



BGC Interface Guide

# FTP-via-Internet

MANUAL FOR YOUR COMPANY

November 2008

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## Contact details and addresses

Postal address: BGC, 105 19 Stockholm

### **Telephone, fax and email for BGC Customer Service for customers of:**

Swedbank Telephone +46 8-725 60 80 Email fsb@bgc.se Fax 0046 8-556 100 85	Handelsbanken Telephone +46 8-725 60 60 Email handelsbanken@bgc.se Fax 0046 8-556 101 66
Nordea Telephone +46 8-725 60 30 Email nordea@bgc.se Fax 0046 8-556 100 35	SEB Telephone +46 8-725 60 50 Email seb@bgc.se Fax 0046 8-556 100 53
Danske Bank Telephone +46 8-725 60 77 Email danskebank@bgc.se Fax 0046 8-556 101 07	Other banks Telephone +46 8-725 60 90 Email bankgiroservice@bgc.se Fax 0046 8-556 100 01

### **For software companies**

Please contact BGC Customer Service Technical Support.

Telephone +46 8-725 70 70

Email program.dialog@bgc.se

### **Find information quickly and easily on the web!**

Feel free to visit our website at [www.bgc.se](http://www.bgc.se)! Here, you will find up-to-date product information, questions & answers as well as manuals and other documents.

## Introduction

This manual is designed for bank customers intending to use bankgiro services using FTP-via-Internet as the method of delivery. Among other things, this manual describes tamper protection, outlines technical user specifications and describes how file transfer works.

### **General**

FTP-via-Internet uses TCP/IP FTP, a standard product used for file transfer found in all UNIX systems. It can be used to transfer data from most PCs to IBM mainframe computers.

Connection to Bankgirot is via a VPN tunnel over the Internet to ensure secure transmission.

VPN is a method used for creating secure data communication over a non-secure (often public) network, such as the Internet. A secure channel, or “tunnel”, is created between two nodes by means of encryption. All traffic between the two nodes is passed through this channel before being released at the other end. This means that no one other than those individuals sitting at either of the two ends is able to access files or data, even though these are being transferred via the Internet.

The software used to set up the tunnel must be secure at all levels to ensure that the node at the other end can be identified with confidence. For VPN, this means first identifying a node or a computer, unlike, say, BgCom or Bankgiro Link, where a user - an individual - is identified.

The payment file is created in the agreed format for Bankgiro services. The file is protected against tampering and is sent in accordance with the instructions which can be found below.

### **Security**

To achieve as high a level of security as possible when transferring payment files to Bankgirot, the material is checked in a multi-stage process. These checks are designed to protect your company from unauthorised changes, and ensure secure handling within the bankgiro system.

### **Tamper protection**

All files to Bankgirot must have tamper protection. If a payment file has tamper protection it means that the file is protected from unauthorised alteration when being transferred between you and Bankgirot. A special mathematical calculation (encryption algorithm) is used in combination with a special unique key to give the file an encrypted check value, calculated on the basis of the file contents. By checking the tamper protection, Bankgirot can verify that the file contents have not been changed without authorisation.

**Reference:** For more information on tamper protection, see Tamper protection technical manual.

# Technical information

## Technical requirements

- VPN-gateway
- Software for TCP/IP FTP
- Fixed, public IP address on VPN gateway, (not DHCP).
- Fixed, public IP address on FTP client/server. If you do not have an official IP address, Bankgirot can lend you a temporary IP address.
- Software for tamper protection

## Technical specifications for VPN

- IPSec is used to set up the VPN tunnel
- Encryption           3DES
- Data integrity:       SHA-1
- Key Exchange         DH Group2 (1024 bit)
- Perfect Forward Secrecy
- Don't use Aggressive Mode

## Files

### Encoding

Bankgirot accepts files in ASCII- or EBCDIC-format. For ASCII-files, ISO8859-1 is the recommended encoding.

### Line Break

According to the File Transfer Protocol standard RFC 959, <CRLF> should be used as end-of-line sequence for textfiles in ASCII. (CR = 0x0D, LF = 0x0A)

**PC (Windows)** – In textfiles <CRLF> is used as Line Break. No correction needs to be made.

**Unix / Linux** - In textfiles <LF> is used as Line Break. The FTP-client in Unix/Linux then has to add CR in transmission so that the file is transmitted with <CRLF>. If it doesn't do that, the file has to be altered to use <CRLF> as Line Break.

If the wrong Line Break is used in the file, the following error message is sent:

*451-File transfer failed. File contains records that are longer than the LRECL of the new file.*

### Filename

Files to Bankgirot are named according to the structure BFEP.Ixxxx.K0nnnnnn, where xxxx is replaced with productcode and nnnn is replaced with customer number, right aligned and zero filled.

**Note! For testfiles product code and ZZ must always be used, i.e LBZZ.**

### Ex Filename for test and production

AG - Autogiro

Testfile       BFEP.IAGZZ.K0123456

Prodfile       BFEP.IAGAG.K0123456

KI - Kontoinsättningar/Löner

Testfile       BFEP.IKIZZ.K0123546

Prodfile       BFEP.IKIKI.K0123456

LB - Leverantörsbetalningar

Testfile       BFEP.ILBZZ.K0123456

Prodfile       BFEP.ILBLB.K0123456

# Connection

## *Agreement with the Bank*

### **Configuration**

Once Bankgirot has received the agreement information from the bank, the appointed technical contact person at your company will be contacted to exchange technical data.

