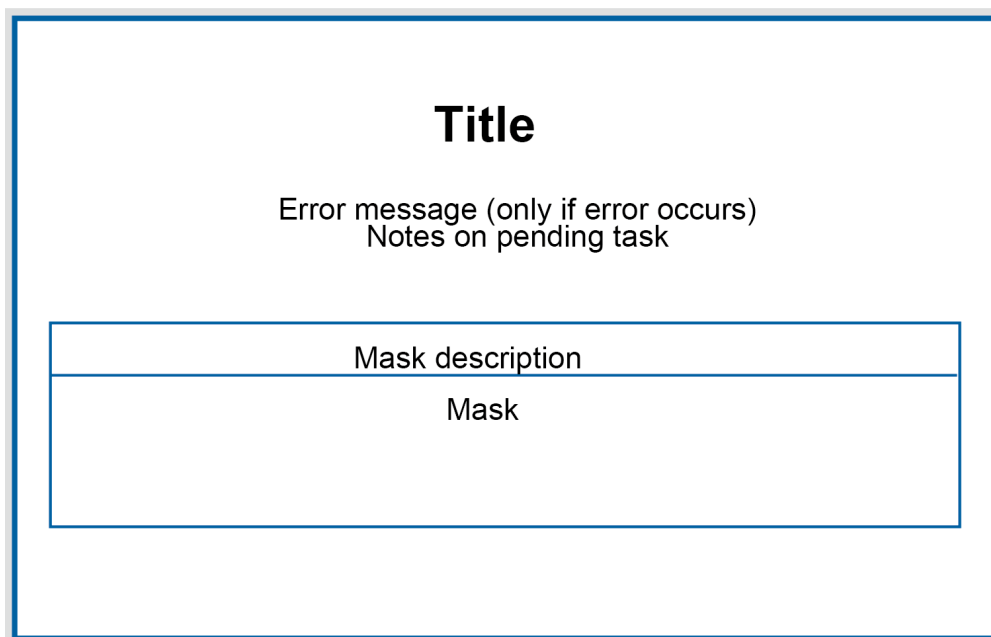


Illustration 20: Screen structure

Details included in the screen The following details are included in the screen:

Name	Definition
Identification number/ID	Number under which each query can be clearly identified; application automatically generates a number for each query
Specialised procedure	Superordinate procedure of the Deutsche Bundesbank generating the query (e.g. BSM = banking statistics reporting)
Function	Unit for which the query was generated (e.g. 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
Question	The specific query
Attachment	File attachment regarding the query (optional)

3.4.3.3 Procedure for responding to a query

3.4.3.3.1 Using the link sent via email message

Procedure

Procedure for responding to a query using the link sent via email message:

Phase	Description
1	A Deutsche Bundesbank staff member generates an online query to one or more contact persons (user(s)) of the customer.
2	The application generates an unsecured email with a subject heading and the URL directing the recipient to the query.
3	The user enters the sent URL into the browser (by clicking on it or copying it into the browser address bar) and is then directed to the login screen of ExtraNet's user management.
4	The user logs in to ExtraNet's user management using their user ID and password.
5	The application opens the query and shows the user the details (see Details included in the screen, page 52 in chapter 3.4.3.2 Screen structure, page 51) 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 button "Write response", the user is directed to a text field in which the user can directly respond to the query. Note: A response can only be generated for queries bearing the status "Request", "Received" and "Reply deadline missed" (see chapter 3.4.3.4 Status, page 54).
7	The user enters a response and clicks on the button "Send response". Result: The response is saved and sent to a member of staff at the Deutsche Bundesbank. The user receives confirmation. Note: By clicking on the button "Save response", the response is saved for later processing and not sent. The user receives confirmation.
8	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.

3.4.3.3.2 Using user management

Procedure

Procedure for responding to a query via user management:

Phase	Description
1	A Deutsche Bundesbank staff member generates an online query to one or more contact persons (user(s)) of the customer.
2	The application generates an unsecured email with a subject heading and the URL directing the recipient to the query.
3	The user calls up ExtraNet's user management (see chapter 3.3.1 Access to user management, page 29).
4	The user logs in to ExtraNet's user management using their user ID and password.
5	The user selects the function "Display queries" listed on the input screen of the user management system. Result: A search form is displayed.
6	The user launches a search by clicking on the button "Start search". Note: The user can refine the search using the following search criteria: <ul style="list-style-type: none"> • specialised procedure; • function (if only one specialised procedure has been selected); • identification number; • institution name; • 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; • institution name; • status; • date; • details. <p>Only ten hits are displayed on each results page. If additional search results exist, the results page contains a button which enables the user to display the next page of results.</p>
7	The user selects the query that they want to process by clicking the appropriate button under "Details". Note: The application opens the query and shows the user the details (see Details included in the screen, page 52 in chapter 3.4.3.2 Screen structure, page 51) of the query as well as the response to it, if there is one already. 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".

