

## eFive 25 Installation Guide



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This short guide explains how to install the eFive 25 Firewall and to get started with the embedded configuration web site.

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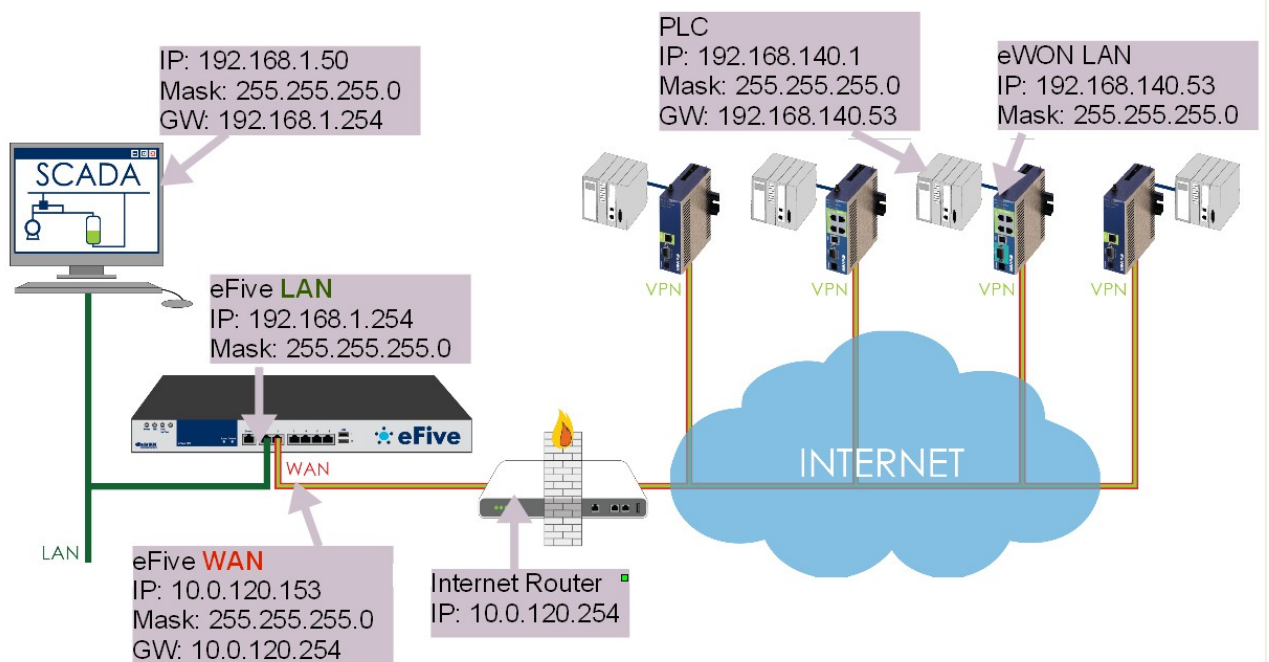
## 1. What is eFive 25 ?

This Installation Guide describes the hardware and software installation of the VPN server platform eFive 25.

eFive 25 is a compact fanless hardware platform featuring a Virtual Private Network (VPN) gateway with OpenVPN. It has been designed to be a perfect match with the eWON range to build a VPN network. The eFive 25 acts as OpenVPN Server and the eWONs as OpenVPN Clients.

The model eFive 25 is designed to support up to 50 VPN clients. For larger configurations there is the eFive 100 (see IG-013-0-EN).

The objective is to connect for example a SCADA PC to the PLC devices behind the eWON. The SCADA PC makes part of the LAN network of the eFive and has the eFive as default Gateway. When the VPN connection is established between the eWON and the eFive, the eFive routes the requests from the SCADA to the network behind the eWON. An example of typical IP address configuration is given in the picture below. The System and VPN configuration to reach this objective are described in the user guide AUG-050-0-EN (eFive system and VPN configuration). This guide is available on the eWON support site <http://wiki.ewon.biz/efive>.



