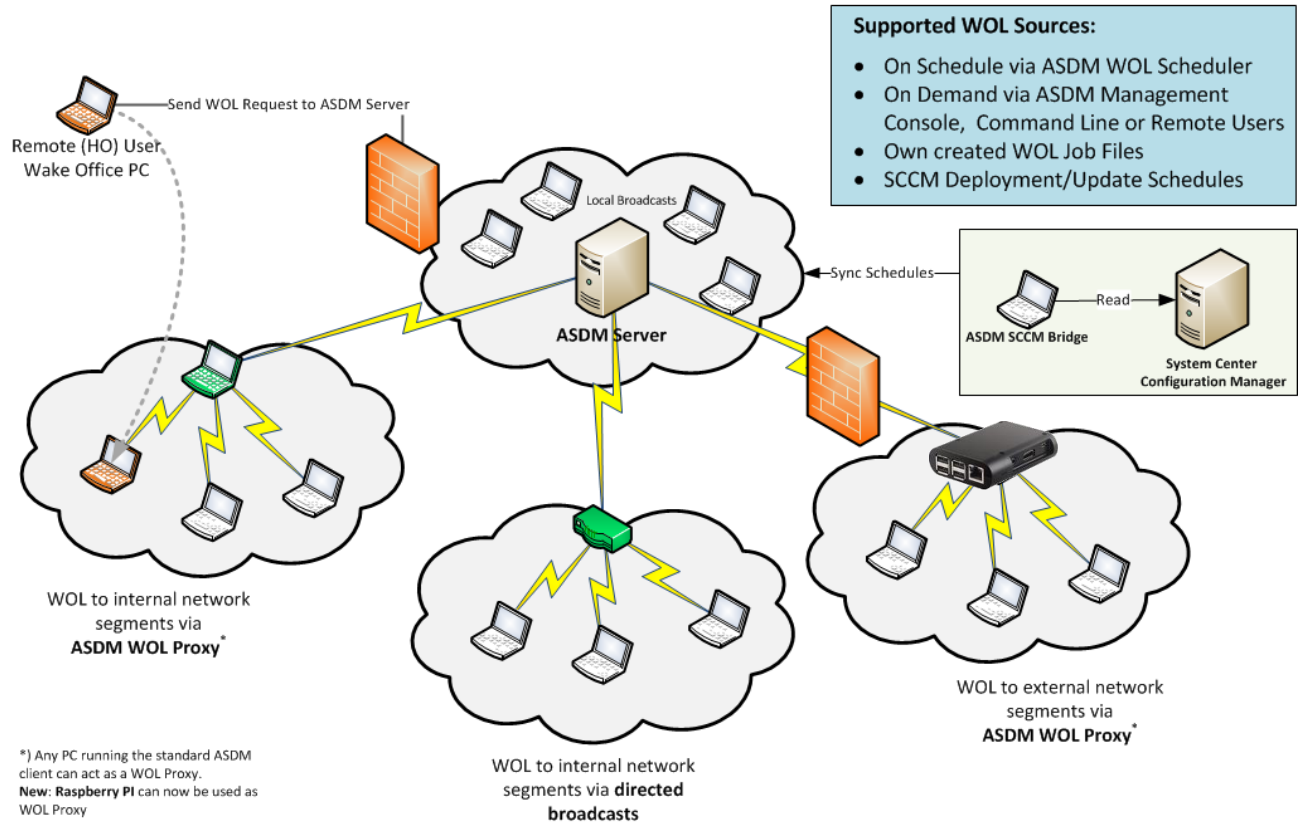
Using Raspberry Pi® as Auto Shutdown Manager WOL Proxy

Auto Shutdown Manager Server supports Wake On LAN (WOL) into remote networks by using so called directed broadcasts or WOL Proxies. Because of the security issues directed broadcasts potentially have, WOL proxies are the technology of choice in almost all scenarios when it comes to wake remote computers located outside of the local network.

Every computer that runs the Auto Shutdown Manager client can be used as a WOL proxy. In many cases, small 24/7 running PCs or local servers can do the job on remote locations.

