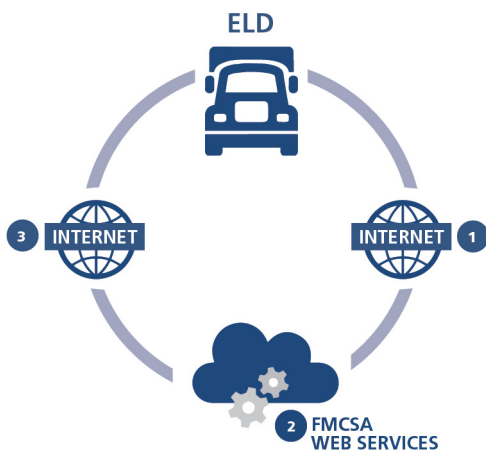


TELEMATICS Web Services (FMCSA's preferred method.)



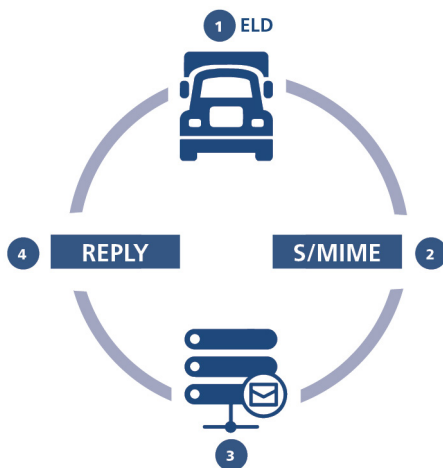
HOW IT WORKS:

- 1 ELD connects to an FMCSA SOAP service and submits:
 - » Client certificate.
 - » ELD data file.
 - » Output file comment.
- 2 FMCSA validates ELD certification status.
- 3 ELD data file is validated.
 - » If no errors are found, it will be passed onto the safety official.
 - » If errors are found, they will be indicated in the SOAP response.

HOW TO TEST:

- » Log into the ELD Provider Portal to obtain service endpoints and download WSDL and ICD/Web Services Development Handbook.
- » ELD submit function will have an optional "test" flag. When set, submissions will not be sent on to safety officials or used by FMCSA for verifying device certification.
- » Certificate validation will be enforced when using the test flag.
- » To enable testing prior to device registration, FMCSA provides:
 - Testing device certificate containing both public and private keys.
 - Sample ELD Identifier.
 - Sample ELD Registration ID.

TELEMATICS Email



HOW IT WORKS:

- 1 Transfer via email to FMCSA's ELD address, available in the ELD Provider Portal.
NOTE: Email transfers should only be used to transfer ELD data via FMCSA's ELD email address, not directly to a safety official.
- 2 Using the S/MIME standard, the email must be encrypted using at a minimum the AES-256 algorithm and FMCSA ELD public key. The message must be signed using the manufacturer's private key.

Email to be composed:

TO: <FMCSA ELD EMAIL ADDRESS>
FROM: <VENDOR ADDRESS FOR SUCCESS/FAIL RESPONSE>
SUBJECT: ELD records from <ELD REGISTRATION ID>:<ELD IDENTIFIER>
BODY: <output file comment provided by safety official>
ATTACHMENT: <ELD output file>

- 3 Once transmitted to FMCSA:
 - » Email will be decrypted.
 - » Signature will be validated using the manufacturer's public key.
 - » ELD file will be validated.
- 4 A reply is sent to "From" address indicating success or providing a list of errors.

HOW TO TEST:

- » See ICD/Web Services Development Handbook for details on the FMCSA ELD email address.
- » Providers should identify test email by prefixing the subject line with the keyword "TEST".

For example:

```
TEST: ELD records from <EL
REGISTRATION ID>:<ELD IDENTIFIER>
```

- » "TEST" submissions will not be sent on to safety officials or used by FMCSA for verifying device certification.
- » Signature will be validated using the ELD registration database.
- » To enable testing prior to device registration, FMCSA provides:
 - Testing device certificate containing both public and private keys.
 - Sample ELD Identifier.
 - Sample ELD Registration ID.
- » ELD Providers can access the safety official view of their successfully submitted test files in the ELD Provider Portal.

NOTE: The submitted email's Message-ID is included in the In-Reply-To header and can be used to tie the reply message to the submitted email.

KEY TERMS:

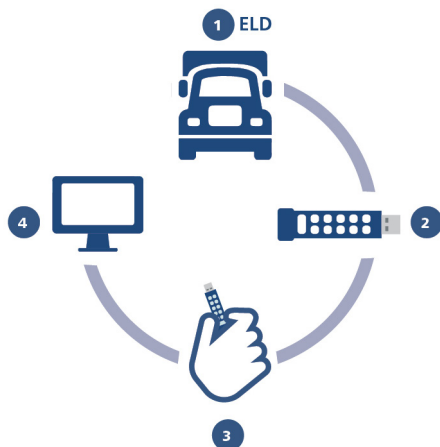
FMCSA ELD public key: Provided by FMCSA during device registration.

Manufacturer private key: Corresponds to manufacturer's public key, which is submitted during device registration.

ELD DATA TRANSFER REQUIREMENTS

LOCAL TRANSFER

USB 2.0



HOW IT WORKS:

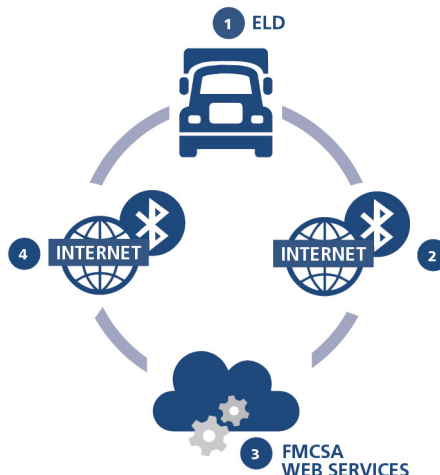
- 1 Safety official connects a hardware-encrypted USB device to the ELD and inputs the device key to decrypt it.
- 2 Driver initiates the ELD transfer of the output file to the USB device.
- 3 Safety official connects USB device to his/her PC.
- 4 ELD file is validated locally using software on the safety official's PC.

HOW TO TEST:

- » Confirm the ELD can transfer data files to various USB devices.
NOTE: FMCSA will only make use of devices that provide a hardware mechanism for device decryption.
- » Use the FMCSA File Validator to confirm the generated ELD file meets the ELD specification.

LOCAL TRANSFER

Bluetooth®



HOW IT WORKS:

- 1 An operational internet connection is made available by enforcement, via Bluetooth, to the ELD. The ELD will use the Internet connection provided by the Bluetooth device to submit the ELD data file via FMCSA Web Services.
NOTE: Bluetooth is not intended to allow direct transfer of the ELD data file to a safety official's device.
- 2 ELD connects to an FMCSA SOAP service and submits:
 - » Client certificate.
 - » ELD data file.
 - » Output file comment.
- 3 FMCSA validates ELD certification status.
- 4 ELD data file is validated.
 - » If no errors are found, it will be passed onto the safety official.
 - » If errors are found, they will be indicated in the SOAP response.

HOW TO TEST:

- » ELD providers should confirm the device can effectively pair with a variety of third-party devices sharing an Internet connection via Bluetooth.
- » Web services testing methods should be used once it is confirmed the device can successfully connect to the Internet.