



## Ceros Trixbox Update to 2.0

### 1.0 Overview

The Rhino Ceros comes with Trixbox 1.2.X loaded. This application note walks the user through updating the Ceros to the newest Trixbox 2.0 system.

The process overview is:

- 1) backup all zaptel and zapata configuration files
- 2) perform the Trixbox update script
- 3) load any Rhino drivers (modules) that may not have successfully ported
- 4) validate that the configuration files are still intact and correct
- 5) test

**NOTE: THIS IS NOT A GURANTEED PROCESS. WHILE THIS APPLICATION NOTE WAS WRITTEN WHILE PERFORMING THE UPDATE, TROUBLE COULD HAPPEN. RHINO IS NOT TRIXBOX, AND WE CANNOT GURANTEE SUCCESS! UNFORTUNATELY THERE IS NO GOING BACK!**

**PLEASE ALSO NOTE THAT YOUR SYSTEM SHOULD BE CONFIGURED AND WORKING WITH THE OLDER VERSION OF TRIXBOX BEFORE ATTEMPTING THIS UPGRADE.**

Of course we will do our best to help you out if there is trouble!

### 2.0 Update Process

This process assumes that you can either get to a CentOS (Linux) command line prompt on the Ceros system itself using a monitor and keyboard, or a SSH session. What you will type at the keyboard will be shown in *italics* text.

You **MUST** be connected to the internet for this to work!

**2.1** Login as *root*, password is *rhino*.

**2.2** Backup both *zaptel.conf* and *zapata.conf*

Type at the command line prompt:

```
cp /etc/zaptel.conf/etc/zaptel.conf.backupto2  
cp /etc/asterisk/zaptata.conf/etc/asterisk/zapata.conf.backupto2
```



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this will copy both zaptel and zapata configuration files to backupto2 file extensions. If all goes well, these files will not be needed. It is always better to be safe than sorry.

**2.3** Perform the Trixbox update using the provided Trixbox script.

*trixbox-update.sh*

answer

y (as in Yes, just type the single character)

to the request to store the new file to disk.

Run the update script again, this time with the update parameter at the end of the line.

*trixbox-update.sh update* (note the additional update this time at the end)

This will now go out and get the new data from the Trixbox server. Allow this to complete, note that there is a note to go to the FreePBX web site to update that module, you can do that if you wish later. We will not be covering that in this application note.

**2.4** Reboot the system when the script tells you to, and all screen activity is completed.

*reboot*

The system will reboot and should come back to the normal login screen. If you are running a SSH session, allow the system to boot and reconnect remotely.

**2.5** If you have the following cards installed, there should be no issues with the system, it should be back to operating condition at this time. The following Rhino cards are supported directly by Trixbox 2.0, hopefully all Rhino cards will be supported in the near future:

**r4fxo r1t1 r2t1 r4t1**

**r4fxo** uses the r4fxo module

**r1t1** uses the r1t1 module

**r2t1** uses the rxt1 module

**r4t1** uses the rxt1 module

BUT...to make this process cleaner, and this is optional, you should disable the drivers that are not being used, something our Linux heritage says that we should do!



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Edit the `/etc/sysconfig/zaptel` file to NOT load the unnecessary drivers:

```
nano -w /etc/sysconfig/zaptel
```

Yes, that is a `-w` in the command line, that is to disable word wrap when editing this file, which can cause lots of problems.

Note that there are many `MODULES =` lines in this file. Add a comment character, which is the `#`, to the beginning of all entries that are NOT needed in your installation. If you have any Digium cards in the system, then you will have at least one uncommented line. If you have all Rhino cards, then you can comment out all of them. Go ahead and put `#` in front of the ones that are not needed.

When done, use the key sequence *Ctrl-o*, answer *y*, and then quit with *Ctrl-x*.

If you do not have a R8FXX, R24FXX, R24FXO or R24FXS card in your system, then you can reboot the system now and test! If you do have one of these cards, go onto the next section.

**2.6** As of this writing, the following Rhino cards do not upgrade automatically!

```
r8fxx uses the rcbfx module (not included with Trixbox 2.0)
r24fxx uses the rcbfx module (not included with Trixbox 2.0)
r24fxx uses the rcbfx module (not included with Trixbox 2.0)
r24fxo uses the rcbfx module (not included with Trixbox 2.0)
```

Luckily, here at Rhino we decided to combine all of our analog boards into one driver, the `rcbfx`, so if you have any of these cards, a simple one step process is needed.

Edit the `/etc/sysconfig/Zaptel` file to load the `rxbfx` driver at boot time:

```
nano -w /etc/sysconfig/zaptel
```

Yes, that is a `-w` in the command line, that is to disable word wrap when editing this file, which can cause lots of problems.

Add the following line at the END of this file:

```
MODULES="$MODULES rcbfx"
```

Pay close attention to this format, make sure that the line is exactly like the above, at the end of the file! When done, use the key sequence *Ctrl-o*, answer *y*, and then quit with *Ctrl-x*.



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Reboot the system, and when it comes back up, test!

*reboot*

### 3.0 Interesting Troubleshooting Tips

The one issue that may arise is how the modules load when Linux boots, which is everything when it comes to how Zaptel and Zapata handle the channel ordering. Trixbox 2.0 will load the native Rhino drivers first, that is, the R4FXO card and the others that are now natively supported.

If you have to load any of the Rhino boards that need the rcbfx driver along with another Rhino card, then it is possible that your channel ordering will be off, and you will have to hand edit Zaptel and Zapata configuration files

To see the order of the loading, use the following to peek at the installed hardware.

*cat /proc/zaptel/1*

where the 1 at the end can be replaced with 2, 3, etc. to see all of the installed cards. If they are not in the expected order, it will be necessary to edit both Zaptel files.

*nano /etc/zaptel.conf*

*nano /etc/asterisk/zapata.conf*

And remember that you have backup files there in case you mess that up from the very first step we took!

\*\*\* END OF DOCUMENT \*\*\*