

DeepX

COLLABORATORS

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REVISION HISTORY

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Chapter 1

DeepX

1.1 DeepX

DeepX 1.0 (16-Jan-96)
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First Release	Info about this release
Copyright	The DeepX's rights
Requirements	What DeepX needs to work
Quick Start	For novice users
Install	How to install DeepX
DeepX Info	More info about DeepX
Features	What DeepX can do
Preferences	How to use DeepXPrefs
Technical Info	What DeepX do (or experts)
History	How DeepX grown up

1.2 ^First

Finally I've made DeepX. It takes a lot of time to make it work fine. But DeepX is not finished yet. I am planning to add locale to it and change preferences editor, because it was made in-a-hurry. Of course bugs may me there. So suggestions and transaltions are welcome.

I want to thank Georges "Melkor" Goncalves, Bruno Rohee, Rich "Lego-Master" Jesse, Niels Van Willigenburg, Nils Goers and Leo "Nudel" Davidson. There is always worth making software for people like them.

1.3 copyright

DeepX is now spread as FREeware. It means that you MUST spread it for FREE. Before you put DeepX on a cover disk for a magazine or on some CD-ROM (except AmiNet), it would be nice to let me know about it.

You are NOT ALLOWED to modify the program in any way, or any part of it for any other purpose than than mentioned in this documentation.

The author is not responsible for any damage or data lost caused by DeepX. You are using it for your own risk.

1.4 DeepX's Requirements

DeepX needs:

- * Kickstart 2.04 (37.175) or newer
- * xpkmaster.library v2+ or newer
- * and some xpk sublibraries
- * commodities.library

1.5 Quick Start

Hard disk capacity is shallow. Every file get a lot of disk space and even really big hard disk will get full, sooner or later. How to make it deeper?

DeepX makes it possible!

DeepX makes disk deeper by packing files. When an application wants to read packed file, DeepX unpacks that file to another, so the applications sees original file unpacked. For real it have only its unpacked copy. During writing to a file, application writes data to another file and then DeepX packs them to the original file.

But it is not good to pack every file on the disk and make every application to see them unpacked. In that case DeepX knows which program may read unpacked file, and which one not. The same with writing data.

Additionally DeepX can execute packed executables (applications, commands) and can return the real size of packed file to the client. Because most of the applications need to know the real file size of packed file (the size of this file when it is unpacked), when you are not sure, always set the size fixing.

Now let's try to make DeepX working, without installing it for good. After this quick tutorial you will know is it worth to use DeepX or not. Note that you must have installed xpkmaster.library with some of its sublibraries.

1. Run DeepX by double-clicking on its icon or executing it from shell.
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2. The same way load DeepXPrefs to edit preferences.
3. On the right side of the window you will see the flags of the default client (every client not shown in the client's list). Turn off 'Unpack Files' and 'Fix File Size'.
4. Click on the 'New' gadget below the list on the left, to add client. Type 'type' in the gadget called 'Current Client' (should be already activated). 'type' is a Shell command which we want to show packed files. You do not have to change flags, because they are already set to 'Unpack Files' and 'Fix File Size'.
5. Click again on the 'New' gadget and enter 'dir' as the next command, but this time turn off 'Unpack Files' and 'Fix File Size' flags and activate 'Pack Files' (by clicking on the check box gadgets).
6. Now you have to set a packer. Click on the 'XPK Packer Config' gadget. You will see config window now. Select, for example, 'NUKE' packer in the listview and click 'OK'.
7. Now you will see field called 'Packer' set to 'NUKE'.
8. Now you can click on the 'Use' gadget. Prefernces editor will quit.
9. Because you set Dir command to pack every file it saves, try to save result of its work to a file, for example: `dir sys: >ram:test`
10. Now try to see the 'test' file. Because the only command that is able to read unpacked files (via DeepX) is Type command try: `type ram:test` You will see the directory list previously generated by Dir command.
11. To turn DeepX off type gain its name or double-click on ots icon. You will see the good bye requester.

1.6 DeepX Installation

Because I have not made the installer script for DeepX, you have to install it manually. But don't worry, it's quick and easy.

There are many ways to install DeepX, depends of your needs. The easiest way to do that is copy DeepX to WBStartup drawer by dragging its icon there, and copy DeepXPrefs to the Prefs directory, also by icon dragging. After that DeepX will run automatically at boot time.

There are two types of icons: normal 4-color icons, and Magic Workbench 8-color icons. If you want to use normal icons, just rename DeepX.info.4 as DeepX.info and DeepXPrefs.info.4 as DeepXPrefs.info.

You can also put DeepX logoo as a background for your Workbench. Copy DeepX.iff to your Prefs/Presets drawer and change the background in the WBPattern preferences to Prefs/Presets/DeepX.iff. Because that picture was made for Multiscan monitor (640x480), you may want to change its dimensions using some paint program.

1.7 More about DeepX

You can unload DeepX by executing its again or clicking on 'Remove' gadget in Exchange Commodity.

DeepX can be easily disabled by changing state to 'Inactive' in Exchange Commodity. It is better than killing it, because all opened files are still handled.

