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CA CERTIFICATE

Registratore Telematico

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2	All	fix description of URL field	25 th March 2019	CR
3	All	Add S/N of printer with new certificate in production	23 rd May 2019	CR
4	All	Updated certificate link to neon.epson-europe.com site. Added EpsonFpWizard and web service fpmate.cgi instructions. Document updated throughout.	4 th Sep 2020	PB
4.1	6 and 14	Updated certificate link to tooshi.sumorize.com site.	7 th Sep 2020	PB

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1. INTRODUCTION

The aim of this document is to explain how to update the CAEntrate.cer certificate for REG TELEMATICO or Server RT clients.

2. ABBREVIATIONS AND TERMINOLOGY DEFINITIONS

AE	Agenzia Entrate (tax authority)
CA	Certificate Authority
RT	Registratore Telematico (telematic till)
SRT	Server Registratore Telematico
URL	Uniform Resource Locator

3. BEFORE STARTING

RT or SRT printers can download the CAEntrate.cer file from a specific URL. As of the date of this document, the default URL in fiscal firmware is as follows but is no longer valid:

- http://content.epson.it/certificati/registratore_telematico/CAEntrate.cer

Please use the following link available from 7th Sep 2020:

- <https://tooshi.sumorize.com/sites/tooshi/files/CAEntrate.cer>

The TCP port for the new link is the standard 443 for HTTPS.

Check that the above URL can be reached from your network where the RT/SRT has been installed. You can use an Internet browser for this.

The following table indicates the first fiscal serial numbers from which the printers have the new certificates already hard-coded in firmware (from April 2019):

99MEX037253	FP-81 II
99MEY030860	FP-90 III

4. CUSTOMISE THE URL USED TO DOWNLOAD THE CERTIFICATE

Epson fiscal firmware includes the following native command that can be used to customise the source URL. You can use any one of the following drivers/methods/tools:

- EpsonFpWizard (see Appendix A)
 - Web service with directIO (see Appendix B)
 - UPOS with Direct IO
 - EpsonFp2 OCX with progCAAECertificateURL method (space padding managed by library)
 - EpsonFpMate for Windows:
 - With Direct IO and progCAAECertificateURL OCX method or
 - "Double" Direct IO and native command
 - Native protocol command
- [H1=9; H2=007 – SET CA CERT \(CERTIFICATE\) URL](#)

Use this command to configure the URL that the printer uses when it receives the 9-008 command or SET 35 key sequence to download the CA cert (CAEntrate.cer) certificate used for TLS 1.2 communication between the RT/SRT printer and the tax authority server.

TX

9	007	CA URL
---	-----	--------

RX

9	007	OP
---	-----	----

Field	Description	Length	Range / Value
CA URL	HTTP or HTTPS URL	256 bytes	Fixed length left justified with spaces
OP	Operator number	2 bytes	01 - 12 Can be ignored. Current operator number which depends on the operator value passed on previous commands.

The following native command that can be used to verify the source URL. You can use any one of the following drivers/methods/tools:

- EpsonFpWizard (see Appendix A)
- Web service with directIO (see Appendix B)
- UPOS with Direct IO
- EpsonFp2 OCX with readCAAECertificateURL method
- EpsonFpMate for Windows:
 - With Direct IO and readCAAECertificateURL OCX method or
 - "Double" Direct IO and native command
- Native protocol command

- **H1=9; H2=207 – READ URL CA CERT (CERTIFICATE)**

Use this command to read the URL from where to download the CA cert (CAEntrate.cer) certificate used for TLS 1.2 communication between the RT/SRT printer and the tax authority server.

TX

9	207
---	-----

RX

9	207	CA URL
---	-----	--------

Field	Description	Length	Range / Value
CA URL	HTTP or HTTPS URL	256 bytes	Fixed length left justified with spaces

5. DOWNLOAD THE CERTIFICATE

Activation of the certificate download is possible in two ways:

1. Keyboard sequence
2. Specific command

5.1. DOWNLOAD THE CLIENT CERTIFICATE VIA THE KEYBOARD

Make sure the RT/SRT printer is in the "STATO REGISTRAZIONE" condition. Enter the following sequence:

- 3333 + CHIAVE + 35

The following message should appear on the customer display:



Press CONTANTE and enter the password 1973 as follows:



Press G to begin the RT/SRT certificate download from the URL previously indicated.

