Using “FX Teleport” to cross the 32bit barrier on PC

by Piotr Musiał

Note: This tutorial was made using Cubase 4 Studio

Hi. My name is Piotr Musiał and I welcome you to my next tutorial!

OK, let's say you just got yourself a new monster PC with a Quad Core CPU, 8GB of RAM, lots of fast drives and all that cool stuff. You think, your problems with memory and power limits are gone forever, and that you'll finally have all the resources to simply compose and not worry about computer stuff. Well think again.

With Windows XP Pro - still most popular in composer's DAWs, Cubase, and most sequencers out there - you are still limited to use 3.5GB of RAM. And don't think that your 32bit sequencer will use all the 3.5GB ;)

The 32bit system limits each application to use 1.4GB of RAM, which means, that even when you have 8GB of RAM, even though your Win XP sees 3.5GB, you can still only load 1.4GB into your sequencer. With /3GB switch (google it), the limit goes up to (theoretically) 3GB's, but again, above 2.4GB your 32bit sequencer (such as Cubase), will become unstable. This is something well known to users of large sample libraries such as EWQLSO Platinum Pro XP. Cubase 4 is still not fully functional under 64bit OS (unfortunately only Vista 64 will be supported in the future), so loading large templates solely into Cubase seems impossible at this point.

Under 64bit Windows XP Pro, if your hardware supports it, Cubase can theoretically load the full 4GB, which for example, for me, means about 3GB, before it most likely become unstable.

Did I mention 64 Windows XP Pro is free to try for 120days? It's downloadable here:
http://www.microsoft.com/windowsxp/64bit/evaluation/trial_old.mspx

Anyway, 2.4GB to 3GB is still not a big difference; definitively not something worth changing your OS. Although maybe you'll get better results yourself. Check it out!

Now, what I'm going to show you was first inspired by forumers posts at SoundsOnline-Forums.com, especially LEX's, who mentioned this technique once or twice.

I'm going to show you how to exceed that damn 3GB barrier, and be able to load more samples into your favorite template.

STEP 1
PREPAIRING YOUR OS

First of all, let's install Windows XP x64 on a different partition to your main system. Installer will automatically create a boot-menu, so you'll be able to pick the system you want to run. Install proper 64-bit drivers and your favorite software. Don't forget to install the latest updates… most of the time, they don't do much hurt ;).

I'm not saying you cannot do this on Vista 64 bit. I'm simply, not sure whether all this stuff will work with Vista or not :) If you already have it up and running, feel free to try!

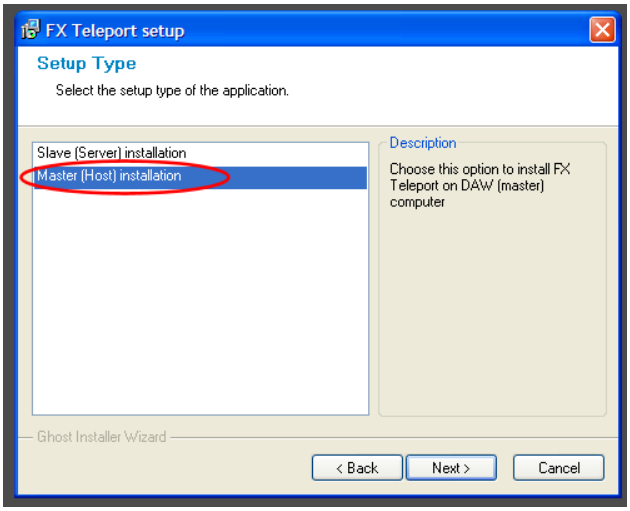
STEP 2
FX TELEPORT

FX Teleport is a very cool small application. A DAW networking software, designed to allow you to use multiple slave PC's under command of a main host machine. Basically, what you can do with it is open a VSTi (such as PLAY or Kontakt) on a slave machine remotely from your host machine, and use it as if it was there in your sequencer. All the MIDI and audio routing is done via LAN cable.

