CONNECTING TO THE KADOE SERVICE USING SFTP

Version 2.00

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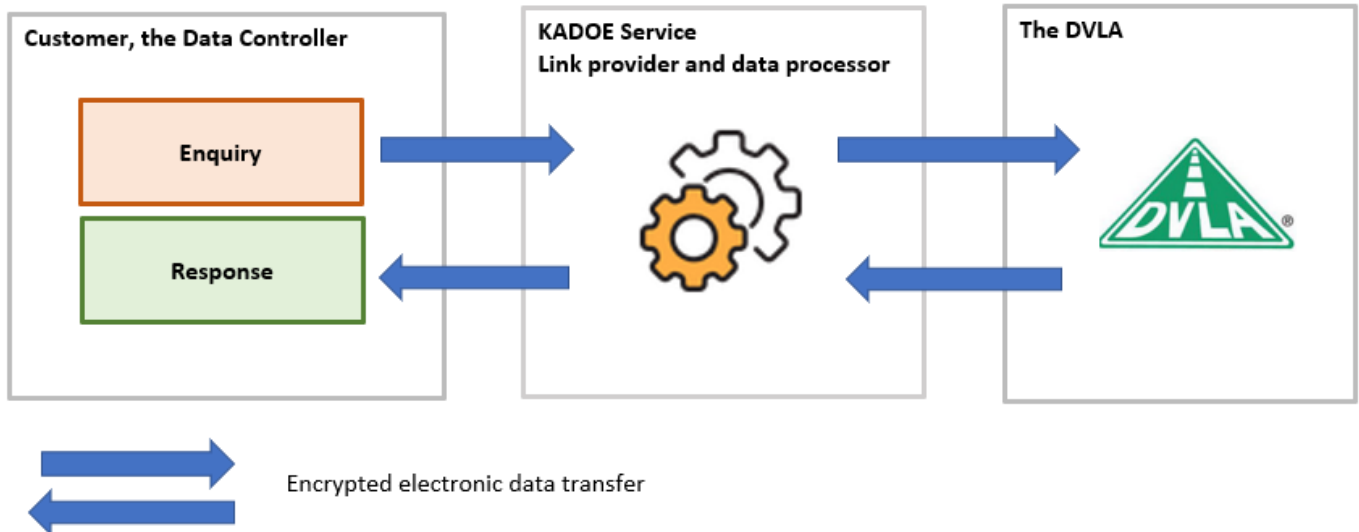
Content

Audience

This document contains the technical information to help you connect to the Valcon KADOE service. You should be reading this document if you are planning to implement an SFTP connection to the service.

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Introduction

A company uses the Valcon KADOE service to make vehicle keeper enquiries, and get the vehicle keeper responses.

The Valcon KADOE service provides secure and flexible connectivity for companies wishing to use the DVLA's vehicle keeper lookup service. Using the Valcon KADOE service removes the need for the specialised network infrastructure demanded by the DVLA, and provides email and telephone support for users of our service.

The Valcon KADOE service is secure, and complies fully with the DVLA's strict data protection policies. Connections between companies and the Valcon service are always secure connections.

Before a company can use the Valcon KADOE service to exchange data with the DVLA, it has to have a contract with the DVLA allowing it access to their data. The must company arrange this directly with the DVLA. It is not something the Valcon KADOE service can organise.

There are 4 ways to connect to the service:

1. A desktop client for the Windows operating system
2. An Electronic Data Interchange (EDI) connection through your EDI network provider
3. A file transfers over a secured (SFTP) file transfer connection.
4. An HTTPS secured API connection used by your back-office system.

This document deals with connections to the KADOE service using the SFTP gateway.

Prerequisites for using the KADOE Service

The Valcon KADOE service is a value-added link provider between yourselves and the DVLA.

Your company must be authorised by the DVLA to use their vehicle keeper look-up service before it can use the Valcon KADOE service.

Your company must be registered with our service and have a contract with us before you can connect to the service.

Your company must have a data security policy that governs the use of the DVLA Keeper data.

How the Valcon KADOE service handles your data is set out on our website:
https://kadoe.co.uk/yourdata/

Technical Prerequisite

The SFTP gateway is restricted by IP address as well as user-name and password or public key file. If you are planning to use the SFTP gateway, you should have a static IP address that we can add to the white-list on the gateway.

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KADOE Service SFTP

The Valcon KADOE service's SFTP gateway is a SHELL FILE TRANSFER gateway. It is NOT a secure variation of the more common FTP protocol.   To connect to the Valcon KADOE SFTP gateway, you will need an SFTP client.

If you are planning to transfer files manually, you should get a client that has a graphical interface such as FileZilla (filezilla-project.org) or WinSCP (winscp.net). If you have software that is going to make the connection, you will need an SFTP library.

