

# ORCA on Sugar - Installation guide – version 0.1

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This guide shows the necessary steps for installing the opensource ORCA screen reader and accessibility suite on Sugar, build 767 (the version of sugar used by plan Ceibal in March 2009).

This document is intended as a reference for the Ceibal staff at LATU, Montevideo, Uruguay, but can be useful for people trying to install this suite on XO laptops all around the world.

Some steps could be simplified, please feel free to contribute and/or translate it into other languages.

## ***Step one: install required packages***

First, we need to open up the terminal activity and type:

```
$ su
# init 3
```

to switch to console mode only (this frees memory and gives more stability to the process, as we need to download a lot of packages). You can now login as root by simply pressing ENTER (yes, that's insecure, but my 767 build came with this configuration).

As direct installation of ORCA through YUM should fail for an error in the libglade2 version check, we need to get an updated version of it:

```
# yum --enablerepo=* install libglade2
```

If this doesn't work, try downloading the rpm directly from a mirror. This one worked for me:

```
# wget ftp://ftp.pbone.net/mirror/download.fedora.redhat.com/pub/
fedora/linux/updates/9/i386.newkey/libglade2-2.6.2-6.fc9.i386.rpm
# rpm -Uvh libglade2-2.6.2-6.fc9.i386.rpm
```

Now we can install the orca package. Note that this will also download a lot of dependencies which we would never want on sugar. I don't really know if there is a way to tell yum we don't want gnome themes and other stuff to be on our system.

```
# yum install orca
```

We're done, now we need to reboot to make it work in Sugar:

```
# reboot
```

## ***Step two: add required packages which are not listed as dependencies***

Unfortunately, installing ORCA in this distribution doesn't provide all required packages (I suppose that some of them are normally present in any Gnome based distribution). As we are not gnome users, we need to install/update some more packages.

```
# yum install gnome-python2-gnome pyorbit gnome-python2-bonobo
gnome-terminal gnome-speech gnome-speech-espeak gnome-speech-
```

```
festival
```

That's it. Now ORCA can be run using this command:

```
$ orca -n &
```

### **Step three: install Festival Text-to-Speech and enable it**

Sugar comes with eSpeak, which is a lightweight, open source speech synthesis system. Some voices are very bad. We can use Festival instead, which has a better Spanish voice.

First, we need to enable OSS emulation for the ALSA sound system. We can do it by simply loading a kernel module:

```
# modprobe snd-pcm-oss
```

Then we need to install Festival and configure it:

```
# yum install festival
```

To get the Spanish voice working we have to download it separately as a tar.gz archive and configure the program to use it.

```
$ cd /home/olpc
$ wget
http://festvox.org/packed/festival/1.95/festvox\_ellpc11k.tar.gz
$ su
# cd /usr/share
# tar -xvf /home/olpc/festvox_ellpc11k.tar.gz
```

We can now enable Festival with spanish voice from the ORCA preference pane. I put velocity to 66 to make it sound a bit more vivid :)

**Optional:** If you want spanish (or any other voice) to be you Festival default, open the file `/usr/share/festival/lib/voices.scm` using your favorite editor and find these lines:

```
(defvar default-voice-priority-list
  '(   kal_diphone
  ...
```

Put `el_diphone` at the beginning of this list.

We can now test Festival by typing something like this in the terminal:

```
$ echo "¡hola, niños del mundo!" | festival --tts
```

### **Step four: enabling voice in Firefox**

To enable voice in Firefox we only need to download this activity from

<http://wiki.laptop.org/go/Firefox>, then we can follow the instructions in [http://firevox.clcworld.net/installation\\_linux\\_orca.html](http://firevox.clcworld.net/installation_linux_orca.html) starting from point 3.

### ***Step five: installing other voicing applications***

The ORCA project website at <http://live.gnome.org/Orca> shows a list of applications working well with the ORCA engine. Unfortunately they are not Sugar Activities, but we can still use them on an XO laptop.

Try installing a text editor:

```
# yum install gedit
```

To start it we need to use the Terminal Activity, unless someone writes an activity package for it. I didn't try anything else by now.