However, if there isn't such a server or PC that runs 24/7, you now can use one of the affordable and low power consuming Raspberry Pi®devices.

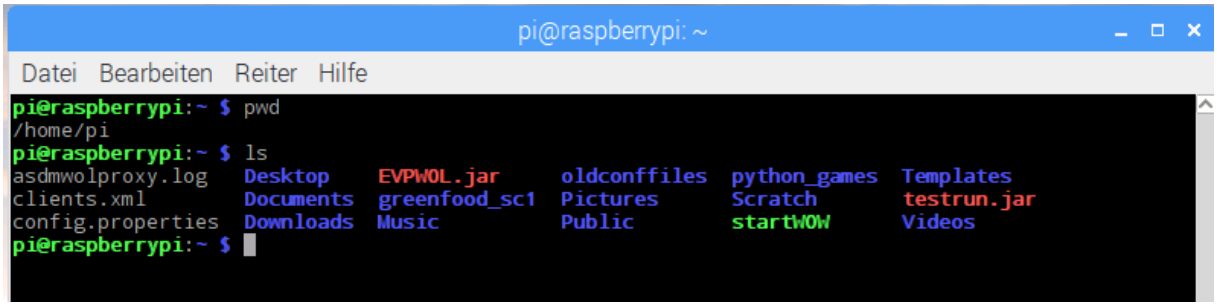
Auto Shutdown Manager Server Wake on Lan concepts



How to use it:

First of all, please make sure that your Raspberry Pi is up to date and that the java version installed is 1.8 or newer (Java 8):

As next, copy the file called EVPWOL.jar into any folder you wish. We're using the */home/pi* folder for this demo:



The proxy can be executed using:

`/usr/bin/java –jar /home/pi/EVPWOL.jar` *`servername port`*

Servername is the DNS name or IP address of your Auto Shutdown Manager server and *port* stands for the TCP port that you're using on your Auto Shutdown Manager server.

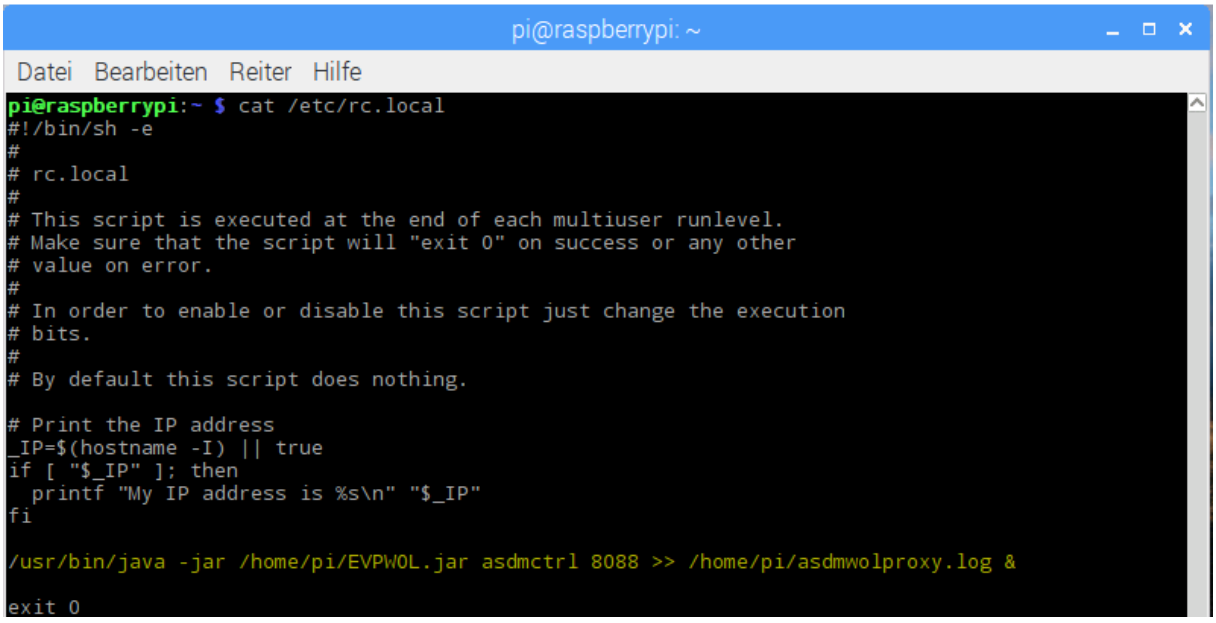
By default, the proxy is using "asdmctrl" as the servername and 8088 for the tcp port. If you'd like to use the defaults please make sure that asdmctrl is defined in /etc/hosts or as an alias in your DNS.