## 2. Compliance

The current versions of product certificates for the eFive are available from our Support site: [http://wiki.ewon.biz/Support/07\\_Documentations/Official\\_documents](http://wiki.ewon.biz/Support/07_Documentations/Official_documents)

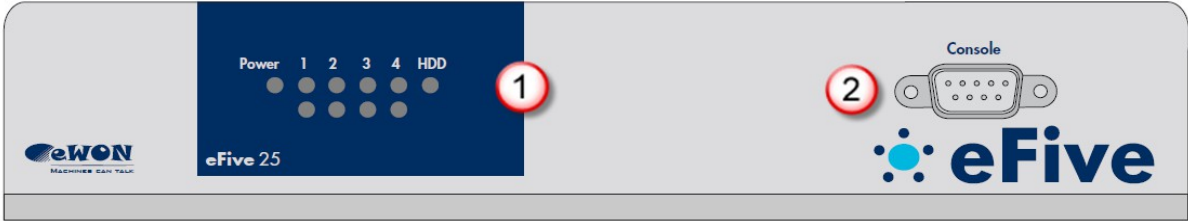
### 3. Hardware description


#### 3.1 Package contents

1	The eFive 25 VPN server hardware platform x 1
2	DC power adapter 12V 5A x 1
3	Power cords (1 x NEMA 5-15p + 1 x CEE 7/7 France/Germany)
4	Plastic adhesive stands x 4 ( <i>small adhesive stands to affix on the bottom of the unit</i> )
5	Quick start guide
6	Serial cable for terminal emulator (see <a href="#">Appendix 1 - Serial Console Access</a> )

#### 3.2 Housing interfaces

##### 3.2.1 Front Panel



<b>1</b>	<p><u>LED panel</u></p> <ul style="list-style-type: none"> <li>Power LED – ON when the appliance is ON.</li> <li>1 to 4 LED pairs – Activity on Network ports 1 to 4</li> </ul> <table border="0"> <tr> <td style="padding-right: 20px;"><b>Top LED</b></td> <td><b>Transfer rate indication (double color)</b></td> </tr> <tr> <td>OFF</td> <td>10Mbps</td> </tr> <tr> <td>GREEN</td> <td>100Mbps</td> </tr> <tr> <td>AMBER</td> <td>1000Mbps</td> </tr> <tr> <td><b>Bottom LED</b></td> <td><b>Activity LED (orange single color)</b></td> </tr> <tr> <td>OFF</td> <td>No connection (or appliance OFF)</td> </tr> <tr> <td>ORANGE flashing</td> <td>Activity</td> </tr> </table> <ul style="list-style-type: none"> <li>HDD LED – ON when reading/writing on the solid state drive (SSD)</li> </ul>		<b>Top LED</b>	<b>Transfer rate indication (double color)</b>	OFF	10Mbps	GREEN	100Mbps	AMBER	1000Mbps	<b>Bottom LED</b>	<b>Activity LED (orange single color)</b>	OFF	No connection (or appliance OFF)	ORANGE flashing	Activity																
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<b>2</b>	<p><u>Console port</u> - DB9 connector to fit RS-232-cable. Interface for reset to factory settings. Connection through terminal emulator (see <a href="#">Appendix 1 - Serial Console Access</a>)</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 15%;"></th> <th style="width: 15%;">Pin #</th> <th style="width: 70%;">RS232</th> </tr> </thead> <tbody> <tr><td></td><td>1</td><td>-</td></tr> <tr><td></td><td>2</td><td>RXD</td></tr> <tr><td></td><td>3</td><td>TXD</td></tr> <tr><td></td><td>4</td><td>-</td></tr> <tr><td></td><td>5</td><td>GND</td></tr> <tr><td></td><td>6</td><td>-</td></tr> <tr><td></td><td>7</td><td>RTS</td></tr> <tr><td></td><td>8</td><td>CTS</td></tr> <tr><td></td><td>9</td><td>-</td></tr> </tbody> </table> <div style="text-align: center;">  <p>COM port 1 <u>Default settings:</u> Rate 115200 Parity 8, n, 1 Flow control: None</p> </div>			Pin #	RS232		1	-		2	RXD		3	TXD		4	-		5	GND		6	-		7	RTS		8	CTS		9	-
		Pin #	RS232																													
	1	-																														
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	4	-																														
	5	GND																														
	6	-																														
	7	RTS																														
	8	CTS																														
	9	-																														

