ecentric
PAYMENT SYSTEMS

Online Payments

SFTP

Integration Guide

This document serves as a guide to secure file transfer

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1. Introduction

1.1 File transfer objectives

Ecentric Payment Systems accepts batch files for various external systems. External systems often create batch files that contain sensitive data, specifically when pertaining to financial transactions. To secure clients' data encryption mechanisms are to be applied to the source data a) before submission, using file signing and encryption; and b) during file transfer, using the Secure Copy Protocol.

It is not standard practice for Ecentric Payment Systems to send files to a client environment. As such, Ecentric Payment Systems will make files available for collection or/and receipt of files.

1.2 Securing the file outside of the transfer process

1.2.1 Encrypting the File

To ensure a file is PGPéd encrypted while in transit to the Ecentric SFTP Server, the client must use the Public PGP key provided by Ecentric Payment Systems. Ecentric Payment Systems will then decrypt the received file with the Private key (the key which generated the Public key given to the client).

1.2.2 SFTP Encryption

To ensure encrypted SFTP connectivity, the client will generate a key pair (Private key and Public key) to connect to the Ecentric Payment Systems SFTP Server. The Client will send the Public key to Ecentric Payment Systems who will use the Public key to authenticate the Client with the Credentials that have been setup for them.

1.3 Securing the file during the transfer process

When the file data is submitted across the participating networks, it should be sent using a secure transfer protocol. The secure transfer process is not intended to replace the encryption and signing of the file. It is specifically implemented to protect the data while in transit.

2. File signing and encryption

To sign and encrypt a file, a client may use either a number of built-in Unix functions or freely available open source software. The GnuPG tools are a good open source option. Commercial software such as VisualCron is also recommended.

3. Secure file transfer

Ecentric Payment Systems send and receive files using the Secure Copy protocol (SCP). SCP is a file transfer protocol that uses Secure Shell (SSH) as the communication mechanism for authentication.

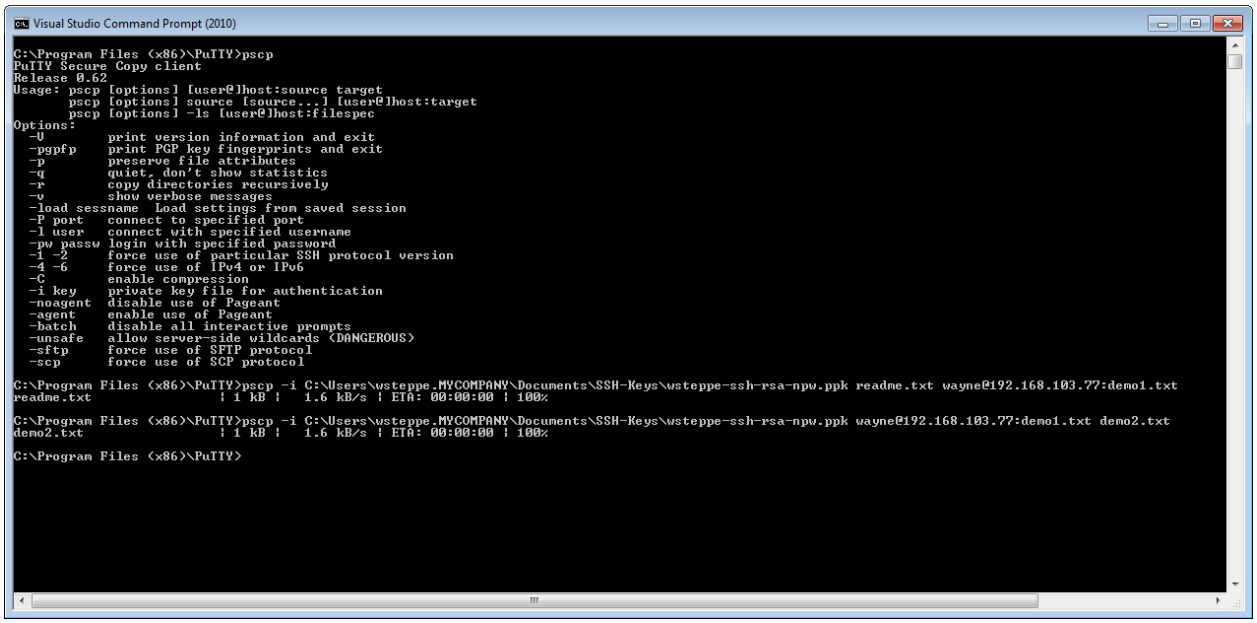
3.1 Initiate connection

The client will initiate an SSH connection to the Ecentric Payment Systems host. A private and public key pair will be used. The client will generate a public and private key pair in the SSH-2 RSA format and provide the public key to Ecentric Payment Systems. Annexure A gives an example of generating a key pair using the open source PuTTY software. The client should keep the private key secure.

3.2 File transfer

The client will transfer files using the SSH protocol. This can be done using a GUI tool for once-off files, but should be automated using a command line tool and scheduling software. Ecentric Payment Systems recommend the open source terminal emulator PuTTY http://en.wikipedia.org/wiki/PuTTY.

