



BSE FTP Upload Server Guide (for Xetra short code mapping file)

October 2017

Based on Wiener Borse's Guide with BSE technical parameters



1. HOW TO ACCESS THE BSE FTP SERVER

1.1. Protocol

The BSE FTP Server can be reached over the Internet by SFTP with username/password or SFTP with public key.

Members will be able to upload a file containing the mapping between short codes and according National IDs or LEIs to a FTP server of BSE.

Access to the FTP server is based on SFTP with username/password or SFTP with public key. BSE will provide one SFTP user to every member, which is enabled for uploading. For security reasons the IP address of the members needs to be activated on the firewall of BSE's FTP server, as the access to the server is IP restricted.

SFTP - URL:

download2.bse.hu

SFTP - IP:

82.144.184.235

Ports:

Port 22 (SFTP with username/password)
Port 22 (SFTP with public key)

SFTP Fingerprint:

Host: download2.bse.hu:22
Fingerprint: 2048 25:ec:55:83:db:13:93:22:80:69:bd:4e:ee:4c:f8:df"

1.2. Access credentials

1.2.1. Username/Password

Username and password are initially given by BSE but can be changed if requested. For requests regarding new access credentials or change of credentials please contact BSE per e-mail to czanikj@bse.hu.

1.2.2. Public Key

To provide SSH public key for authentication a private and public SSH key pair has to be created by



the customer. Existing keypairs may be used as well.

How to generate a new key in Mac OS X / Linux

To generate a new RSA key, please open terminal app. Use the ssh-keygen command without any parameters. No passphrase is needed, but it is recommended.

```
[ [redacted] tmp]# ssh-keygen
Generating public/private rsa key pair.
Enter file in which to save the key (/root/.ssh/id_rsa): test_private_key
Enter passphrase (empty for no passphrase):
Enter same passphrase again:
Your identification has been saved in test_private_key.
Your public key has been saved in test_private_key.pub.
The key fingerprint is:
af:75:79:73:54:65:77:30:51:34:f5:ee:21:6c:0d:c1
The key's randomart image is:
+--[ RSA 2048 ]-----+
|          ..+*X|
|          E.o*|
|          . o|
|          . o..|
|          S   + oo|
|          . ...o.|
|          o o o o|
|          o . . o|
|          .      |
+-----+
[ [redacted] tmp]#
```

If no explicit file has been specified, a .ssh directory will be created with private (id_rsa) and public key (id_rsa.pub) – default behaviour.

```
[ [redacted] tmp]# ls -lsa test_*
4 -rw----- 1 root root 1675 18. Okt 17:48 test_private_key
4 -rw-r--r-- 1 root root 408 18. Okt 17:48 test_private_key.pub
[ [redacted] tmp]#
```

To receive the public key in the correct format a conversion is needed: ssh-keygen -e -f ~/.ssh/id_rsa.pub

```
[ [redacted] tmp]# ssh-keygen -e -f test_private_key.pub
---- BEGIN SSH2 PUBLIC KEY ----
Comment: "2048-bit RSA, converted from OpenSSH by root@ma23168.plusserver.de"
AAAAB3NzaC1yc2EAAAABIwAAAQEAt5+bHIMT6KBJkX40mfQnvNACWHypvI/jCuTNabMRJw
STX7Y/fTRfEPzuUmVm0RLhH4V1AO+NTAxFhDabGZiF5PYBRP5O3CXWTQ419O0VJwXRIWBU
j9hKxNK6UdKgD6LF+kwghNuZo6p/kpnXqlDFgKl1QHN6gBZs22AsuVUfD5ywX6ZVUwqE+j
GslwjNyDbYghXcfErHeAr5x4xffTayOlWwl4UxaVQeQIxjk4TafToEf595ptceOkuMBEOI
wdfyeL4lzuPcZRie5DQITHmkoL0f7+I5Tw83X2BfnOKQzOAIASaiUDK2JKTPMN2Pz1EV1G
4+Hk+Fx4Kf7th7y2VwGQ==
---- END SSH2 PUBLIC KEY ----
[ [redacted] tmp]#
```

This public key **including BEGIN and END section** needs to be passed to BSE via e-mail to czanikj@bse.hu for further setup. The private key shall **not** be discarded and shall **not** be sent to BSE.