##### 3.2.2 Back panel

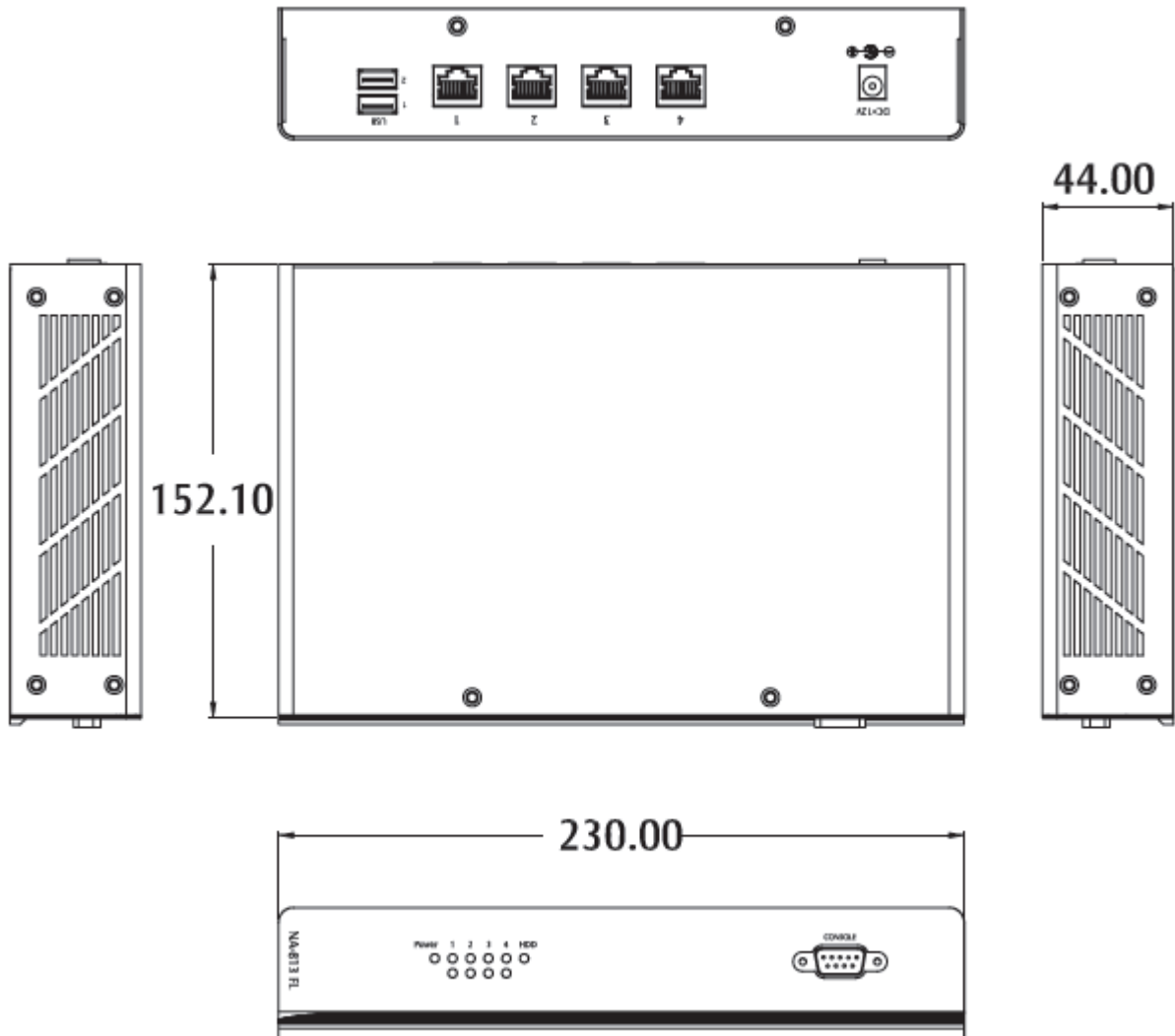
<b>1</b>	Ethernet <b>Port 1</b> - LAN (green)	<b>Left side LED - Activity LED (orange single color)</b> OFF = No connection (or appliance OFF) ORANGE flashing = Activity <b>Right side LED - Transfer rate indication (double color)</b> OFF        10Mbps GREEN     100Mbps AMBER     1000Mbps
<b>2</b>	Ethernet <b>Port 2</b> - WAN (red)	
<b>3</b>	Ethernet <b>Port 3</b> - DMZ (orange)	
<b>4</b>	Ethernet <b>Port 4</b> – WLAN (Blue)	
<b>5</b>	12V/5A power input	
<b>6</b>	USB Ports (2) for mouse/keyboard connection	