Auto start the WOL proxy on boot:

Some systems use the SysVinit System (using the rc.local file), some other use Systemd to execute scripts, daemons or applications during the boot phase.

1) Using the /etc/rc.local file

There are many ways to automatically start a software during the boot phase of the device. In this demo we use the file called /etc/rc.local:



Add the command: **`/usr/bin/java -jar /home/pi/EVPWOL.jar asdmctrl 8088 &`** to start the proxy.

Optionally add "**`>> /home/asdmwolproxy.log`**" to generate a log file in case there are some problems or errors while the proxy is starting or running. *** Important: don't forget the **&** at the end in any case ***

2) Using Systemd

Store the driver EVPWOL.jar in any folder you wish, like your home folder /home/pi/EVPWOL.jar

Navigate to /etc/systemd/system/

Create a file called evpwol.service: ***sudo nano evpwol.service***

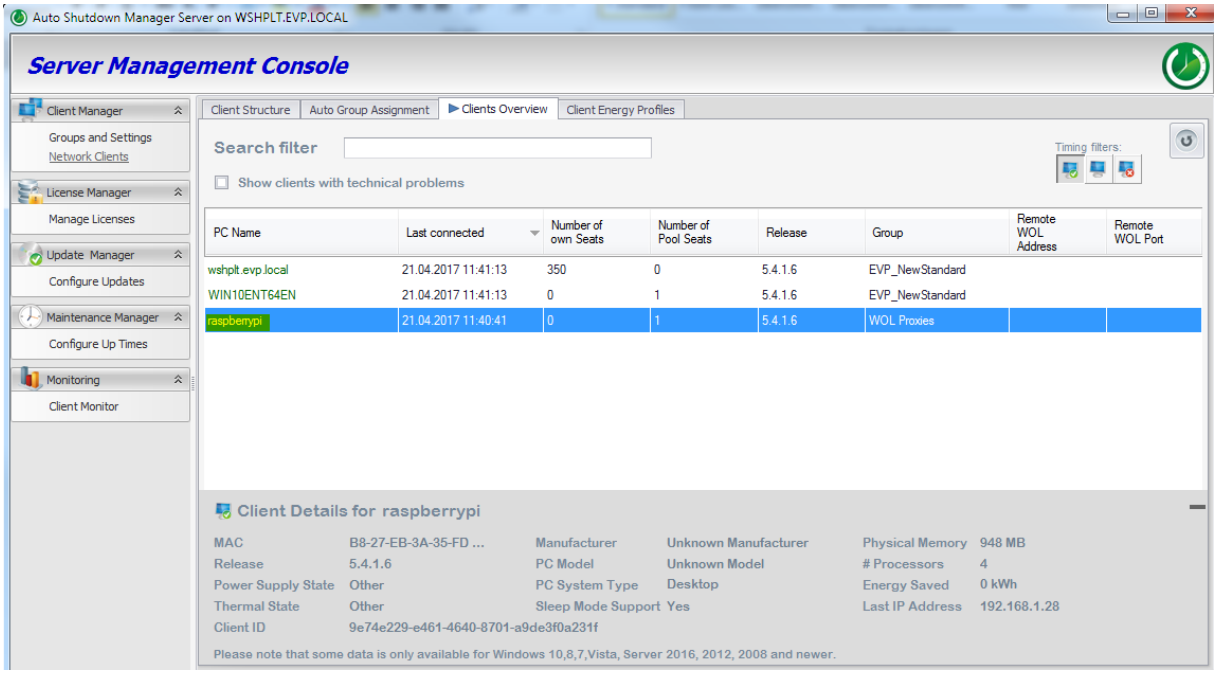
Add this content: Please note that "asdmctrl" stands for the Auto Shutdown Manager server address and 8088 is the default TCP

```
[Unit]
Description=Job that runs the EnviProt WOL Proxy daemon

[Service]
ExecStart=/usr/bin/java -jar /home/pi/EVPWOL.jar asdmctrl 8088 &

[Install]
WantedBy=multi-user.target
```