In case of Error, the display will show the "DATI INESISTENTI" (non-existent data) message.

If successful, the following message is displayed:



Press CHIAVE to return the printer to the "STATO REGISTRAZIONE" condition.

5.2. DOWNLOAD THE CLIENT CERTIFICATE VIA COMMAND

Send the following command to the RT/SRT printer. You can use any one of the following drivers/methods/tools:

- EpsonFpWizard (see Appendix A)
- Web service with directIO (see Appendix B)
- UPOS with Direct IO
- EpsonFp2 OCX with downloadCAAECertificate method
- EpsonFpMate for Windows:
 - With Direct IO and downloadCAAECertificate OCX method or
 - "Double" Direct IO and native command
- Native protocol command
- **H1=9; H2=008 – DOWNLOAD CA CERT (CERTIFICATE)**

Upon receiving the command, the RT proceeds to download the CA Cert (Caentrate.cer) certificate using the URL programmed in the above 9007 command.

TX

9	008	PSW
---	-----	-----

RX

9	008	OP
---	-----	----

Field	Description	Length	Range / Value
PSW	Security code password	4 bytes	1973 (fixed value)
OP	Operator number	2 bytes	01 - 12 Can be ignored. Current operator number which depends on the operator value passed on previous commands.

In case of password error, code 16 "NON PREVISTO" (not foreseen) is returned.

In case of other error, code 12 "DATI INESISTENTI" (non-existent data) is returned.

6. CHECK THE RESULT

Open your Internet browser and input the following URL:

- http://xxx.xxx.xxx.xxx/printer_status/get_rt_status.html

The following web page should appear. Check the expiry date (Scadenza Cert. CA AE). It must be 2038. The old one was 2021.

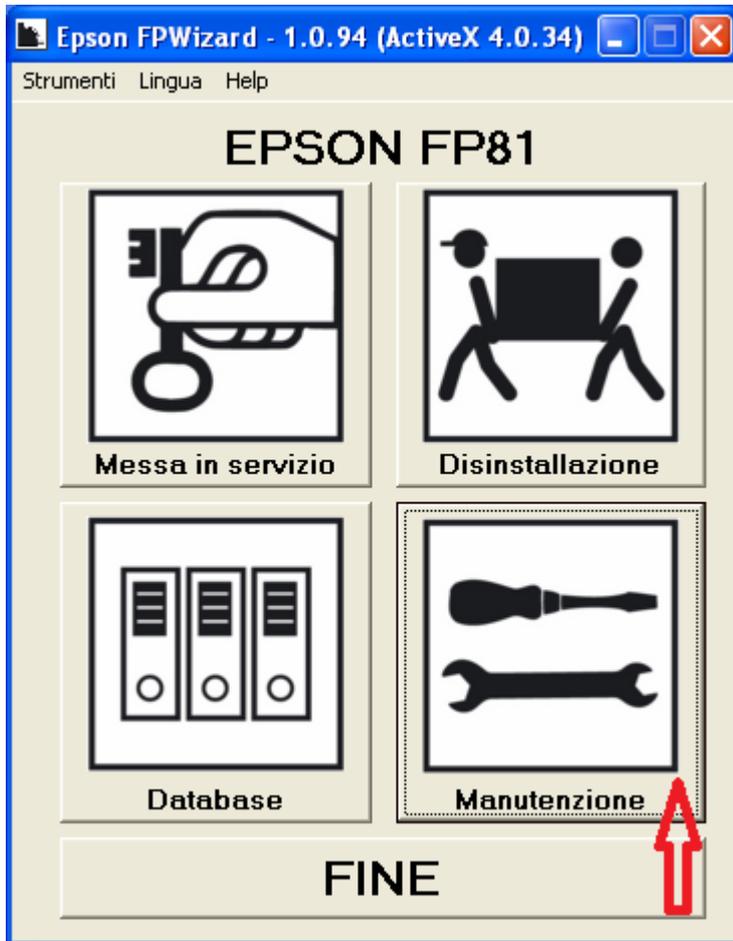
Stato RT

Tipo Dispositivo RT	Server RT	Numero File > XX Giorni	0 (SET 15/25 = 003)
Stato Main	02	Numero File Rifiutati	40
Stato Sub	08	Scadenza Cert. Dispositivo	21/06/2021
Stato RT Attuale	In Servizio	Scadenza Cert. CA AE	<u>11/01/2038</u>
Day Opened	0 (False)	Modalità Training Demo Simulatore	0
Periodo Inattivo	False		
Numero File Da Inviare	0		

