Operative Manual about WEB Switcher installation to be experimented at Antarctica Concordia Base Station

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1 - Introduction

The Concordia staff people had some problems with the Panasonic CF 30 Notebook Computer devoted to the acquisition of microwaves signals during the winter season 2009.

This Notebook computer is inside the box radomex, on a tower, at 15 meter of hight from the Antarctic ice..

In this season exit to check and restart the notebook personal computer Panasonic CF 30 could be extremely heavy and dangerous for the technical staff of Concordia Antarctic base.

We are planning an alternative method to shutdown the Personal Notebook to avoid at the people to exit from Concordia base during the winter season.

Object of this report is to describe the procedure of ONLINE web switcher installation and the procedure planned to restart the Notebook Personal computer from a severe problem.

Fig. 1 - Radomex installation on the US tower. The Panasonic CF30 Laptop is inside the box of Radomex

2 - Scheme of the Web Switcher installation

The scheme in Figure 2 shows the correct installation of online web switcher device and the installation of Sitecom Network Switch, these devices must be installed in the radomex box.
The plug of the Panasonic CF30 must be plugged in socket called Slave 1 or 2. The socket called master is not controlled by Web Switcher and is always ON
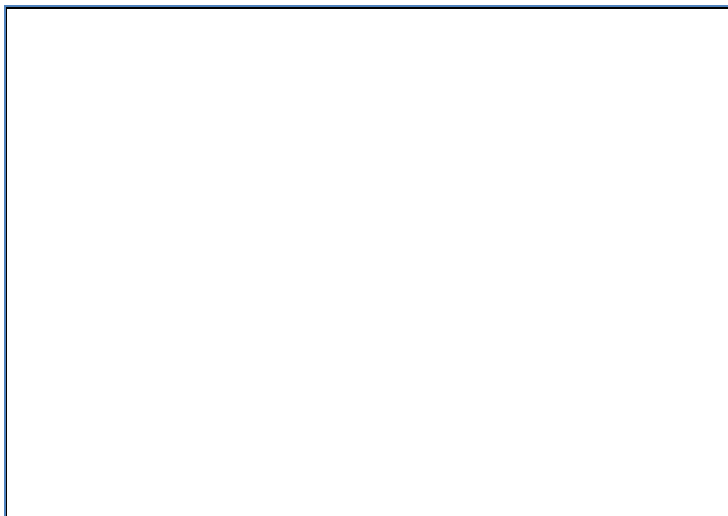

Fig. 2 - Web Switcher installation scheme

2 - The software installation of the Online Web Switcher

Online Web Switcher permits the remote control of power energy of multiple devices.

The web switcher has a web server on board that associated at an IP number permits the control of the energy power points.

1) First of all a fixed ip number must be set on online web switcher the correct subnet mask also must be set (in the example the static ip 149.139.33.125 was provided)
2) The web switcher can be programmed using a web browser, the little web server on it will reply on number 80 port.
3) The Web server on Online Web Switcher Will reply at your request showing the welcome screen, after you have to provide Login "admin" and Password "admin" to enter in the programming and using menu of the device.
4) If you click on Network you can go on Network mask were you provide ip number, name of the device (i.e. "ciabatta") and ip mask.
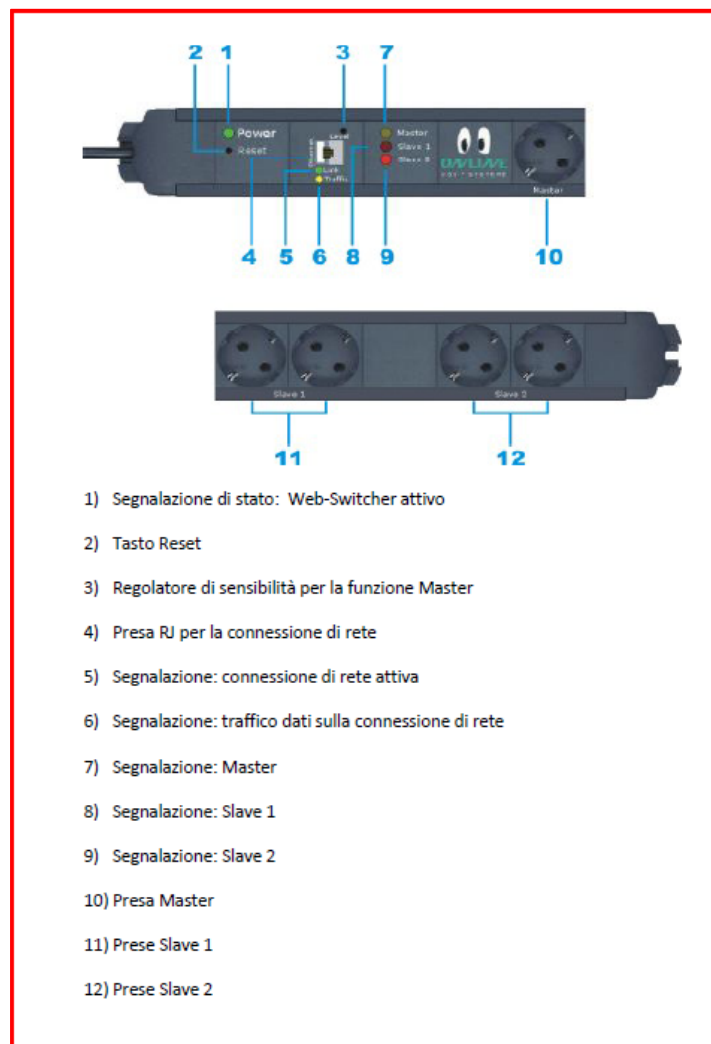5) Only the acquisition computer Panasonic CF30 must be powered by Online Web Switcher slave 1 socket.