DeepX may refuse quit in two cases:

1. Some files are still in use (there are not Close()ed), so DeepX will show: "I have opened <n> temporary file(s)". You should wait for some DeepX clients to finish and then try to quit again.
2. Dos library vectors, which DeepX uses, were changed, so DeepX will show: "Someone patched DOS functions after me". This may be caused by some other system patcher or virus. This is also caused by xpkCRM2.library (CrM.library in particular), so when you use CRM2 packer there is no way to turn DeepX off.

DeepX tries to load its preferences from ENV:DeepX.prefs. If they are not correct or if they don't exist, DeepX uses the following defaults:

- temporary directory is set to 'RAM:'
- timeout is set to 5 seconds
- DeepX starts activated and enables global unpacking and size correcting

1.8 features

Features:

- * DeepX supports specified processes (called clients) indicated by their task or command name; every client has its own preferences
- * DeepX works as Commodity broker, where can be activated or disactivated.
- * DeepX open its own process called 'DeepX Process' with priority 1
- * DeepX keeps unpacked file for a short time for the next possible open
- * DeepX works with interactive devices, like prt: or con:, and nil:
- * DeepX unpacks executables
- * DeepX patches Open(), Close(), Examine(), LoadSeg(), NewLoadSeg(), Write()
- * DeepX was written in assembler

1.9 DeepX Preferences[^]

In the DeepX Preferences window you find following gadgets

DeepX Clients

This is a list of DeepX clients (processes/command names) with a one special client called <DEFAULT CLIENT>, which have preferences for all programs not shown in this list. If you click on the client's name, then you'll see its preferences, which you can edit.

New

Inserts a new client into the list after the current client. After that you should set its name and you may change the flags or packer.

Delete

Removes the current client from the clients list.

Processes

This is a list of available processes in the system. You can add a process to the clients list by clicking on its name. Do not use devices (DF0, DH0, RAM, CON, etc.) as a clients, because it gives nothing.

Rescan

Because processes may be added to, or removed from system, this gadget updates the list.

Current Client

Here you can edit the client's name, except <DEFAULT CLIENT>. This gadget is active after adding a client to the list. Don't forget to press Return/Enter after editing.

Unpack Files

When this gadget is active (tick in the box), the current client will unpacks every opened file.

Pack Files

When this gadget is active (tick in the box), the current client will packs every written file, using the Packer and Mode shown below.

Fix File Size

When this gadget is active (tick in the box), the current client will get the correct file size, like the file was unpacked.

Packer and Mode

XPK packer ID and mode to pack file with, when Pack Files is enabled.

XPK Packer Config

Opens XPK packer and mode config window, there you can change packer (by clicking on the list view gadget) and mode (by moving slider) for packed files.

Temp Dir

Temporary directory path, where DeepX's temporary files will be kept. If you have enough memory, you should set it to RAM:. BE CAREFUL: If it is a disk path, remember that temporary files may exist after reboot, and system may validate the disk. I am planning to add reset-handler to DeepX which will flush temporary directory then user cause reset. But it will not work when you turn the Amiga off.

TimeOut

Here you can change the timeout (in seconds), after which DeepX will delete unused temporary files from temporary directory.

Start

This cycle gadget changes the state of DeepX activation. In 'Active' mode DeepX is ready after launch. In 'Inactive' mode you must change the DeepX activity in Exchange Commodity to let DeepX work normally.

Unpack Executables

When this gadget is active (tick in the box), every packed executable file can be executed like it was unpacked.

Save

Save preferences to ENV: and ENVARC: and exit.

Use

Save preferences to ENV: and exit.

Cancel

Cancel all changes and exit.

1.10 Technical Info

DeepX patches the following vectors in dos.library: Open(), Close(), Write(), Examine() and LoadSeg().

Open() and Close()

If DeepX's client needs unpacking, then every packed file (opened as an old file) is unpacked to the temporary file in the temporary directory (set in preferences) and temporary file handle is returned to the client. Every temporary file stays opened for the given timeout, because it may be opened once again in a short time. After timeout temporary file will be deleted. If, for some reason, DeepX can't open temporary file (there is no packer, file is encoded), Open() will fail.

If DeepX's client needs packing, then every created file (opened as new file) has an opened temporary file and temporary file handle is returned to the client. When client finishes writes to that file and call Close(), DeepX will try to pack data to the original file with the given packer and mode. If something went wrong (packed file is larger than unpacked, packer doesn't exist, etc.) the contents of temporary file will be copied to the original file. After that temporary file will be deleted.

Write()

When client writes something to the temporary file opened as an old file, DeepX will remember to save the changes to the original file, and pack it when it is requested. Modified old file will not stay opened then.

Examine()

If DeepX's client needs correct file size for packed files, DeepX will

change the file size in FileInfoBlock and the client will see the size of packed file like it was unpacked. Note that fib_NumBlocks field is not changed.

LoadSeg() and NewLoadSeg()

If the user sets 'Unpacks Executables' in DeepX's preferences, every packed executable will be unpacked to temporary file, loaded from it, and then temporary file will be deleted.

DeepX counts every opened file and it will not quit until all of them are closed. Before quit DeepX deletes all temporary files.

1.11 history

Version	Date	What was changed
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1.0	19-Jan-96	first release
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