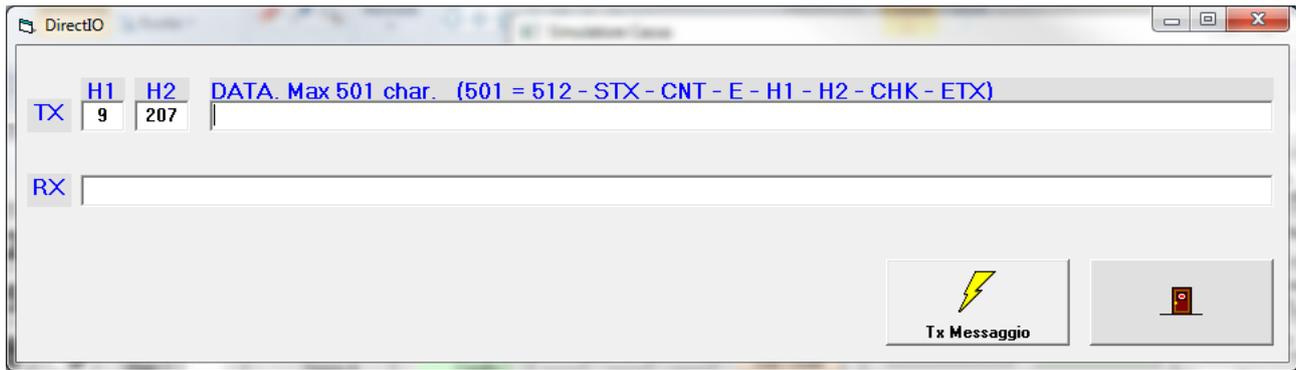
7 APPENDIX A – EPSONFPWIZARD

The following steps can be used.

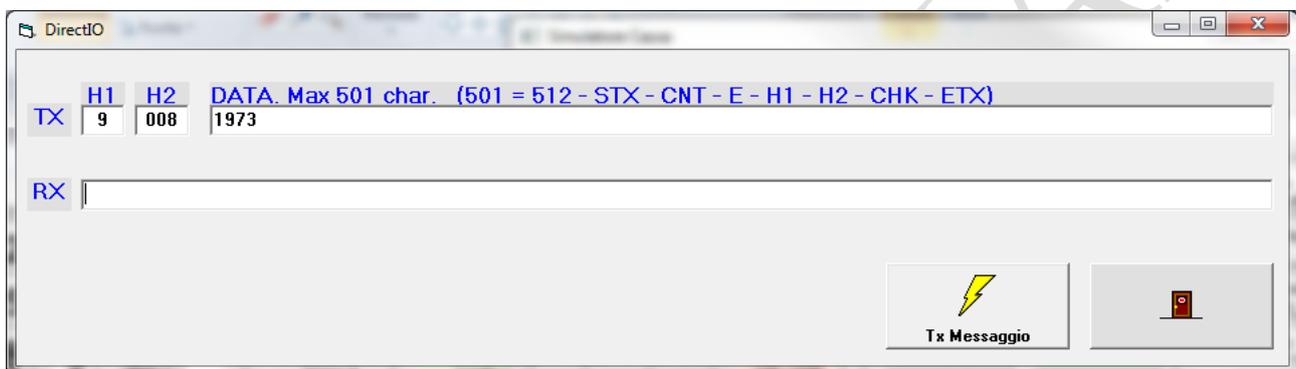
1. Open the Direct IO form:



3. Set H1 to 9 and H2 to 207 to verify URL:



4. Set H1 to 9, H2 to 008 and DATA to 1973. No spaces are necessary:



8 APPENDIX B – WEB SERVICE FPMATE.CGI

The following XML file can be used to both set the URL and activate the download:

```
<printerCommands>
  <directIO command="9007" data="https://tooshi.sumorize.com/sites/tooshi/files/CAEntrate.cer"
  " comment="URL with spaces" />
  <directIO command="9008" data="1973" comment="CAEntrate.cer download activation"/>
</printerCommands>
```

The following XML file can be used to read the URL:

```
<printerCommand>
  <directIO command="9207" data="" comment="Read CAEntrate.cer URL" />
</printerCommand>
```