1) Segnalazione di stato: Web-Switcher attivo

2) Tasto Reset

3) Regolatore di sensibilità per la funzione Master

4) Presa RJ per la connessione di rete

5) Segnalazione: connessione di rete attiva

6) Segnalazione: traffico dati sulla connessione di rete

7) Segnalazione: Master

8) Segnalazione: Slave 1

9) Segnalazione: Slave 2

10) Presa Master

11) Prese Slave 1

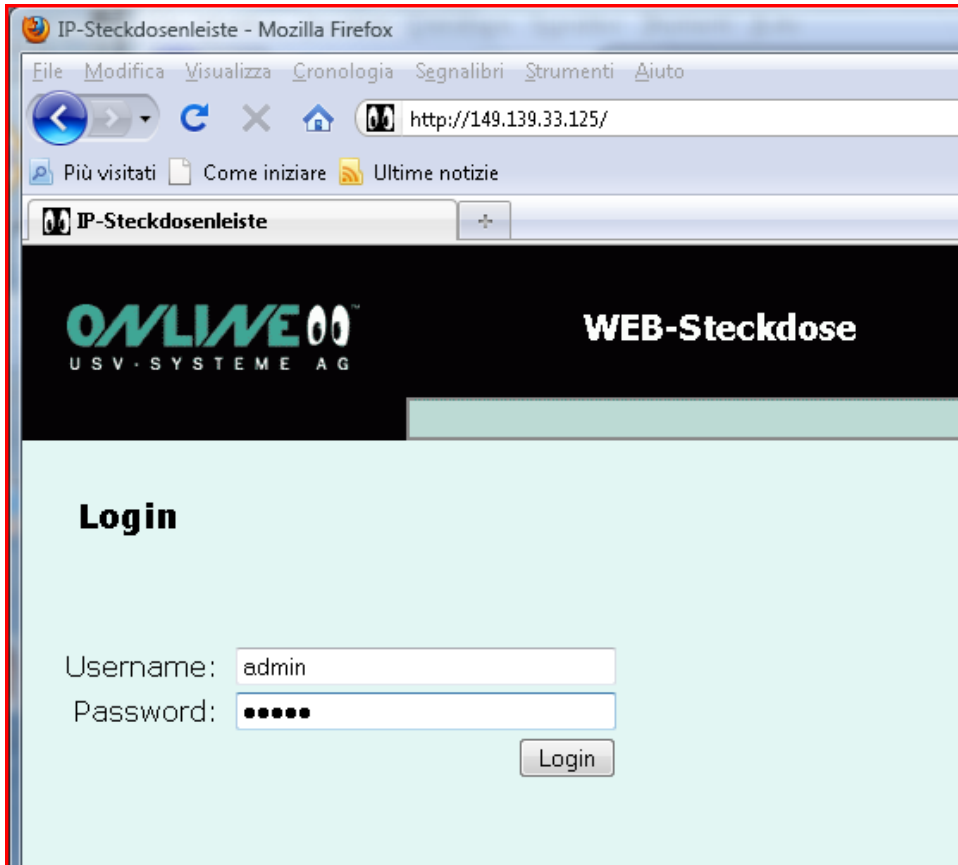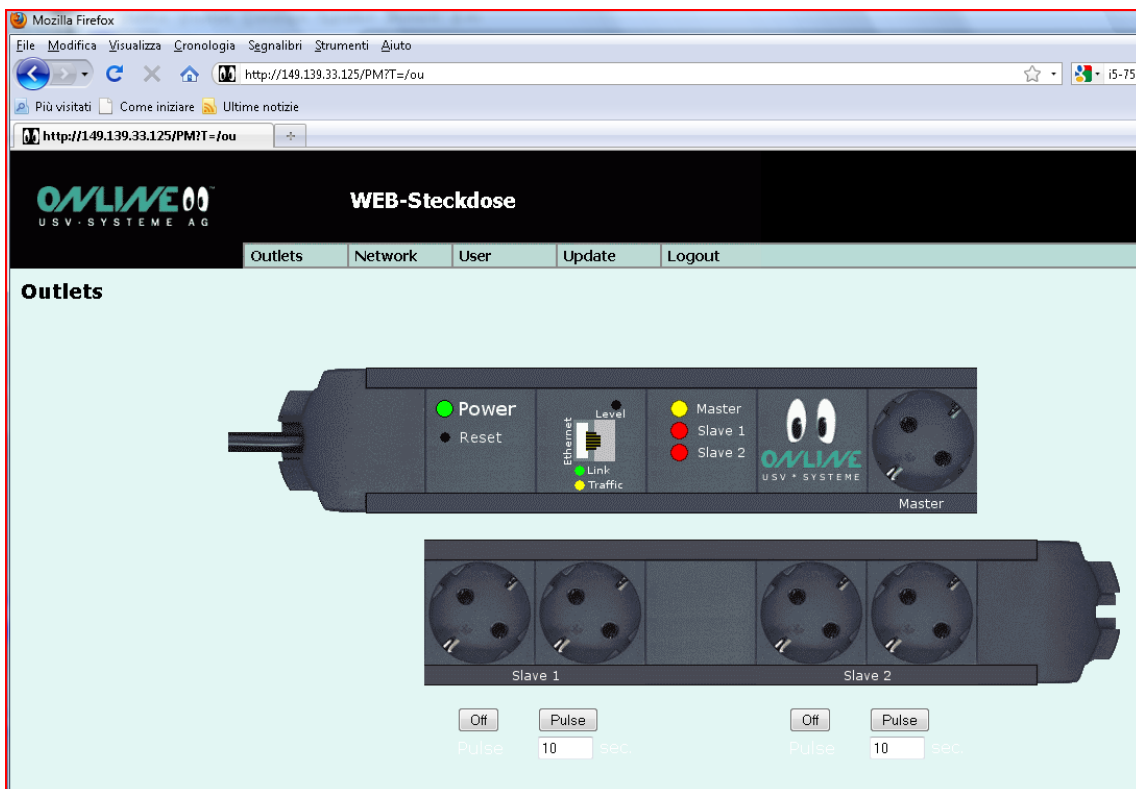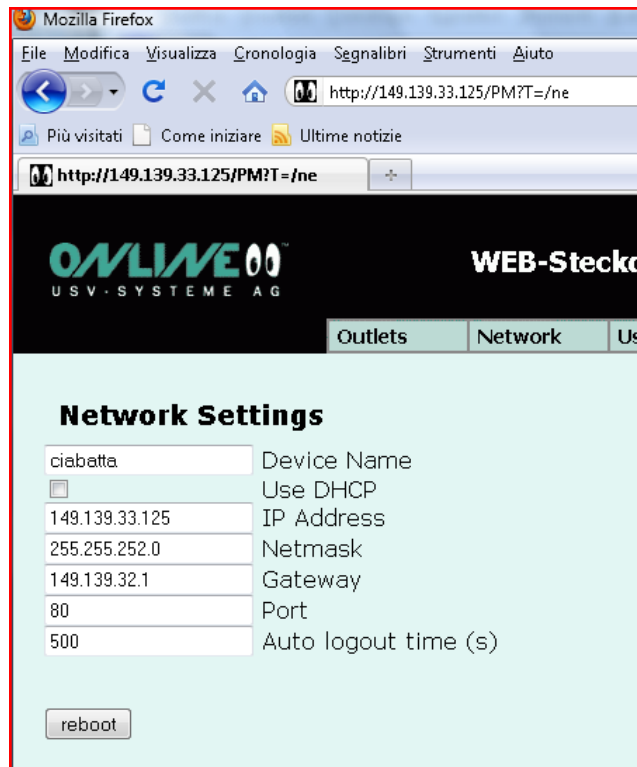12) Prese Slave 2

