

netinput

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Chapter 1

netinput

1.1 NetInput

NetInput remote control client/server package - Written by Marius Gröger.

This software requires AmigaOS 2.0 (V37) or higher.

Intro

Description	Why You need it!
Features	All in one glance
Requirements	What you need

Getting started

Installation	What's needed to be done
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Options

Usage	How to handle the thing
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Problems, Questions and Caveats

Caveats	Caution!
Troubleshooting	Doesn't it work properly?
Bugs	Known Bugs

Should this be all ?

Future plans	Things I should perhaps lay my hands on
History	What's been done already
Copyright / Author	Legal stuff, my addresses

1.2 NetInput - Description

Description

Recently I re-activated my good old A1000 and connected it to my A2000.

Due to the tightness of my room, the A1000 is now put close to the floor. Beside of it, the monitor, which I can look down to if necessary. As you may imagine, it is rather inconvenient to bend down to the A1000 to do some input, so I thought of writing the software you finally seem to examine right now.

NetInput passes all mouse movements and keystrokes of one machine to any other in the network. The involved events will not appear on the client side.

So, in the above situation, I invoke the NetInput client on the A2000, and immediatly "are" on the A1000. All mouse-movements, or keystrokes are fed to the A1000, I only have to look at it's monitor. As soon as I have enough of it, I return to working with the A2000 by pressing a hotkey.

1.3 NetInput - Feaures

Features

- ~Fast even on 68000 based systems due to optimized event passing and udp protocol
- ~Completely pure code
- ~Distributed as Freeware, complete source code is supplied

1.4 NetInput - Requirements

Requirements

- AmigaOS Release 2.04
- ~AmiTCP/IP (tested with Release 4, should work also with Releases 2 and 3)
- ~2 Amiga computers connected via AmiTCP/IP

1.5 NetInput - Installer Script

Actions taken by the Installer-script

On the machine you want to remote control, you have to install the server program netinputd:

```
AmigaShell> copy server/netinputd AMITCP:serv/
```

On the machine you want to use for remote control, you have to install the client program netinput:

```
AmigaShell> copy bin/netinput AMITCP:bin
```

1.6 NetInput - Installation

Installation

Installing internet services is really no fun, as you may already know. The IP network identifies services by a certain port number. "Well known" services such as "telnet" don't have any problem with that number, as for this kind of service the port number is world-wide the same. Custom services, such as NetInput, are nowhere registered and therefore it is up to the system administrator (in this case: You) to assign it a port number that is currently not in use in your network.

Rather than writing an installer script with artificial intelligence I decided to split the installation procedure into the installation of the binaries and a manual part.

The first part is best done by the supplied installer script. If you still want to do the installation manually then follow the steps described herein.

The second part must be done by hand. As I guess the only hands around currently are yours, follow these steps:

On both the remote controlling as well as the remote controlled system, load the file AMITCP:db/services into your favorite text editor. Add the following line:

```
amiganetinput 2503/udp
```

Possibly you may have to change the number 2503. It should be a value greater or equal to 2500, and may in no case be already used for any other service!. On both systems, however, this must be the same value. So, please scan carefully the service database on both your systems to find a proper number.

Next, on the system you intend to remote control, load the file AMITCP:db/inetd.conf into your favorite text editor. Add the following line:

```
amiganetinput dgram udp wait/priority=20/stack=4096 root ...  
... AMITCP:serv/netinputd netinputd
```

Note that the elipsis (...) at the end (and the beginning, respectively) of the above lines should not be typed in; you should rather concatenate both lines to a single (but long) one when you enter them in the file "inetd.conf".

You should re-start AmiTCP/IP to propagate all changes to the corresponding networking programs.

Additionally, you may make both programs resident:

```
AmigaShell> resident netinput AMITCP:bin/netinput
```

```
AmigaShell> resident netinputd AMITCP:serv/netinputd
```

This speeds up the connection procedure but will consume a bit memory when NetInput is not in use.

1.7 NetInput - Usage

Invoking netinput

The netinput client accepts the following commandline arguments:

```
HOST/A,IMM=IGNOREMOUSEMOVES/K/N,QUIET/S
```

HOST (Required Argument)

The name of the machine in the network, on which the server programm is installed.

