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- Topic: Synergy

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1 - ABOUT

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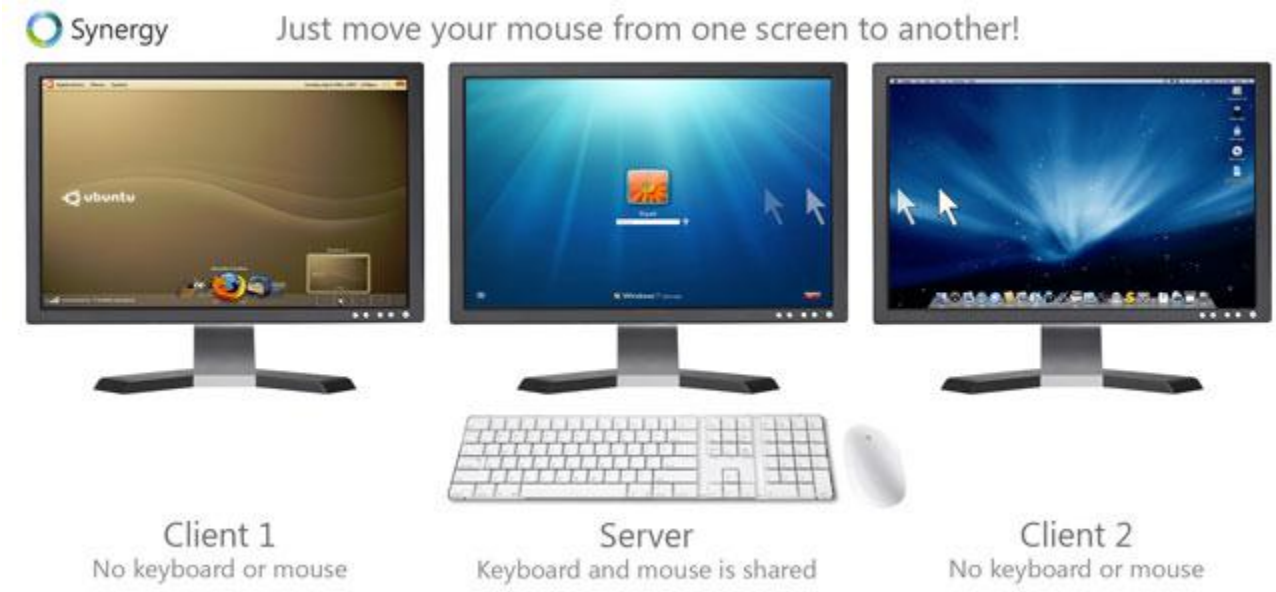
1.1 - What is Synergy?

Synergy lets you easily share your mouse and keyboard between multiple computers on your desk, and it's Free and Open Source. Just move your mouse off the edge of one computer's screen on to another. You can even share all of your clipboards. All you need is a network connection. Synergy is cross-platform (works on Windows, Mac OS X and Linux).



1.2 - Requirements:

<u>OS supported:</u>

* Windows XP SP3
* Windows Vista SP1
* Windows 7
* Ubuntu 10.04
* Mac OS 10.5 Leopard
* Mac OS 10.6 Snow-Leopard
* Mac OS 10.7 Lion
* Mac OS 10.7 Mountain Lion

<u>Partially supported:</u>

* Windows 2003 Server
* openSUSE
* Fedora
* Ubuntu 11 and above

Non supported:

* Mac OS 10.4 Tiger and below
* Windows NT family and below (e.g. 2000, etc)
* Windows 95 family and below (e.g. 98/ME)

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2 - INSTALLATION

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Download Link: http://synergy-foss.org/es/download/ and follow installer steps.

or

Download from repository (Linux)**:**

```
# apt-get install synergy
```

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3 - CONFIGURATION FOR LINUX

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3.1 - Open port:

The first step is to configure synergy to open port 24800 (default port of Synergy):

```
# iptables -A INPUT -p tcp --dport 24800 -j ACCEPT
```

This makes,

-A = Append a new rule to a chain
-p = Specifies a protocol
--dport = Indicates the destination port
-j = Determines the action

3.2 - Config file:

Now with port open, proceed to configure synergy:

Create file *synergy.conf* at /etc/
--path: /etc/synergy.conf

section: screens
serverHostname:
client1Hostname:
client2Hostname:
end
section: aliases
serverHostname:
ipServer
client1Hostname:
ipClient1
client2Hostname:
ipClient2
end
section: links
serverHostname:
right = *client2Hostname*
left = *client1Hostname*
client1Hostname:
right = *serverHostname*
client2Hostname:
left = *serverHostname*
end

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3.2.1 - Config example:

```
  //Order:                    Left     ---->   Right
  //Hostname:          PC1 (server)   ---->   PC2 (client)
  //IP:                      10.9.0.1 ---->   10.9.0.2

section: screens
   PC1:
   PC2:
end
section: aliases
   PC1:
   10.9.0.1
   PC2:
   10.9.0.2
end
section: links
          PC1:
           right = PC2
          PC2:
           left = PC1
 end
```

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3.2.2 - Why to use a text based config?

The first reason is that you don't really have a choice. If you aren't using a gui that you have to use a text-based config file.