#### **When Bankgirot contacts you, you should have the following technical information to hand:**

Bankgirot needs the following information when you send files to us:

- IP address to VPN Gateway
- IP address to FTP Client

Bankgirot needs the following information when we send files to you:

- IP address to VPN Gateway
- IP address to your FTP Server (recipient PC)
- User ID and Password to your FTP-Server
- Chosen file name for delivery to you

Once Bankgirot has configured its system, Bankgirot will give you the information below:

- User ID with Bankgirot
- Temporary password
- Preshared secret
- BGC's IP addresses
- File name for test or production

### **Password**

When Bankgirot configures the connection, you will be given a temporary password which is replaced with your own password the first time you log on. For this reason, it is important that your communications program can handle the dialogue in the event of password replacement. The password must contain a minimum of six and a maximum of eight alphanumerical characters. The Swedish characters Å, Ä, Ö cannot be used in the password, nor can abbreviations for months such as "Jan" or "Feb".

Changing your password:

```
FTP bgc
USER user-id given to you by Bankgirot
PASS old_password/new_password/new_password
```

## **Testing**

To verify that the transmission is working and that the payment files created by your payments program have the correct format, you should perform a test. Only once the agreement is complete and the test approved you can start using your password and your key to provide tamper protection for real payments. The test is another way of improving security.

The following procedure is carried out in connection with testing:

### **1. Create a payment message in the payments program:**

- Make sure your company's details are registered in the payments program before generating the test file because this information follows with the payment file and is checked at the time of the test run.
- Make payment messages to and from real bankgiro numbers or account numbers since the format of this information will be checked by Bankgirot.
- Make those payment types that are to be used for real payments. In the relevant manual read how the bankgiro service works.

### **2. tamper protect the testfile**

Testfiles are protected using the testkey whereas productionkey is used for production files.

### **3. Logging on to Bankgirot**

Use the temporary password given to you by Bankgirot and replace it with a new password the first time you log on. See page 5.

### **4. Send the test in accordance with the instructions in the software manual.**

Once the test is approved by Bankgirot and the agreement is complete, your company will be notified by letter. You can now start using bankgirot's services in your administration of real payments. Record the production key for tamper protection with a start date in your seal software. **Note that you cannot sign a file created with a date earlier than the date when the seal key was generated.**

# File Transfer

## ***Sending files to Bankgirot***

### **Dialogue when communicating with Bankgirot**

```
FTP bgc
USER user-id given to you by Bankgirot
PASS password
PUT local_file name BFEP.Ixxxx.K0nnnnnn
QUIT
```

If the file is more than 80 characters in size, indicate this using the command:

```
SITE LRECL = nnnn      (nnnn = data record length)
```

Max file size that can normally be sent is 20 MB. For larger files, please state:

```
SITE PRI = nnnn      (nnnn = file size in MB/0.22)
```

FTP passive mode (PASV) can be used when sending files to Bankgirot.

### **Character Encoding:**

Files are stored at Bankgirot in EBCDIC-format. If nothing else is declared a conversion between 8-bit ASCII (Code Page 858) and EBCDIC Finnish/Swedish Code Page (1143) will be carried out. If you would like to transfer files using another encoding that has to be specified.

To send files with 7-bits ASCII, indicate:

```
SITE XLATE = ASCII7
```

To send files with ISO 8859-1, indicate:

```
SITE XLATE=ISO8859
```

If the file is already an EBCDIC file, the file must be sent as a binary file, indicate:

```
BINARY or TYPE I
```

The command for PRI, LRECL and XLATE can be indicated in the same SITE command. If your FTP client doesn't support SITE commands, you can use the QUOTE command: QUOTE SITE...

The result is a file created in the Bankgirot system with a unique file name. The Bankgirot system has an inbuilt "generation data set", which means that every delivery always gets a unique file name at Bankgirot. This enables several files to be sent on the same day without risk for data loss (overwriting).

If the file name is wrong or if a no-approved command is used, you will see the following error message:

```
550 User Exit denies userid xxxx from using command YYYY
```

## ***Sending files from Bankgirot***

File transmission from Bankgirot is initiated by Bankgirot once the file is ready in Bankgirot's system. The file is automatically sent from Bankgirot and cannot be collected via FTP. However, your communication system must be set up to be able to receive. The file will be placed in the beforehand agreed catalogue in your file system.

The generation data set may be indicated by Bankgirot as the command STORE UNIQUE. To use this facility, the recipient computers must be able to handle this function.

**Warning! Bankgirot cannot create and send empty files. If there is nothing to report on the day agreed in the timetable, no file will be sent.**



## Ready to start – once the following items are ready...

Before you can start using Bankgiro services, the following steps need to be taken:

**1. Agreement**

The customer and the Bank signs the bankgiro services agreement and specify form of delivery.

**2. Configuring communication**

Bankgirot contacts the customer and configures the connection

**3. Test**

The customer sends a testfile to Bankgirot containing authentic payments messages.

### ***... you are ready to start.***

You can now start using bankgirot's services in your administration of real payments.