### 3.3 Markings

The identification label of the eFive 25 is placed on the bottom plate of the housing. The different parts of the label are shown below:

<b>1</b>	Type:	<b>eFive 25</b>	<b>1</b>	Device type
<b>2</b>	Serial number:	<b>1237-0314-04</b>	<b>2</b>	Serial number 1237 = year+week 0314 = sequential number 04 = product code
<b>3</b>	Part number:	<b>E510101_00UK</b>	<b>3</b>	Commercial part number
<b>4</b>	HW version:	<b>V1.00</b>	<b>4</b>	Hardware version

### 3.4 Mechanical outline



All dimensions are in millimeters.

## 4. Software configuration

### 4.1 Factory default IP settings

Default LAN IP address (on Port 1)	10.0.0.153
Corresponding Subnet Mask	255.255.255.0

### 4.2 Network interface configuration

#### 4.2.1 Selecting the appropriate IP ranges

Configuring the VPN server is simple. However, you need to pay attention to the different IP ranges of the involved networks. The IP range of the LAN-side needs to be different than the one on the WAN-side. Check with the network administrator whether the planned WAN range is compliant with the current IT-policy. For more information about the different networks used by the eFive, please see the eFive User Guide, AUG-050-0-EN which is available from the eWON Support website <http://wiki.ewon.biz/efive>.

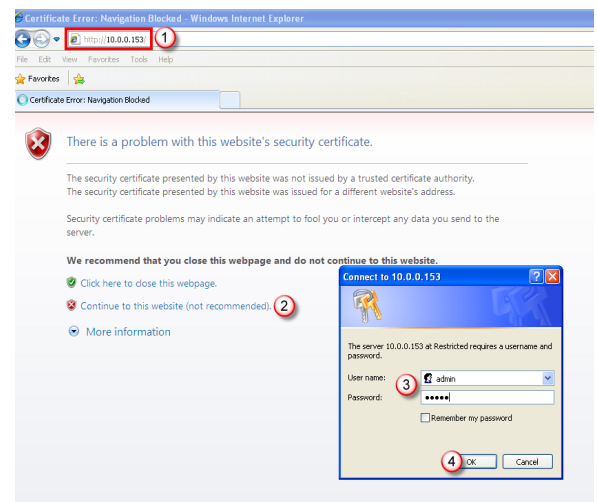
#### 4.2.2 First connection

Connect your PC with the LAN-port of your eFive (Port 1 - green). Make sure that your PC is having an IP address that is compatible with the default LAN IP address of the eFive. Open your browser and type the default address 10.0.0.153 in the URL field. Hit Enter. You can discard the security warning as shown. The eFive redirects this address to <https://10.0.0.153:8443/>

Enter the default username and password.