Fig. 3 - Web Switcher details

Fig. 4 - The picture with the welcome screen

3 - Setting the Panasonic CF 30 Notebook

This computer has the wake up on line facility that you can set on or off by BIOS menu.

We need to disable the suspend functionality and hibernation facility and to substitute them with the shutdown command, this will be possible triggering the power saving procedure of the Windows Xp system procedure.
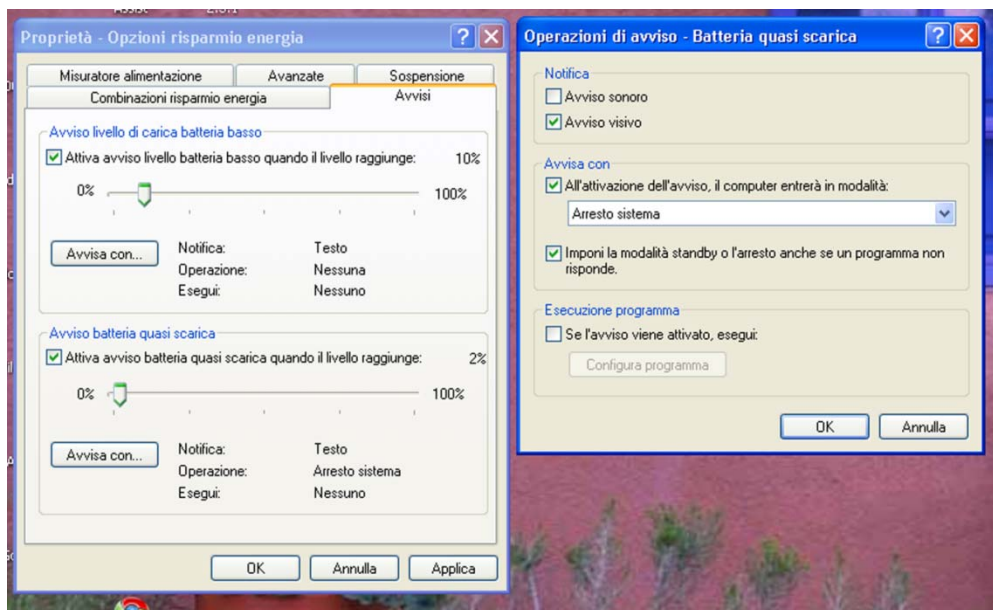

Fig. 5 - The power saving boxes in a laptop computer with Windows XP system

Some experiences in laboratory with an analogue Laptop Computer given us the following data and values:
with the setting the level at 50% of the battery, in the power saving application of Windows XP, the Notebook can start the shutdown procedure so that the Ethernet card is powered by Battery of Notebook for about 1 day (in this way we have the power to sustains Ethernet card so that Wol, wake up on line can start again after the shutdown of the computer).

4 - The Sitecom switching

This is a normal network switch we need it to connect the Personal Computer Panasonic and to the Web switcher sockets..
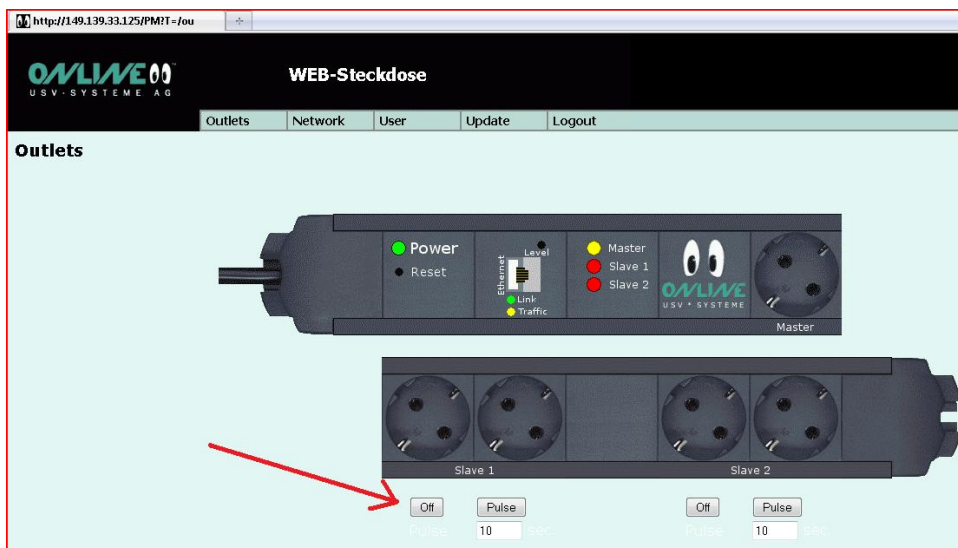
4.1 - Procedure to follow in case of failure of Personal Computer Panasonic

