????

- ??: http://www.mhspot.com/sts/siptosis.html
- ????: http://www.mhspot.com/sts/sts_install_centos.html

????

- Multi-Skype Trunk Builder - stsTrunkBuilder

????

- PIAF 2.0.6.2 (Asterisk 1.8.8.0 + CentOS 6.2)
- Guest OS on VMware ESX
- Java: jre-7u17-linux-i586.rpm
- Skype: skype-4.1.0.20-1.el6.i586.rpm

????

- ??? NAT ???
- ???? pfSense?port forwarding ??? SIP ? RTP
- ??????????

????

- VNC ????? Skype ???????????????????? Skype ????
- Xvfb ????? Skype ? SipToSis ??????

????
???? stsuser

```
useradd stsuser
cd /usr/src
mkdir install_sip2sis
```

?? Skype
Skype ????: https://www.amazon.com/clouddrive/sh...T8coz0dqKKRnR4

```
cd /usr/src/install_sip2sis
wget -O skype-4.1.0.20-1.el6.i586.rpm "https://dl.dropbox.com/s/409livlxb7p33hy/
skype-4.1.0.20-1.el6.i586.rpm?token_hash=AAGnThJzNok_EhTOYWR9BdAoEOIzpIG0_QGWq75Ugl-j6w&dl=1"
yum groupinstall "X Window System"
yum install libXv libXScrnSaver alsa-lib xterm xorg-x11-twm
```

```
rpm -ivh skype-4.1.0.20-1.el6.i586.rpm
```

?? /etc/X11/twm/system.twmrc

```
...
RandomPlacement <== ?????
NoGrabServer
RestartPreviousState
...
```

?? system.twmrc

```
cp /etc/X11/twm/system.twmrc /home/stsuser/.twmrc
chown stsuser:stsuser /home/stsuser/.twmrc
```

?? snd-dummy

```
modprobe snd-dummy
vi /etc/rc.local
```

rc.local:

```
# Required for Sip2Sis
/sbin/modprobe snd-dummy
```

?? Skype

```
su - stsuser
vncserver
```

? VNC Viewer ??????? skype &

????? SipToSis ???? Skype ??

- ?????? Sign me in when skype starts
- Advanced
    - ? Enable Skype WiFi: ??
    - ? Check for update on startup: ??

TIP:

????? VNC server ??? yum install tigervnc-server

?? Sun/Oracle Java (???? openjdk)
????: http://java.com/zh_TW/download/manual.jsp

```
cd /usr/src/install_sip2sis
wget -O jre-7u17-linux-i586.rpm http://javadl.sun.com/webapps/download/AutoDL?BundleId=75249

yum remove java-1.6.0-openjdk
rpm -ivh jre-7u17-linux-i586.rpm
```

Note:

???????? openjdk ?????????

?? java ??

```
$ java -version
java version "1.7.0_17"
Java(TM) SE Runtime Environment (build 1.7.0_17-b02)
Java HotSpot(TM) Client VM (build 23.7-b01, mixed mode, sharing)
```

?? Xvfb

```
yum install Xvfb
```

?? stsuser ??? audio

```
usermod -a -G audio stsuser
```

?? SipToSis
????: http://www.mhspot.com/sts/siptosis_download.php

- SipToSis_20111012.zip
- stsTrunkBuilderLinux_20110808.zip

```
cd /usr/src/install_sip2sis
mkdir /opt/siptosis
unzip SipToSis_20111012.zip -d /opt/siptosis/
cd /opt/siptosis/
chmod a+x SipToSis_linux
chown -R stsuser:stsuser /opt/siptosis
```

?????: SipToSis_linux
?? siptosis.cfg??? 5070

```
host_port=5070
username=skypests
```

passwd=unimportantpasswd
do_register=no

Notes:

      ??????? Asterisk ???????? stsTrunk_linux ????? skype ?????

?? VNC Viewer ???????? stsuser ??? Skype ??????

? VNC Viewer ? xterm???

/opt/siptosis/SipToSis_linux &

Notes:

      VNC ??? Skype ???? "???? API ??" ???