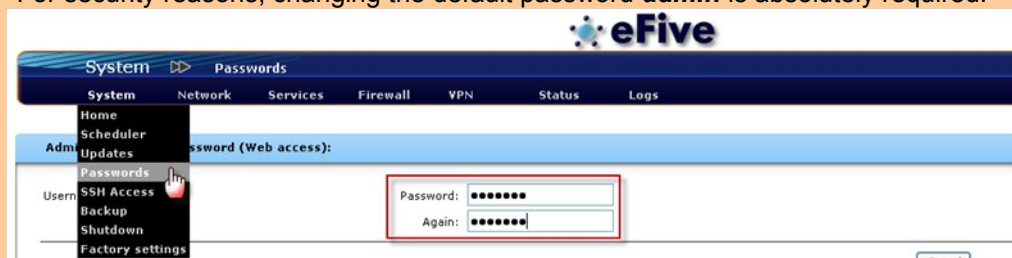
Default username: admin

Default password: admin



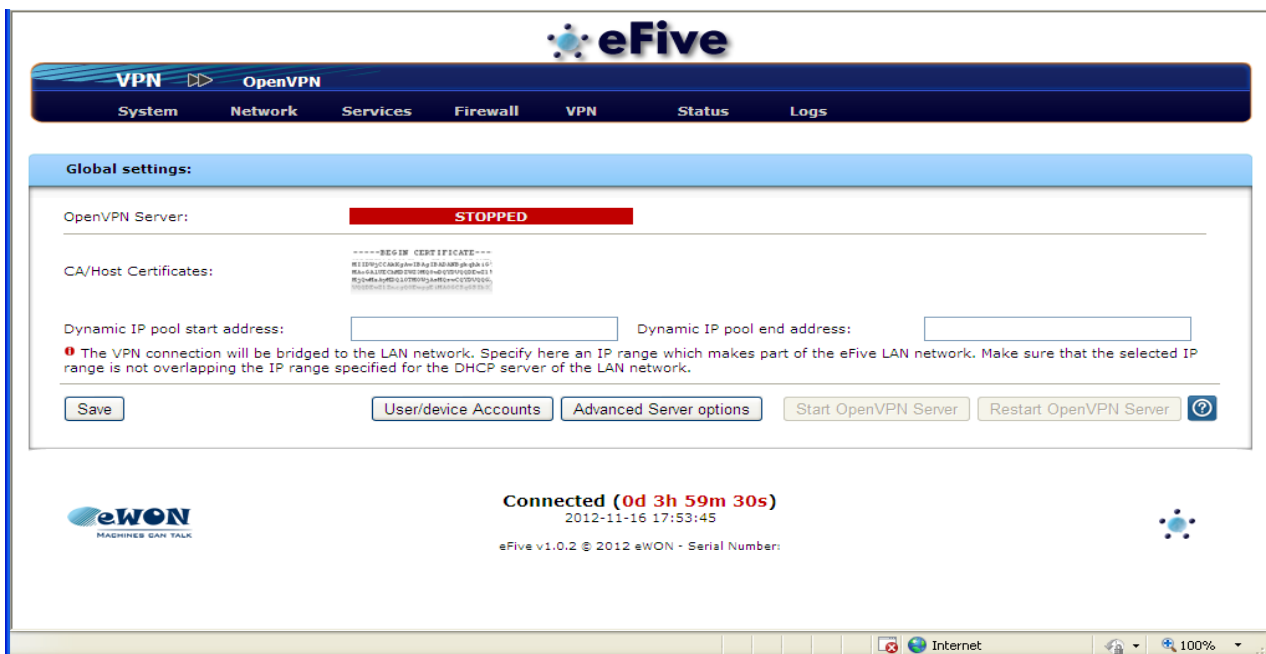
### Warning!