IMM=IGNOREMOUSEMOVES (optional keyword argument / number)

When moving the mouse very much, netinput can try to melt multiple mouse moves to one single, resulting in the same final mouse position. By setting this number, you may specify a time interval in microseconds. All but the last one in a series of mouse moves in one such interval will be not be transferred over the net.

This parameter is very system dependend (CPU type, network interface). If the network is too slow, long series of mouse moves might get not transferred in real-time: The mouse responsiveness, the "feeling" of the mouse-handling gets worse.

I recommend to try different values. For my configuration consisting of an A2000/030 and an A1000/000, a value of 10,000 has shown to give a good balance between speed and responsiveness.

Note that, unfortunately, in the documentation of Releases 37.1 and 37.2 this parameter was described in a wrong way.

QUIET (Switch)

Normally, after having connected to the server netinput tells that it is now in transparent mode, and what the escape key is. By setting this switch the user can suppress this output.

Stopping netinput

The netinput client will stay connected to the server until the user presses the escape key. This is (currently hard-coded) <control>-<escape>. Note that you need to halt down <control>, then press <escape>, and then release both keys.

1.8 NetInput - Caveats

Caveats

This section tries to address some known problems.

I will always try to give the user the necessary technical background to understand the problem and, if possible, to include a work-around.

If any user has found a similar problem which is not mentioned in this document, he or she should contact me in order to append it to this section.

netinput and netinputd on the same machine

NEVER TRY TO "REMOTE" CONTROL THE SAME SYSTEM. This will result in an infinite event loop, and makes no sense at all anyway.

However you may well install both the client and the server program on a single machine in order to use it in one of this roles at a time.

netinput and intuition

The documentaion of Release 37.1 read:

"Currently the system hangs if you try to move a screen with the mouse. However you may press the escape key to leave this situation. Maybe this is a fundamental problem, maybe only a subtle priority problem. I don't know yet, up to know I didn't take the time to think this over. If you have an idea, tell me.

Probably there are a lot of other deadlocks or similar situations that may occur."

The screen-drag-problem gets fixed by declaring "netinputd" as "wait" in inetd.conf. (See also Installation)

However the server system seems to come into a state of heavy system load if you drag the screen. This is quite understandable, as both the input.device and netinputd tasks run on priority 20; if both tasks are in the ready state, round robin scheduling grants 50% cpu-time to each of them.

1.9 NetInput - Troubleshooting

Troubleshooting

"The bloody thing doesn't work at all!"

- > Have you assigned a (in your network) unique port number ?
- > Did you assigned the same port number on both systems ?
This must be the case!
- > Did you tell netinput the corrent host name on the command line ?

See also : Installation
Usage

"The mouse pointer can hardly follow the actual movement!"

Try a different value for IGNOREMOUSE. Begin with a high value of about 50 and work down until you reach the required responsiveness.

See also : Usage

"After some mouse moves the input stops on the server system!"

Be sure to run the daemon with a priority equal to that of input.device. Normally this is 20.

"I don't like the escape key <CTRL-Escape>!"

Sorry, the escape key is currently hard-coded. If there is much request for it, I probably change this.

See also : Usage

1.10 NetInput - Known Bugs

Known Bugs

•~NetInput seems to have problems with key-repeation.

If you know further bugs, contact me.

1.11 NetInput - Future plans

Future plans

Perhaps I will implement some more features:

- Workbench usage
- ~User defineable abort key

If you have any suggestions, contact me.

1.12 NetInput - History

Development history of "netinput"

Release 37.3

- Unfortunately, the description of the IGNOREMOUSEMOVE option of the netinput client program was wrong. It stated erroneously that the named parameter would control a number of mouse moves to be melted instead of determining a time interval. I apologize deeply to all those who got problems out of this embarrassing mistake. Remember: Never write a documentation in such a hurry 8^(

Release 37.2

- ~User part of Installation erranously stated to add netinputd as a "nowait" daemon, however it is of type "wait"
- minor server cleanup

Release 37.1

- ~initial release

Technical history of "netinput"

For more technical details, please refer to the source code. In the header section of each source file, you find the pseudo-keyword \$HISTORY: after which follows the complete revision history of this file.

1.13 NetInput - Copyright / Author

Copyright and author information

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You may make any changes to the source for your own use. If you consider them useful for everybody, please get in touch with me. This way I can try to include them in the next public release.

If you like this software, or have any suggestion how to improve it, or just want to complain about it, feel free to email me.

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