Registering for the SFTP Gateway

If you are either an existing customer moving over to the SFTP gateway, or a new customer wanting to use it, you must register with us to do so. Registration is needed because we configure you as a user on the gateway and add your static IP address to the gateway's firewall. You must register with the gateway before you can exchange test or production files.

To register, please contact the support desk: support.kadoe@valcon.com. We will need your static IP address and, if you plan to authenticate with an SSH key, your public key file. We will create a production and test account for you, and issue a user name and, if you are not using a SSH key, a password. If you are using public keys, we encourage you to use a separate key for the production and test account, though we do not enforce this.

Connecting to the SFTP Gateway

To connect with the gateway once you have been registered use

Host: kadoe.co.uk
Port: 22

Files are exchanged with the gateway using either production or test accounts which we will provide when you register with us.

Logging on to the SFTP Gateway

When you register to use the SFTP gateway, we will create two users for you: a production user and a test user. You will have standard permissions within your home directories (read/write/create/delete) for files and folders.

To log on to the SFTP gateway, you can either use a username/password combination, or a user name/key file. Which one you choose will depend on your own security policy and the capabilities of the client you are using.

We do not independently change the user names or passwords on your SFTP accounts because we do not coordinate with your systems. If you want to change the user name and password on either of your accounts, let us know (support.kadoe@valcon.com) and we will get it done.

SFTP Directories

Your accounts on the SFTP gateway have two directories inside the home directory

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/enquiry	The folder you put vehicle enquiries into
/response	The folder you pick up vehicle responses from

SFTP clients cannot move away from this structure but they do have the permission to add and delete sub-folders, read, write and delete files.

The KADOE service looks for vehicle keeper enquiries in the enquiry folder and drops response files into the response folder.

The files that are exchanged

The gateway exchanges ASCII text files; we cannot exchange binary files. The standard configuration is to exchange Comma Separated Value files, but our gateway is very flexible and we can generally accommodate requests from customers for different formats and layouts.

File names

Vehicle keeper enquiry file names are in the form of VQ3YYYYMMDDHHMMSS.csv. For example: VQ320220720150000.csv. If you are likely to drop more than one file in a second, you can put other characters at the end of the filename: VQ320220720150000A.csv, for example.

The Valcon KADOE service uses VQ7YYYYMMDDHHMMSS.csv as the format for vehicle keeper response file names. For example: VQ720220718050505.csv. It quite often drops more than one file a second, and will add a sequence number to the file when it does: VQ72022071805050501.csv, for example.

We can configure your production and test account to look for and write other file patterns to fit with your requirements; let us know what your systems require and we will do our best to accommodate them.

File formats

The next section specifies the default file formats used by the Valcon KADOE service. If your back-office system cannot produce or consume these files, please get in touch (support.kadoe@valcon.com). Scripting alternative file formats can be a straight forward task.

When to exchange files

You can drop vehicle keeper enquiry files into the enquiry directory at any time. The Valcon KADOE service will pick the files up from the folder and move them before processing. You should not delete or over-write an enquiry file once you have dropped it into the folder.

The Valcon KADOE service usually drops vehicle keeper response files into the response folder early in the morning, after we get the data from the DVLA. This is generally after 3am. You can schedule a pickup from the folder at the start of the day.

When you are using the test account, responses are dropped about 10 minutes after the enquiries are picked up. In production, responses may be delayed because of business or technical problems. Our service desk will let you know when this happens.

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Housekeeping files

The Valcon KADOE service does no housekeeping of the response directory, the client should housekeep the response folder to ensure that files are not downloaded more than once.

Testing your connections and files

If you drop files into your test account's /enquiry folder, the Valcon KADOE service will process the file through the test environment. This takes about 10 minutes to return a vehicle keeper response file to the test account's response folder.

We are pleased to help you with your testing. If you have any questions, please get in touch (support.kadoe@valcon.com).

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File Formats

Vehicle Keeper Enquiry file

ASCII text values separated by a comma.
Quotation marks are optional. Quotation marks are those found in a text editor and not the quotation marks normally used by word processors.

Column headings are optional. If column headings are included, the field position must not change.

	Field Name	Description		Format	Purpose
1	VRM	Vehicle Registration Mark	M	A(7)	
2	DOE	Date Of Event	M	YYYYMMDD	The date for example, when a contravention or accident took place.
3	ENQUIRYREF	Enquiry Reference	M	A(20) 1 to 20 characters 0-9, A-Z, /, * and ;	Your reference to this vehicle keeper enquiry.
4	ENQUIRERID	Enquirer Id	M	AANNN	The ID issued to you by the DVLA
5	REASONCODE	Reason Code	M	NNAA	One of the reasons for an enquiry that the DVLA has authorised you to use.
6	INTERMEDIARYID	Intermediary ID	O	ANN	A code identifying your intermediary. If you are sending enquiries using more than one intermediary id, you must specify it. If you do not specify a value, the service will use the default for your account.