The following screenshot illustrates using the command line to transfer a file:



3.3 Sending a file

To send a file use the following command (as in

pscp –i *keyfile source destination*

where:

keyfile : is the private keyfile generated as in appendix A

source : is the local file to send

destination: is the destination for the file in the following format:

user@server:filename

3.4 Receiving a file

pscp –i *keyfile source destination*

where:

keyfile : is the private keyfile generated as in appendix A

source : is the source for the file in the following format:

user@server:filename

destination: is the local filename to use

4. Bibliography

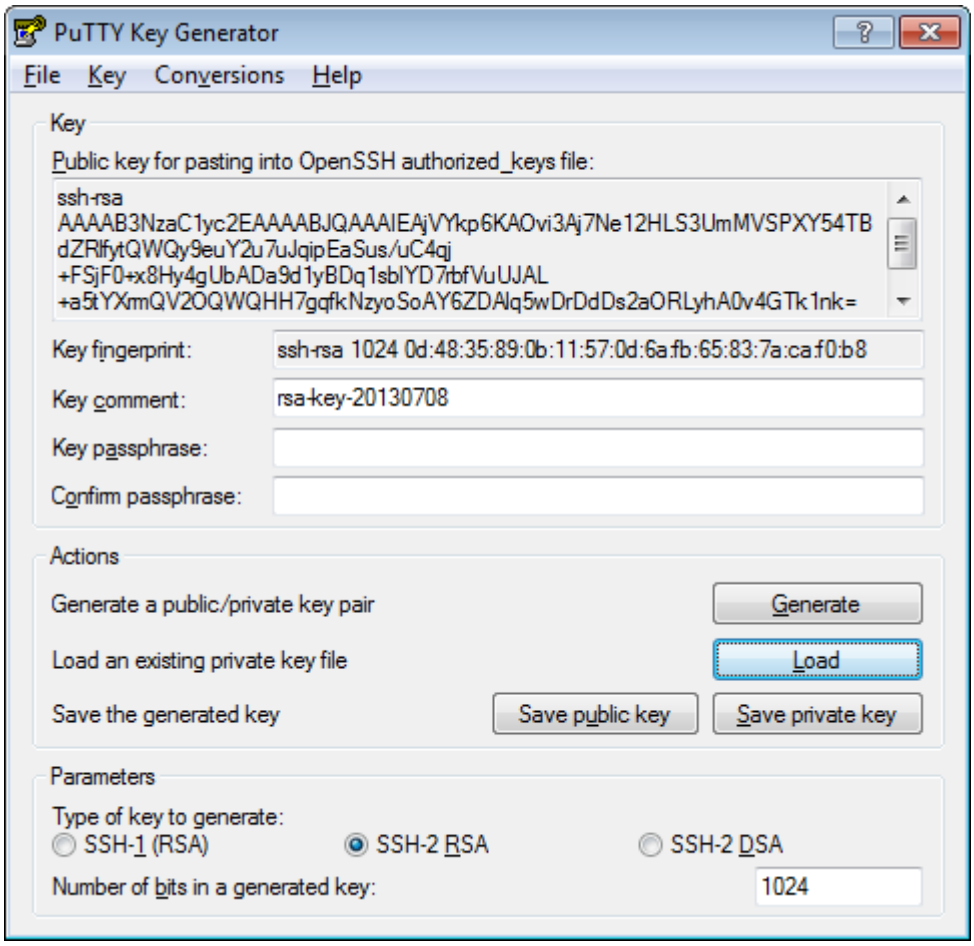
Davis, J. (n.d.). *Manually generating your SSH key in windows*. Retrieved from http://wiki.joyent.com/wiki/display/jpc2/Manually+Generating+Your+SSH+Key+in+Windows

Free BSD. (n.d.). *scp - FreeBSD*. Retrieved from http://nixdoc.net/man-pages/FreeBSD/scp.1.html#HISTORY

Putty. (n.d.). Retrieved from http://www.chiark.greenend.org.uk/~sgtatham/putty/download.html

4.1 Annexure A: Generating an SSH key

The application puttygen.exe will generate a key pair. Simply install the PuTTY application and run puttygen.exe. Do not enter a passphrase so that the key can be used from a batch file. Save the public key and send this to eCentric, save the private key and keep this secure.



ecentric PAYMENT SYSTEMS AT A GLANCE

PCI DSS Level 1 | EMV Certification Service Provider | System Operator TPPP | Association of System Operators

FOUNDED IN 1998

Ecentric Payment Systems is a certified Payment System Operator (PASA) & PCI DSS Level 1 Service Provider.

OVER 40 000 TILLS CONNECTED

OVER 160 BILLION RANDS PROCESSED

OVER 880 MILLION PAYMENTS PROCESSED

OVER 1.1 BILLION TRANSACTIONS RECONCILED

1 DEDICATED DEVELOPMENT HUB

3 DATA CENTRES

WE ARE PASSIONATE ABOUT

- POINT OF SALE PAYMENTS
- ECOMMERCE & MCOMMERCE
- COLLECTIONS & PAYMENTS
- ENTERPRISE RECONCILIATION
- CARD MANAGEMENT SERVICES
- TRANSACTION REPORTS
- PCI COMPLIANT SERVICES
- PAYMENT SOFTWARE ENGINEERING

WE SERVE

ACKERMANS, CAPITEC BANK, Computicket, Independent Newspapers, TFG, PEP, SHOPRITE, Standard Bank, TRUWORTHS, WOOLWORTHS

WE ARE DEDICATED TO

- **LOW** PROCESSING FEES
- **TAILORED** PAYMENT SOLUTIONS
- **WORD CLASS** CUSTOMER SUPPORT
- NEAR **100%** UPTIME

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