For security reasons, changing the default password **admin** is absolutely required.



To change the **admin** password, from the menu bar, click on **System, Passwords**. Enter the new password twice and click **Save**.

The home page of the eFive opens.



### 4.2.3 Setting the LAN IP (green) address

Click **Network**, **Interfaces** from the main menu.



The interfaces window opens.



**eFive**

**Network** >> **Interfaces**

System   Network   Services   Firewall   VPN   Status   Logs

**Interfaces**

**General settings:**

Hostname:

Domainname:

DNS1:

DNS2:

Default gateway:

**lan - trusted internal network segment**

IP address:

Network mask:

**wan - untrusted internet network segment**

Interface type:

IP address:

Network mask:

**dmz - network segment for servers accessible from internet**

IP address:

Network mask:

**wlan - network segment for servers accessible fro WIFI**

IP address:

Network mask:

In the LAN section, replace the default address and Network mask by the one you want to use.

#### 4.2.4 Setting the WAN (red) address

There are no default settings on the WAN side. Depending on the requirements, you can configure the WAN port to acquire a dynamic address automatically (DHCP enabled) or with a fixed IP address and network mask. The WAN/DMZ and VPN configuration are described in the software document AUG-050-0-EN (eFive – Client configuration & device access).

## 5. General specifications of eFive 25

Mechanical/Power/Environmental	
Form factor	Compact fanless appliance
Dimensions	44mm (1.73") (H) x 230mm (9.05") (W) x 152.1mm (5.98") (D)
Weight	2.5kg (5.51 lb)
Power supply	AC/DC power adapter, Input 100-240VAC 1A typ. 2A max. Output 12V 5A
Operation temperature	0°C ~ 40°C (32°F ~ 104°F)
Storage temperature	-20°C ~ 70°C (-4°F ~ 158°F)
Relative Humidity	0 to 95% non condensing
Interfaces	
Ethernet interfaces	4 x 10/100/1000Mbps Ethernet ports on RJ45
Serial interface	1 x RS232 Serial-port on DB9 for console connection
USB interfaces	2 x USB ports

**NOTE:** All specifications and images are subject to change without notice.

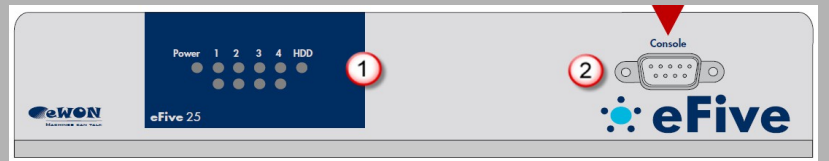
## Appendix 1 - Serial Console Access

The VPN server platform eFive 100 features a serial port allowing to connect a terminal console. This access is a useful rescue solution when it appears impossible to connect with the Ethernet interface. This happens i.e. when the IP configuration is uncertain or unknown, when the admin password is lost.

1. To make this connection, use the serial cable delivered with the unit. This black cable has a DB9 termination on one end and an RJ45 termination on the other end.