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Vehicle Keeper Response file

The file is ASCII text values separated by a comma. Quotation marks are only applied to fields which contain commas.

The file line ending is carriage-return/line-feed. We can configure it to be the Unix style line-feed only if your system needs this.

The file is written with column headings. We can turn this off if your system needs it. The field positions do not change if the file has column headings.

The first 6 fields are copies of the data you sent with the enquiry, all the other fields are optional. Missing data within a line will be blank and lines finish at the last piece of data.

	Field Name	Description	Format	Purpose
1	VRM	Vehicle registration mark	A (7)	Carried over from the enquiry
2	DOE	Date Of Event	YYYYMMDD	Carried over from the enquiry
3	ENQUIRYREF	Enquiry Reference	A (20)	Carried over from the enquiry
4	ENQUIRERID	Enquirer Id	A (5)	Carried over from the enquiry
5	REASONCODE	Reason code	A (4)	Carried over from the enquiry
6	INTERMEDIARYID	Intermediary ID	ANN	Carried over from the enquiry
7	HCTOFOLLOW	Hard copy to follow	A(1)	If 1, the DVLA will sent a paper version of the keeper details to the address it has on file. Otherwise this value will be blank
8	DATERESPONSE	Date Of Response	YYYYMMDD	
9	ERRCODE	An error code associated with the response	A(5)	Possible error code. Blank if no error. See the appendix for a list of error codes
10	ERRDESC	The description of the error	A(80)	Description of the error. Blank if no error
11	VMAKE	Vehicle make	A(35)	
12	VMODEL	Vehicle model	A(35)	
13	VCOLOUR	Vehicle colour	A(20)	
14	ENGINECAP	Engine Capacity	A(35)	
15	SEATCAP	Seating Capacity	N	
16	TAXCAT	Taxation Category	A(25)	
17	VIN	Vehicle Identification Number	A(35)	
18	NUMPKEEPER	Number of previous keepers	N	
19	DATELKCHANGE	Date of last keeper change	YYYYMMDD	
20	DATELICEXP	Date of Licence expiry	YYYYMMDD	
21	DATETHEFT	Date of Theft	YYYYMMDD	
22	DATERECOVERY	Date of recovery	YYYYMMDD	
23	DATESCRAP	Date of scrapping	YYYYMMDD	
24	DATEFSTREG	Date of first registration	YYYYMMDD	
25	DATEEXPORT	Date of Export	YYYYMMDD	
26	KTITLE	Keeper Title	A(10)	May be populated but only if KSNAME is populated

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27	KFNAME	Keeper First Name	A(35)	May be populated but only if KSNAME is populated
28	KSNAME	Keeper Surname	A(35)	A vehicle keeper will have a KSNAME, or a KCNAME or a KONAME or none of these fields will have a value.
29	KCNAME	Keeper Company Name	A(70)	
30	KONAME	Keeper Other Name	A(35)	
31	KADDRS1	Keeper Address 1	A(35)	
32	KADDRS2	Keeper Address 2	A(35)	
33	KADDRS3	Keeper Address 3	A(35)	
34	KADDRS4	Keeper Address 4	A(35)	
35	KTOWN	Keeper Town	A(35)	
36	KPOSTCODE	Keeper Post Code	A(8)	

Formats

YYYYMMDD   Date formatted by year, month and day: 20180305
A(35)   Character data maximum 35 characters in length
N   Numeric data

The file has column headings, but these can be turned off if you ask us.

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Error Codes

Responses can have an error associated with them. When they do, the error code is written to ERRCODE and the error's description to ERRDESC.

KS errors, KS400 for example, are generated by the Valcon KADOE service as it imports the vehicle enquiry. If a KS error is generated, the response, with the error, is written almost immediately. The enquiry is not sent to the DVLA so you will not be charged by them.