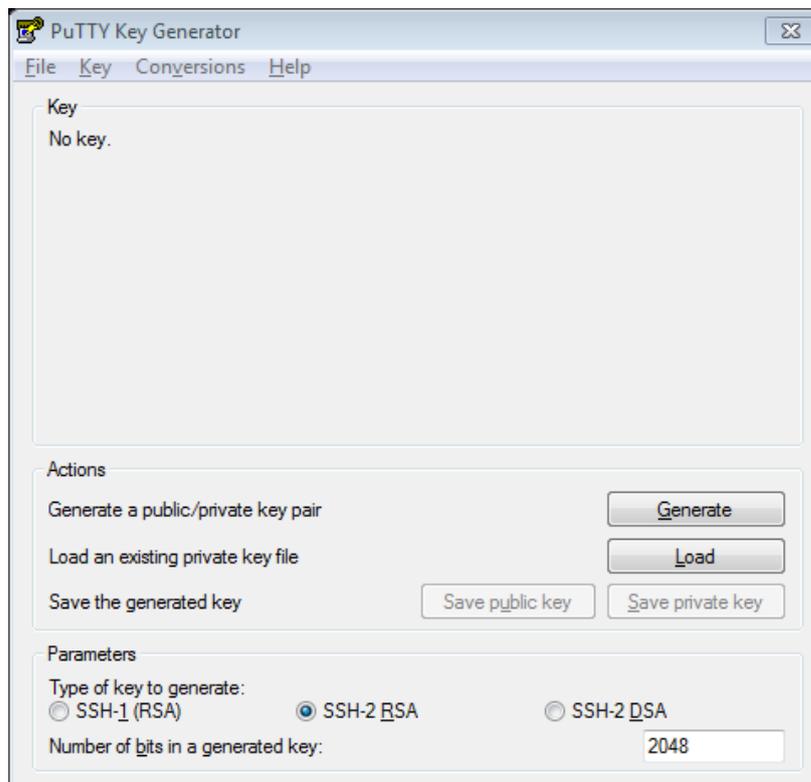
BSE will confirm finalization of internal setup to the sender of the public key. Login can then be done with username only (and implicitly private key instead of a password).

How to generate a new key in Windows

For windows it is recommended to use Putty utilities to generate a new ssh key. The program can be found on the website <http://www.chiark.greenend.org.uk/~sgtatham/putty/download.html>.

Please use binary PuTTYgen (simply click on the link "PuTTYgen.exe").

After starting the application, the following screen appears:



The settings selected by default are strongly recommended:

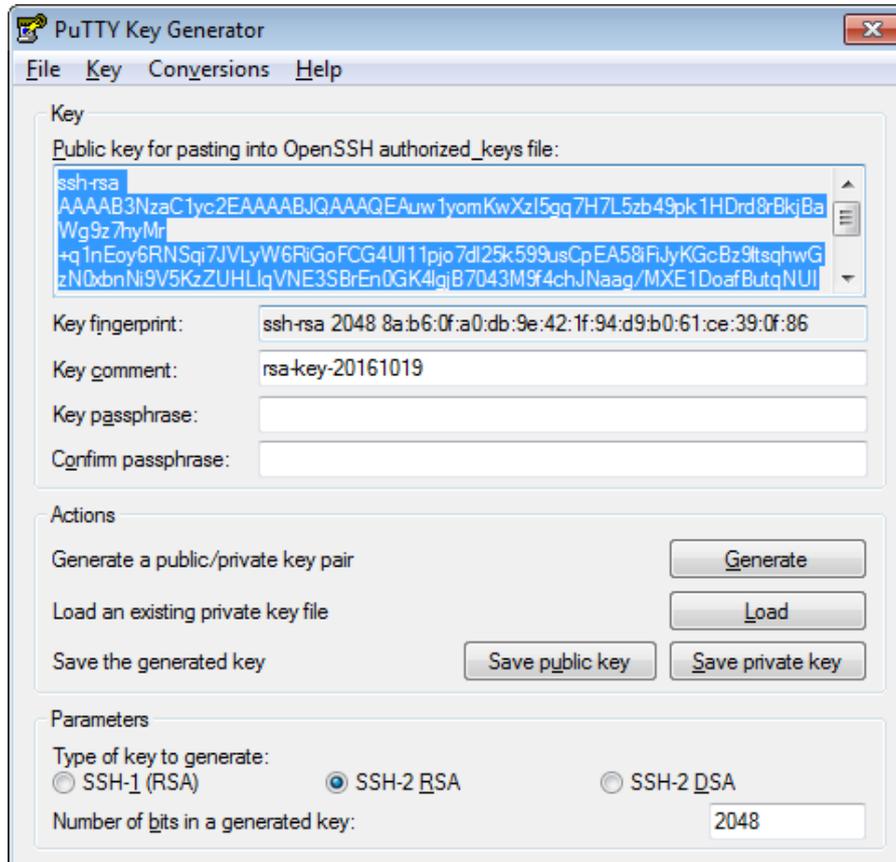
SSH-2 RSA

2048 (number of bits in a generated key)

As a next step, please click the button „Generate“.

To achieve better entropy, it is needed to move the cursor over the blank area.

After the process finished, the result will look similar as shown below:



It is optional to set a passphrase for the private key.

Via the two newly appeared buttons, the private key as well as the public key can be saved.

The public key **including BEGIN and END section** needs to be passed on to BSE via e-mail to czanikj@bse.hu for further setup. The private key shall not be discarded and shall not be sent to BSE.

BSE will confirm finalization of internal setup to the sender of the public key. Login can then be done with username only (and implicitly private key instead of a password).

Number of SFTP accounts:

Normally only one SFTP account is set up per participant that permits access to a directory on the BSE FTP Server.