Phase	Description
8	By clicking on the button "Write response", the user is directed to a text field in which the user can directly respond to the query. Note: A response can only be generated for queries bearing the status "Request", "Received" and "Reply deadline missed" (see chapter 3.4.3.4 Status, page 54).
9	The user enters a response and clicks on the button "Send response". Result: The response is saved and sent to a member of staff at the Deutsche Bundesbank. The user receives confirmation. Note: By clicking on the button "Save response", the response is saved for later processing and not sent. The user receives confirmation.
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.

3.4.3.4 Status

Basic features

The status indicates the processing status of a query.

Status

The following table shows each 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 contact person (user).
Received	A user has accessed the query for the first time.
Answered	A user has answered the enquiry.
Completed	The query has been processed.
Reply deadline missed	The query was not answered on time.

4 Technical specifications

4.1 File transfer

4.1.1 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 again.
-206	Timeout. Your session has expired. Please log in again.
-210	No data available – please log in again.
-212	File parameter is missing.
-213	Missing parameters.
-215	No client information available.
-216	An incorrect value was specified for the dirKind parameter.
-220	Invalid special character in filename.
-230	File not found.
-300	Error in order component.
-305	File storage aborted.
-310	Transfer aborted.
-1000	Unexpected error.

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	HTML page
Automated access	XML code or string <pre> <?xml version="1.0" ?> <!DOCTYPE error [<!ELEMENT error (message)> <!ELEMENT message (#PCDATA)>]> <error> <message> An unexpected error has occurred!</mes- sage> <error> </pre>

4.1.2 Order identifier and type

4.1.2.1 Order identifier

Basic features

When processed via ExtraNet, the order identifier will be added to the original filename.

Example:

Original filename	Testfile.txt
Technical filename after processing via ExtraNet	R.FTSEX.STA01.5.<FB code><Institution key>.SD.Testfile.txt

Structure

The order identifier consists of the following components:

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

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

4.1.2.2 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 customer)
MD	Multiple file (file is available to several customers)

4.2 Implementing automated access to file transfer

4.2.1 Requirements

Requirements

The use of an automated client should be flagged to the ExtraNet Customer Service Centre so that customers can be informed as soon as possible of any changes to the interface.

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

■ 4.2.2 Use of Java

Basic features

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

- the Deutsche Bundesbank's server must be accessible via the specified URLs;
- communication via TLS 1.2 must be possible.

Note: TLS 1.2 encryption is preconfigured as of Java 8.

4.2.3 Certificates in JSSE

Basic features

Applications in ExtraNet are secured by a server-side certificate that was created by a public certification authority.

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

To identify the certificate, open your browser and go to:

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

and call up the necessary information through the internet options.

Determining the keystore used

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 filename including the absolute path information of the keystore used is reproduced in the first lines of the output.</p> <p>Note: Further details are available in the JSSE reference guide: http://docs.oracle.com/javase/8/docs/technotes/guides/security/jsse/JSSERefGuide.html</p>

Importing the certificate using Microsoft Internet Explorer

The relevant certificate for the root CA can be imported to the keystore using Microsoft Internet Explorer as follows:

Step	Action
1	Open 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 from the list and export it in the format "Base64 encoded X.509".</p> <p>Result: The certificate is exported in a Base64 encoded format.</p> <p>Note: Once the root CA certificate has been identified, it can also be downloaded from the relevant CA's internet site and imported into your automated client keystore.</p>
3	<p>Import the certificate with the JDK tool to the Java keystore 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".</p> <p>If no import takes place, JSSE generates the following error message: "untrusted server cert chain"</p>

4.2.4 Login form

Login form when using browsers

When accessing ExtraNet applications in the password-protected area via a browser, non-authenticated users receive an HTML form, in 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 ExtraNet via a batch application, the browser behaviour must be replicated. 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 session cookie (PD-S-SESSION-ID in the case of HTTPS)
3	Client > server: POST protocol://hostname/pkmslogin.form with session cookie and userid&password&login-form-type
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

■ 4.2.5 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: For each request, all cookies sent in the response must always be returned. Session ID cookies should also be read from the response each time because session IDs may change during a session.

4.2.6 HttpURLConnection

Setting up an HTTPS connection

An HTTPS 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 request generated. If the request body is not defined, a GET request is sent, otherwise a POST request.