E errors, E2200 for example, are generated by the DVLA and you are charged for these as you are ones with vehicle keeper information. Most of the DVLA errors are returned with no vehicle or keeper data, but some, E2200 for example, can contain vehicle data.

| Code	Description
KS400	Duplicate Enquiry – we check for duplicate enquiries by comparing VRM, DOE, ENQUIRYREF, ENQUIRERID, REASONCODE and INTERMEDIARYID.
KS500	Invalid VRM – we check the format of the vehicle registration. We do not check if the vehicle registration exists.
KS501	Invalid enquirer - we check the enquirer id against the one the DVLA issued
KS502	Invalid reason code – we check the reason code on an enquiry against the codes the DVLA issued
KS503	Invalid Intermediary Id - we check the intermediary id against the one the DVLA issued
KS504	Invalid date of event. For most customers, the data of event must be within the last 180 days. There are exceptions to this, but the customer has to be agree the value the DVLA and notify us.
KS506	Invalid Enquiry Reference – please check the characters and length of the enquiry reference you have sent us.
E2200	No trace of the vehicle
E2201	Scrapped marker set – vehicle details provided
E2202	Exported marker set – vehicle details provided
E2203	Void main file record – the DVLA is unable to provide vehicle or vehicle keeper data.
E2204	MOD Record – a Ministry of Defence vehicle
E2205	BFG Record – a British Forces vehicle
E2206	Invalid VRM
E2207	Invalid date of event
E2208	Invalid date of enquiry
E2209	Enquiry is outside of permitted validity period

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Using SSH Keys to authenticate with the gateway

You can authenticate with the gateway using SSH keys instead of a password. To do so, you generate an OpenSSL public key and send it to us to install on the gateway. There are a few ways to generate OpenSSL keys depending on the tools you have and operating system that you use. As an example, we will use the Putty tool which is widely available (https://www.putty.org/)

If you haven't done so, download Putty from their website (https://www.putty.org/) and install it.

Using Putty Key Generator (puttygen.exe)

1 Start Putty Key Generator and ensure RSA key type and 4096 key bits are selected then click the Generate button.
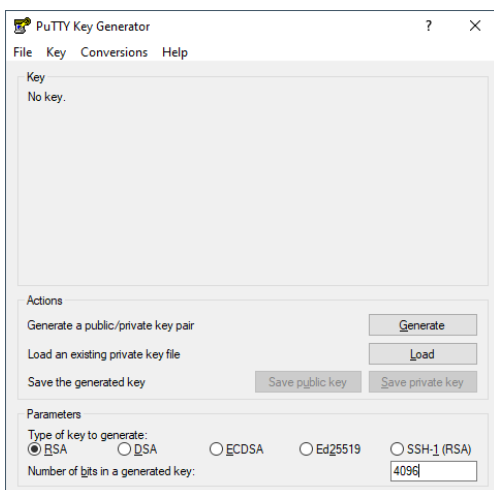
2 Wiggle the mouse about in the blank part of the screen; as you do so, the progress bar will move along as the key is generated. When it is done, the screen will populate
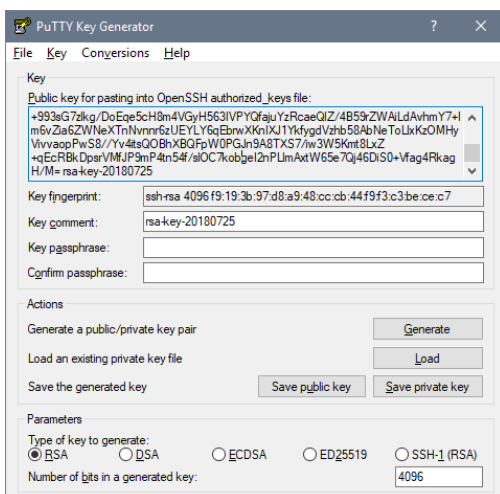
3 Optionally, give your key a passphrase which will be used to protect your keys.

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4 Save the public and private keys

5 Highlight and copy (ctl-c) the contents of the OpenSSL key

Public key for pasting into OpenSSH authorized_keys file:
```
+993sG7zlkg/DoEqe5cH8m4VGyH563IVPYQfajuYzRcaeQIZ/4B59rZWAiLdAvhmY7+I
m6vZia6ZWNeXTnNvnnr6zUEYLY6qEbrwXKnIXJ1YkfygdVzhb58AbNeToLIxKzOMHy
VivvaopPwS8//Yv4itsQOBhXBQFpW0PGJn9A8TXS7/iw3W5Kmt8LxZ
+qEcRBkDpsrVMfJP9mP4tn54f/sIOC7kobgeI2nPLlmAxtW65e7Qj46DiS0+Vfag4Rkaq
H/M= rsa-key-20180725
```

6 Paste the key into a new text file. This is a single line of text which must not be changed. Please make sure you select all of the text: alt-p will do this.

7 Name the text file something identifiable; you could use your party identify or enquirer-id for example, to create a name like aa123-sftp-public.key. Please do not put spaces in your file name.

You will send your Open-SSL public key to us and we will install it onto the gateway. You will then be able to use your username and private key file (on your client) to authenticate with the gateway.

Why would you use a key file rather than a password?

A lot of people find it better to use key files because they do not have to store or share passwords. A lot of companies' security policies insist key files are used.

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