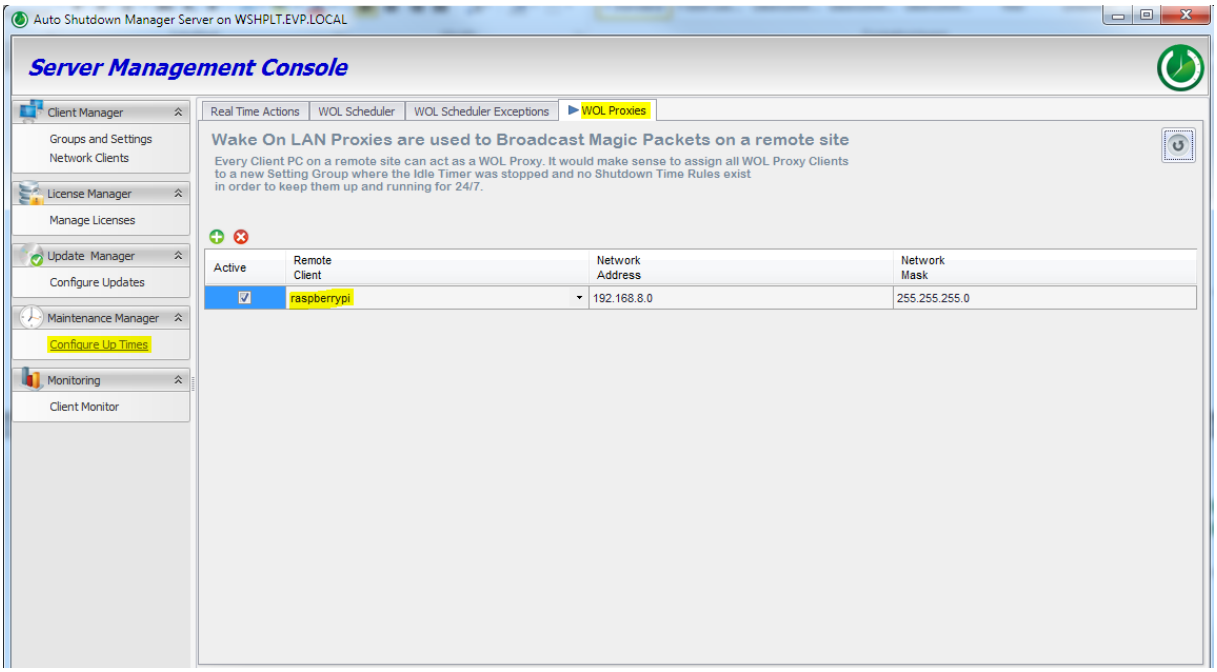
Now you can immediately start this service:
sudo systemctl start evpwol

AND don't forget to enable it to run at boot:
sudo systemctl enable evpwol

If everything went well, then you'll be able to see the Raspberry Pi device as a client in your Auto Shutdown Manager server console:



Finally, you can select it to act as a WOL proxy for the network segment it belongs to. In this demo the Raspberry Pi will be the WOL Proxy for the entire class C network 192.168.8.0.



Download:

You can download the software and this description at:
https://www.enviprot.com/Software/JavaWOL.zip

Final note:

This software is currently a Proof Of Concept and still under development. It is provided as is. Because it is developed in Java, it may also run on other devices than the Raspberry Pi – but there aren't any tests made so far on our side other than on Ubuntu 18.10.

We would be very pleased to receive your comments, recommendations or bug reports. Please send them to support@enviprot.com with a subject JavaWOL or Raspberry.