■ 4.2.7 Local proxy servers/firewalls

Setting up local proxy servers

Local proxy servers can be set up in JSSE using the following system properties:

- https.proxyHost
- https.proxyPort

Note: See also

<http://docs.oracle.com/javase/8/docs/technotes/guides/security/jsse/JSSERefGuide.html>

Access to the public internet

Every customer is personally responsible for ensuring access to the public internet using their application via the local proxy server or firewall installed. One way of regulating public internet access by an application on the private intranet is to implement a SOCKS server.

Glossary

Array	A list of data with the same attributes.
Authentication	Authentication ensures that a notification does in fact come from the person or institution claiming to be the sender.
Authorisation	Authorisation mechanisms check whether a user has the rights to access certain data (only) with defined functions, such as read, change, insert or delete.
Batch application	Background application
Boundary	A boundary marks the start and end of a POST request.
Browser	Derived from the verb "to browse" (peruse, leaf through, look around). Browsers are programs that retrieve data from the internet and can display and process these on the computer (client).
Button	A defined screen area that can be selected with the mouse, for example. Clicking on a button launches a specific action (e.g. calling up another screen).
Client (external)	Term from the field of networking: A client uses services, which is why a workstation connected to the server is referred to as the client. The client sends user requests to the server using a special protocol and displays the answers in such a way that they can be read on screen.
Content type	The content type is the format of the data to be transferred.
Cookie	Small file with text information that 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. In internet terminology, a cookie is a small file – which is stored locally on the user's computer and – in which data related to the current website are stored. Cookies are usually given a "lifespan". Some remain active only during the browser session, while others have a lifespan of several days or weeks.
Customer	Institution, respondent, etc.
Dir servlet	Component of the file transfer service program code which is used to present a file transfer list on a web server.
Download servlet	Component of the file transfer service which runs on a web server and enables data to be downloaded from the Deutsche Bundesbank.
Download	Download is the term used to describe the transfer of data from a communications system such as the internet. With a download, programs or files are transferred to the user's own computer.

Extension	Also referred to as "suffix". The extension is what appears after the full stop in file-names. Many programs use file extensions to attribute files to an application, e.g.: – .txt for ASCII text files; – .doc for MS Word files; – .htm or .html for HTML documents.
ExtraNet administration	Organisational unit at the Deutsche Bundesbank which deals with the technical day-to-day operation of ExtraNet.
Firewall	Technology in the form of hardware and/or software that checks the flow of data between a private and an unprotected network (i.e. between a local area network (LAN) and the internet) and/or protects an internal network from attacks from the internet. All network traffic goes via the firewall, where it can be regulated. For this purpose, a firewall compares, for instance, the IP address of the computer which sent the data package that has been received with a list of authorised senders – only data from these senders may pass through the firewall.
FTSext	Component of the file transfer service enabling data to be transferred between ExtraNet and a business unit's customers.
HTML	Hypertext Markup Language Standardised set of markup symbols or code for web-sites on the internet or intranet. It defines the layout, content and graphics of the page as well as the links (hyperlinks, connections) to the user's own or others' web-sites.
HTTP	Hypertext Transfer Protocol Communication protocol between the web server and web browser to transfer HTML data.
HTTPS	Hypertext Transfer Protocol Secure Encrypted communication protocol between the web server and web browser to transfer HTML data.
IDS	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.
Input stream	Input data stream
Java application	Java is a programming language developed by SUN. A "Java Virtual Machine" is required to run Java programs. Nowadays, this is built into the most commonly used browsers. This means that Java programs can be run on virtually every computer, regardless of its hardware or operating system.
JavaScript	JavaScript is an object-oriented scripting language. It is used mainly for programs that are run in web browsers. The source code of these programs is embedded in individual web pages. In addition, there are also programs written in JavaScript that run directly on a web server, e.g. as active server pages (ASP). JavaScript must be enabled in your browser in order to use websites that contain JavaScript.

JDK tool	Program included in the Java Development Kit
JSSE	Java Secure Socket Extension Security package in JDK V1.4, which supports TLS communication, amongst other things.
Keystore	A database used to store confidential certificates and issuer certificates.
Parser	Parsers are software modules that break up documents or source code syntactically in accordance with predetermined criteria and prepare them for further processing.
PIN letter	Specially secured letter used to inform the user of their initial password.
Pixel	A pixel is the smallest element of a digital image and has defined colour and space coordinates.
Port	Term to define an interface. TCP/IP applications address the communication partner, on the one hand, via an IP address and, on the other hand, using a port number that specifies the service on the target computer.
POST request	A way of transferring data from the browser to the web server.
Root CA	Main directory of the Trust Center that carried out the certification.
Servlet	Program code running on a web server.
Specialised procedure	Generic term for several specialised applications which use the same customer's master data.
TLS	Transport layer security A technology used by a web client to authenticate the server and to encrypt the flow of data between the web client and the server.
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.
Upload	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.
XBRL	Extensible Business Reporting Language (XBRL) is a freely available electronic language used for financial reporting, i.e. 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 Extensible Markup Language (XML). Certain prudential returns can currently be submitted in XBRL format.