2. Connect the RJ45 side in connector 2 as shown and the DB9-side to the serial COM port of your PC.



3. On your PC, open a terminal application like HyperTerminal or PuTTY ([www.putty.org](http://www.putty.org)).

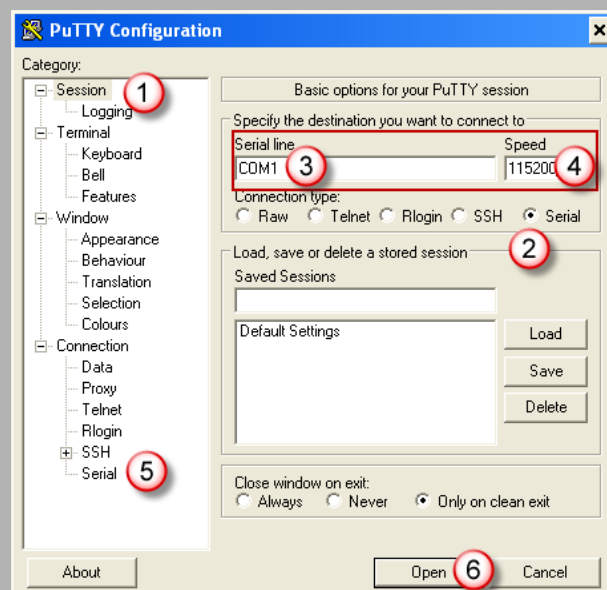
Configure the terminal application to open a serial (2) session on:

- COM-port used (3)
- @ 115200 bps (4)

Check the Serial (5) parameters to be

- 8, n, 1
- Flow Control: None

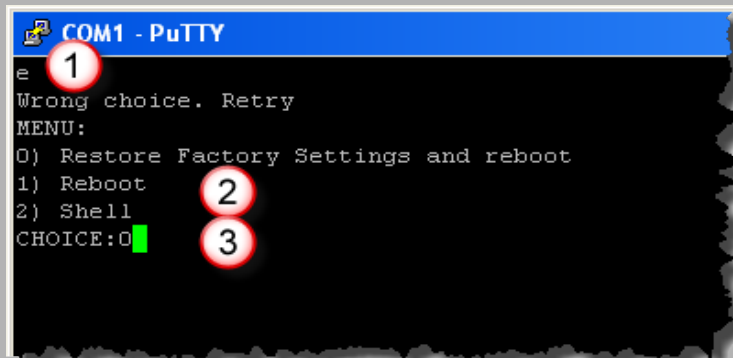
Click Open (6)



4.  
Type any character and hit [enter] (1) the eFive returns a Menu (2).

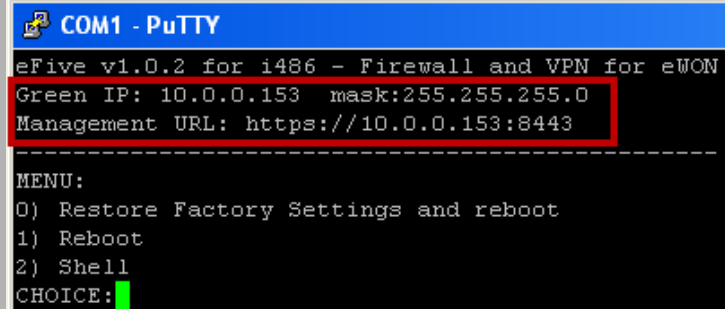
Select an option (3) depending on what you want to do.

To **display the current IP configuration** without resetting the unit, select option 1 (Reboot). After reboot, the IP configuration appears in as header in the terminal interface.



```
COM1 - PuTTY
e
Wrong choice. Retry
MENU:
0) Restore Factory Settings and reboot
1) Reboot
2) Shell
CHOICE:0
```

5.  
To **reset the unit to its factory settings** (IP 10.0.0.153 and the admin password to admin) type 0 and hit [enter]. Wait for the reboot to complete (takes some time).



```
COM1 - PuTTY
eFive v1.0.2 for i486 - Firewall and VPN for eWON
Green IP: 10.0.0.153 mask:255.255.255.0
Management URL: https://10.0.0.153:8443
-----
MENU:
0) Restore Factory Settings and reboot
1) Reboot
2) Shell
CHOICE:
```

Revision history

<b>Revision Level</b>	<b>Date</b>	<b>Description</b>
1.0	10/01/12	Initial release
1.1	12/12/12	Add serial emulation cable + port parameters + power cords
1.2	14/06/13	Add Serial Console Access
1.3	09/05/14	eFive 25 supports up to 50 VPN Clients eFive 100 supports up to 200 VPN Clients

i

Document build number: 64

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