In second place it gives you more control. The GUI cannot create advanced configuration such as non-reciprocal connections. An example of a non-reciprocal connection would be that if you go right from screen A you get to screen B, but if you then go left from screen B you get to screen C rather than back to screen A as you would in a reciprocal connection.

Other considerations:

You can use a version control system
It's easier to share configs with people
You can have multiple config files (like if you use a laptop in multiple places)

3.3 - Starting Server / Client

3.3.1 - Start Linux Server

$ synergys

--If I want to see if have successfully load config, and some more info:

$ synergys -d DEBUG

3.3.2 - Start Linux Client

$ synergyc -f *server'sIP*

--If I want to see its behavior:
$ synergyc -f *server'sIP* -d DEBUG

--If I use a different port than default one (24800):
$ synergyc -f *server'sIP* **:** *port*

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4 - CONFIGURATION FOR WINDOWS

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4.1 - Configure and Start Windows Server

"Share this computer's keyboard and mouse (server)"
"Screens & Links" press "Configure.."
"Screens:" press "+"
on Screen Name: put 'hostname'
on Aliases the IP of that computer
(Options as you wish)
and "Ok".

Just like that we add each computer involved.

"Links:" press (example with two computers, PC1 & PC2)
…% of the right PC1 goes to % of PC2 (appears computers that have been added to Screens)
Then "+"

…% of the right PC2 goes to % of PC1
Then "+"

Note: If we only put one Link on Links section, we can only go through the other computer, but not go back.

Once all links done, press "Ok"

Once settings finished, press "Start"

4.2. - Configure and Start Windows Client

"Use another computer's shared keyboard and mouse (client)"
Other Computer's Host Name: --here put Server's IP Address
And "Start"

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5 - LINUX / WINDOWS

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5.1 - Windows Server with Linux Client

-Windows Server (Section 4.1)
-Linux Client (Section 3.3.2)

If rise up the error “Cannot open primary screen: unable to open screen” (Section 7.3)

5.2 - Linux Server with Windows Client

-Linux Server (Section 3.3.1)

-Windows Client(Section 4.2)

6 - Synergy via Open SSH

6.1 - LINUX

6.1.1 - Configuring the Server

Install the OpenSSH server on the same computer as the synergy server. Configure the OpenSSH server as usual (synergy doesn't demand any special options in OpenSSH) and start it. Start the synergy server as usual; the synergy server requires no special options to work with OpenSSH.

6.1.2 - Configuring Clients

Install the OpenSSH client on each synergy client computer. Then, on each client, start the OpenSSH client using port forwarding:

ssh -f -N -L *localhost*:24800:*server-hostname*:24800 *server-hostname*

Or, if that does not work, try:

ssh *user@server-hostname* -L 28400:*localhost*:28400 -N

The server-hostname is the name or address of the computer with the OpenSSH and synergy servers. The 24800 is the default network port used by synergy; if you use a different port then replace both instances of 24800 with the port number that you use. Finally, start the synergy client normally except use localhost as the server host name. For example:

$ synergyc -f *localhost*

Synergy will then run normally except all communication is passed through OpenSSH which decrypts/encrypts it on behalf of synergy.

6.2 - WINDOWS

6.2.1 - Configuring the Server

Configure as regular steps; (Section 3.2)

6.2.2 - Configuring Clients

Only if we can’t connect directly as usual steps (Section 3.2), we might need to use some program to open a tunnel.

Here a small guide to use putty:

You can download it from: http://www.putty.org/

Steps to activate the tunnel connection with the port of the machine with the ssh server running.

-Connection

-SSH

-Tunnels

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7 - COMMON TROUBLESHOOTING

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7.1 - Same hostname

If some of the computer you want to connect between Synergy has the same name, the program won't be sure which computer must access. To resolve this problem, we must change some computer hostname.

7.1.1 - Linux

In console:

hostname *name_pc*

,then edit the file:

/etc/hostname

and edit the file:

/etc/hosts

,ensuring that 127.0.0.1 reference your pc:

127.0.0.1 localhost
127.0.1.1 *name_pc*

7.1.2 - Windows

From properties in "My Computer":

-Tab 'Computer Name', 'Change ..'
-Change computer name, Accept.

7.2 - Unknown screen name "XXX"

If the configuration was read successfully and you get this error then it means that the server's screen is not in the configuration. All screens must be listed in the configuration.

A common reason for this is when you haven't used the system's hostname as its screen name. By default, synergy uses the hostname as the screen name. If you used a different screen name in the configuration then you must tell synergy what that name is. Let's say the hostname is tpi-labo but the configuration defines a screen named tpi. Then you must tell the server that its screen name is tpi by using the --name tpi command line option or setting the screen name in the advanced options dialog to tpi.

Another common reason for this is a mismatch between what you think the hostname is and what synergy thinks it is. Typically this is a problem with fully qualified domain names (FQDN). Perhaps you think your system is named tpi but synergy thinks it's tpi.whatever.com or tpi.local. You can use either solution above to fix this.

7.3 - Cannot open primary screen Error

To resolve this, a simple solution is to first start up the client, and after that start the server.

7.4 - Non-common troubleshooting

For other (non-common) troubleshooting, you may find useful this link to synergy page (section troobleshooting: http://synergy2.sourceforge.net/trouble.html)