When you experience some problems on the Panasonic CF30 (failure to answer ping or failure on WOL utility), you can try using this procedure.
The following procedure has to be activated ONLY in case of failure or indeterminate problems (crash of the Notebook Panasonic CF30) with the acquisition system.
This is an Emergency procedure that has the primary scope to switch off the computer and shutdown it from the remote station.
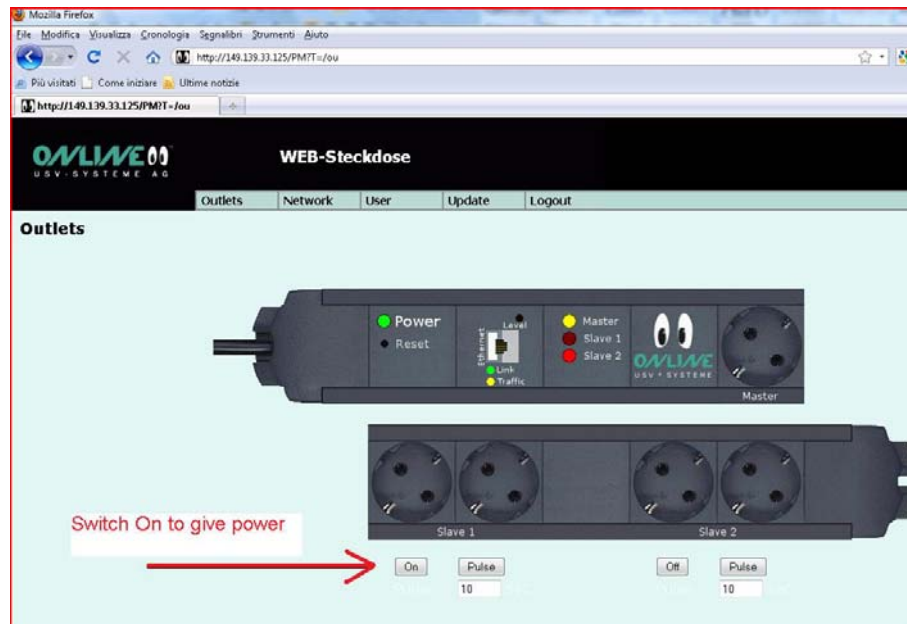
1. Log on the Web switcher plug (user:admin password:admin).
2. Toggle the button off (see the arrow) so that the power has shutdown.

3. After 6 or 7 hours the power saving level will reach the value that you have settled (I suggest a percentage of 45% or 50%) and the computer will shut down following your setting.
4. **After 8 -9 hours** you need to open again the power circuit with the Web Switcher. So log again in the Web Switcher server and toggle again the button on to give the power to the web switcher sockets.
   PLEASE DON'T LEAVE WITHOUT POWER ENERGY THE NOTEBOOK MORE THAN 24 HOURS BECAUSE YOU RISK THAT THE PERSONAL NOTEBOOK HAS TO BE RESTARTED MANUALLY.

   This is due because the Ethernet card for wake up on line use the battery of notebook so that when the level of battery will reach 0 it will be impossible to start it by Wol procedure.

5. After that you have give the power to the Personal Computer Panasonic CF30 you can try to wake up the CF30 using the usually Wake Up On line Utility called WOL 1.0.3.
    In this way the Personal Computer should restart normally opening the normal services at the starting (Symantec Pc Anywhere and the other software services that normally starts om the laptop personal computer)

Bibliography

Technical manual in Italian language of Web switcher

http://www.online-ups.it/download/web-switcher.pdf