      ?? netstat -lun ????? port 5070

?? SipToSis_linux ??????????

```
[stsuser@pbx siptosis]$ Launching SipToSis
2013-03-26 13:17:06,170 Starting SipToSis v20111012
2013-03-26 13:17:06,175 Skype4Java Version 1.3.0.1
2013-03-26 13:17:06,175 os=Linux ver=2.6.32-220.2.1.el6.i686 arch=i386 (1 core)
2013-03-26 13:17:06,175 javaVer=1.7.0_17 - Oracle Corporation (32 bit)
2013-03-26 13:17:06,198 Available Codecs: PCMU(0),PCMA(8),iLBC(98),L16/16k(102)
2013-03-26 13:17:06,198 DTMF rfc2833(101)
2013-03-26 13:17:06,199 initSkype - If stuck, check Skype online & API auth
2013-03-26 13:17:06,454 STUN: Error - Unknown Host: stun.xten.net
2013-03-26 13:17:06,697 PublicIP=211.72.203.62
2013-03-26 13:17:06,741 SkypeVer:172
2013-03-26 13:17:06,816 Attached SkypeUserId:skype.share
2013-03-26 13:17:06,825 Config - skypeClientSupportsMultiCalls:false  concurrentCallLimit:2
2013-03-26 13:17:06,825 SipToSis contact_url=sip:skypests@192.168.7.62:5070
2013-03-26 13:17:06,825 via_addr=192.168.7.62  realm=
2013-03-26 13:17:06,825 RTP Ports: 63200-63202  Local Skype Ports: 64432-64435
2013-03-26 13:17:06,825 jitterLevel=-1
2013-03-26 13:17:06,866 Registrar Server Domains=
2013-03-26 13:17:06,868 MaxCallTime: not limited MaxPSTNCallTime: not limited
2013-03-26 13:17:06,868 MaxDailyPSTNUniqueNumberCount: 48 MaxDailyPSTNMinutes: 350
2013-03-26 13:17:06,876 Loading Skype PSTN Call History
2013-03-26 13:17:06,881 WAITING FOR INCOMING CALL
2013-03-26 13:17:06,891 6 possible calls to import.
```

2013-03-26 13:17:06,893 WAITING FOR INCOMING CALL
2013-03-26 13:17:07,793 0 PSTN calls imported
2013-03-26 13:17:07,799 PSTN counters reset at: 08:00:00 CST
2013-03-26 13:17:07,807 Qualified PSTN calls today: 0 Time: 0 minutes
2013-03-26 13:17:07,944 AcctBalance: 1.00 FREECALL

?? Zoiper ??? SipToSis_linux ????
Zoiper ??

- Domain: <SipToSis ??IP:5070>
- Username: ??
- Password: ??
- Caller ID Name: ??

?? dialpad ?? 55??? Skype ??? echo123 ??? ID

?? Asterisk ??? SipToSis_linux ????
Asterisk ??: FreepBX > Trunks

```
type=peer
host=<SipToSis ?? IP>
port=5070
nat=no
dtmfmode=auto
canreinvite=no
qualify=yes
incominglimit=1
outgoinglimit=1
call-limit=1
busylevel=1
context=from-trunk
```

???? SIP to Skype
??? Outbound Route ? SIP ????? 55 ???? trunk?????? Skype ? EchoTest

TIPs:

???? 55 ??? Skype ? EchoTest??????? SkypeOutDialingRules.props
^55$:echo123

???? Skype to SIP
?? SkypeToSipAuth.props

*,sip:skype.share@192.168.7.62:5060

Notes:

    * ????? Skype ??

    sip:<your skype ID or whatever name>@<Asterisk IP:Port>

?? Inbound Route
FreePBX > Inbound Routes > Add Incoming Route

- DID Number: <your skype ID or whatever name>
- Set Destination: <whatever you wanted>

???? SipToSis_linux
????????????? SIP to Skype ????????? VNC ???? Skype & SipToSis_linux????? command line ???????????????
??

```
cd /opt/siptosis
chmod a+x stsTrunk_linux
su -l stsuser -c "/opt/siptosis/stsTrunk_linux start"
```

??: ? CentOS 6.2 ??? skype ????????????? Skype ???????????????

?? /opt/siptosis/stsTrunk_linux

```
...
if [ "${displayMethod}" == "XVFB" ]
then
    #launch virtual frame buffer
    pidfile=tmp_xvfb.pid
    ps -ef | grep -v ' awk ' | awk '/Xvfb.*${DISPLAY}/  { print $2}' > $pidfile
    pid=`cat $pidfile`
    if [ "$pid" == "" ]
    then
     echo start Xvfb on display ${DISPLAY}
 #check /etc/dbus-1/system.d/xorg-server.conf if dbus error
    #Xvfb ${DISPLAY} -render -auth XauthXvfb 1> log/xvfb.log 2>&1 &
    Xvfb ${DISPLAY}  1> log/xvfb.log 2>&1 & <== ????????
    fi
    rm $pidfile

    sleep 1
fi
...
```

TIPs:

?? stsTrunk_linux boot ??????????????????????? ps -ef | grep stsuser ??

???????? stsTrunk_linux start???????????????????

????? stsTrunk_linux stop

Q&A

??: xvfb.log

[dix] Could not init font path element catalogue:/etc/X11/fontpath.d, removing from list!
[dix] Could not init font path element built-ins, removing from list!

Fatal server error:
could not open default font 'fixed'

Ans: ??? libXfont ??????

yum update libXfont

????

- http://community.skype.com/t5/Linux/...1210686/page/4
- http://cooker.techsnail.com/index.ph...stem_%28TWM%29
- http://nerdvittles.com/?p=784