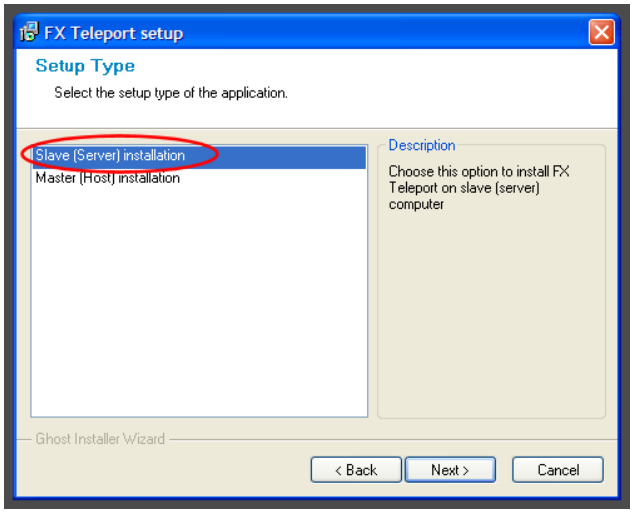
Even if you already knew that, you probably didn't know that you can actually install both FX Teleport Host *AND* Slave on your main machine and use it as if your PC was both Host and Slave.

Let's download a 14-day trial from FX Teleport website:
http://www.fx-max.com/fxt/download.html

Now, let's install FX Teleport Host. Run the installer and pick „Master (Host) Installation”:



And now, on the same machine (could even be the same folder), run the same installer again and pick „Slave (Server) installation”.

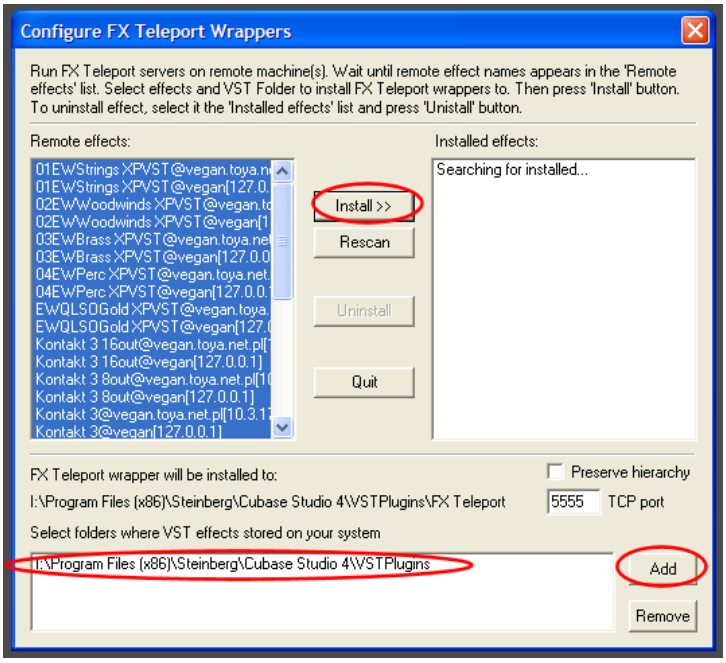


Both will probably run instantly after they are installed, if they don't please run "Start Server" and "Install Effects" from your FX Teleport folder (or Start Menu).

PART 3
INSTALLING WRAPPERS

"Install Effects" application is a simple program, installing our VST Instruments as wrappers, so they are visible for FX Teleport Server and can be used "remotely".

Let's add our VST Plugins path, and let the application rescan it. After it's done, let's click on "Install" and wait for results. Now, our VST Plugins are ready to run with FXT Server.



STEP 4
LOADING INSTRUMENTS IN CUBASE 4

As you can see in your VST Instruments window of Cubase, Install Effects has created a directory in our VST Plugin list, named "FX Teleport". Inside, you can find all of your VSTi's. What now?