XML

Extensible Markup Language, or XML, is a method of presenting structured data – e.g. calculation tables, address books, configuration parameters, financial transactions, technical drawing, etc. – in a text file.

Index

A

Access 13
 Additional services 2, 8
 Authentication 13
 Authorisation 13

B

Basic infrastructure 9
 Basic services 2, 3, 16
 BBS 4
 Benefits 11
 Bidding systems 4, 14
 Blocking users 37
 by the business unit 39
 by the customer 37

C

CashEDI 6
 CashRecycling 7
 Changing user data 34
 by business unit 35
 by user 34
 Collateral Management Access Portal (CAP) 7
 ConTact 3, 49
 Procedures 51
 Query 52
 Status 54
 Customer access 13
 Customer Service Centre 2, 8
 Customer's PC - system requirements 14
 Customer's PC - technical connection 15

D

Deleting users 45
 by users 45
 by ExtraNet administration 46
 Display uploads of the last 10 days 18
 Display uploads of the last 100 days 18
 Documentation 2, 8
 Download
 Multiple file 19
 Single file 19
 via automated access 27
 via browser 18
 Drafting prudential returns 5

E

EBS 4
 Error messages file transfer 55
 Establishing a connection
 File transfer via automated access 21
 ExtraNet 1
 Homepage 8

F

File name
 for file transfer 17
 for upload 17
 File transfer 17
 Error messages 55
 Order identifier 56
 Order type 56
 File transfer via automated access
 Establishing a connection 21
 File download 27
 File upload 23
 Functions 21
 Parameter passing 22
 Parameters for Dir servlet 25
 Parameters for download servlet 27
 Parameters for upload servlet 23
 Procedure 21
 Servlets 21, 22
 TLS 21
 Upload list 25
 XML output for Dir servlet 25, 26
 XML output for upload servlet 24
 File transfer via browser 17
 Confirm download 19
 File name 17
 File upload 17
 Functions 17
 Uploads of the last 10 days 18
 Uploads of the last 100 days 18
 File transfer via browser:File download 18
 Filetransfer über automatisiertem Zugriff
 Download bestätigen 28
 Functions
 File transfer via automated access 21
 File transfer via browser 17

- User management 3
- G**
- General statistics reporting portal (AMS) 6
- I**
- Initial registration 30
- J**
- JavaScript 14
- M**
- MACCs 6
- Maintaining user data 34
- Master data search engine 4
- Multiple file 19
- O**
- OMTOS 4
- Online registration 31
- Organisational measures
 - Security 12
- P**
- Parameter passing
 - File transfer via automated access 22
- Participation 10
 - Participation criteria 10
- Participation criteria 10
- Password
 - Reset 31
 - Resetting 42
- Password reset procedure
 - simplified 42
- Password reset procedure
 - Simplified 31
- R**
- Range of services
 - Overview 2
- Registration
 - Online 31
 - Procedures 31
 - through personal contact 33
- Reporting platform 5
- Reset
 - Password 31
- Resetting
 - Password 42
 - Resetting user password
 - Special procedure 44
 - Standard procedue 42
- Resetting user passwords 42
- S**
- Secondary registration 30
- Security 12
 - Organisational measures 12
- Security technology 12
- Services
 - Additional 2, 8
 - Basic 2, 3, 16
 - Special interactive 4
- Servlets
 - File transfer via automated access 21, 22
- Simplified password reset procedure 42
- Simplified password reset procedure 31
- Single file 19
- Special interactive services 4
- T**
- TLS
 - File transfer via automated access 21
- U**
- Unblocking users 40
 - by the business unit 41
 - by the customer 40
- Upload
 - File name 17
 - via automated access 23
 - via browser 17
- Upload list 25
- Uploads of the last 10 days 18
- Uploads of the last 100 days 18
- User
 - Deleting by ExtraNet administration 46
- User authorisations
 - Verifying 47
- User data 31
 - Changes by business unit 35
- User data: Changes by user 34
- User management 29
 - Functions 3
 - Initial registration 30
 - Secondary registration 30

User manager 30

User password

Resetting 42

User registration 30

Users

Blocking 37

Blocking by the business unit 39

Blocking by the customer 37

Deleting 45

Deleting by users 45

Unblocking 40

Unblocking by the business unit 41

Unblocking by the customer 40

V

Verifying user authorisations 47