First, make sure you are running FX Teleport Server. If not, run "Start Server" from your 'FX Teleport' folder. Now, click to open one of FX Teleport-ed instruments, as if they were normal plugins. Let's say, we pick Kontakt 3, and load couple of patches from EWQLSO Platinum Pro.

When first run, "remote" plugins will check and set a proper latency for FXT, but don't worry about that too much, just click OK and let it do its job ;) Now, as you can see on Windows Task Manager, it's "Server" application loaded the samples, not Cubase 4 itself. It works! :)

Now, let's open Kontakt 3 and load more samples, but this time locally - in Cubase, not remotely in FXT Server. As you can see, Cubase 4 is now using its own memory, and FXT Server its own. This way we are now virtually able to load double the amount of samples we could load with Cubase only. What's very cool in FXT is that your project saves with both - local and remote plugins, so you don't really have to worry about anything - it simply saves and opens without any additional requirements!

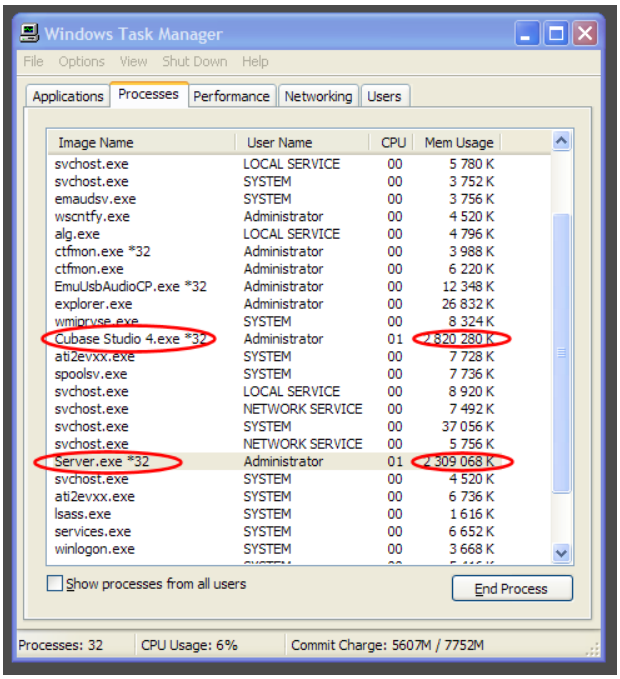
One more, very cool thing with FXT is that it's multi-output capable. So - you want

some instruments in Kontakt 3 to be routed to different audio channels? No problem, use it just as if it was locally in Cubase, assign channels, activate outputs in the VST Instruments window, and voila!

STEP 5
A COUPLE OF THINGS TO KNOW

It's good to know a few things, before you start setting up a large template using this method.

I've never actually exceeded 6GB of samples without running into instability issues, so after all, this may not be an ultimate solution for some of you. My current orchestral template I used to score a short 3D movie is over 5.1GB (Cubase and Server RAM in total) and has 57 articulations in four Kontakt 3's (2 localy, 2 remotely) and one Kompakt for choirs, with a couple of exceptions - all patches have 3 mic positions, routed as described in my first tutorial. My soundcard latency is set to 8ms, FXT plays with an additional 8ms, but the effect is very nice, especially if you put Brass and Percussion on FXT, and Strings and Woodwinds locally.



If you make FXT route back to Cubase with too many audio channels, you can run into additional latency or latency-inconsistency issues. FXT will try to fix latency to compensate for large audio return. In my template, FXT routes back 6 separate 24-bit audio channels without additional latency.

I'm aware, that this might not actually be the ultimate solution. Only 64bit sequencing is. I can't make use of the full 8GBs (maybe someone else will get better results). If it was possible to run and operate with two or more FXT Servers on one machine, the problem would be solved, but as far as I know, it isn't possible. However, if anyone succeeds, then he's more than welcome, to give me (and others) a hint :)

Have fun!

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