Asterisk

**Asterisk Latest Version:**

**core show version**

* Asterisk 11.11.0
* Yum install mpg123
* Yum install sox lame
* /usr/bin/sox /home/barumugam/output.wav -r 8000 -c 1 -s -2 /home/barumugam/output1.wav
* mpg123 -w /home/barumugam/output.wav /home/barumugam/77.End\ Credit.mp3
* PHP 5.3.3 - > sudo yum install php php-cli php-gd php-mysql php-mbstring
* Yum install mysql mysql-server
* GRANT ALL PRIVILEGES ON \*.\* TO 'root'@'%' IDENTIFIED BY 'ukast\*$@!'

Vi /etc/my.cnf -> under [mysqld] put line “bind-address = 0.0.0.0”

**OS Name Latest Version:**

**cat /etc/\*-release & cat /proc/cpuinfo & cat /proc/meminfo**

* Centos 6.5
* 8gb ram
* 4 core cpu
* 60gb

**Asterisk Installation Guide:**

**1. Check server date**

**date**

**date –set=”<string>” |** date --set="2 OCT 2006 18:00:00"

* **Before start setup make sure everything was up to date. Or else use command “yum upgrade && reboot” Check date on the server. It should be matches with the current date**

**2. Disable SELINUX Config**

**sed -i s/SELINUX=enforcing/SELINUX=disabled/g /etc/selinux/config && reboot**

* **Disable selinux config**

**3. Asterisk Dependency**

**yum install make wget openssl-devel ncurses-devel newt-devel libxml2-devel kernel-devel gcc gcc-c++ sqlite-devel e2fsprogs-devel keyutils-libs-devel krb5-devel libogg libselinux-devel libsepol-devel libxml2-devel libtiff-devel gmp php-pear php-pear-DB php-gd php-mysql php-pdo kernel-devel ncurses-devel audiofile-devel libogg-devel openssl-develmysql httpdmysql-develmysql-server zlib-devel perl-DateManip sendmail-cf sox make**

* **Linux os level dependencies for asterisk package support.**

**3. Asterisk Download & Install:**

**wget** [**http://downloads.asterisk.org/pub/telephony/asterisk/asterisk-11-current.tar.gz**](http://downloads.asterisk.org/pub/telephony/asterisk/asterisk-11-current.tar.gz)

**tar –zxvf asterisk-11-current.tar.gz (OR) tar –zxf asterisk-11-current.tar.gz**

**64 Bit: ./configure --libdir=/usr/lib64 && make menuselect && make && make install**

**32 Bit: ./configure && make menuselect && make && make install**

**make samples**

**make config**

* **Configure & make & install & generate sample files and configurations.**

**4. Asterisk Service:**

**service asterisk status/start/stop/restart**

* **System Service action commands.**

**5. Alternate Asterisk Installation:**

**yum install dnsmasq**

**rpm -Uvh http://packages.asterisk.org/centos/6/current/x86\_64/RPMS/asterisknow-version-3.0.0-1\_centos6.noarch.rpm**

**yum update**

**yum install asterisk asterisk-configs --enablerepo=asterisk-11**

**service asterisk start**

**6. SIP Dialplan Strings:**

**SIP/devicename**

**SIP/username@domain (SIP uri)**

**SIP/username[:password[:md5secret[:authname[:transport]]]]@host[:port]**

**SIP/devicename/extension**

**SIP/devicename/extension/IPorHost**

**SIP/username@domain//IPorHost**

**7. OPEN PORT & PERMISSION:**

**Check PORT Open :** nmap <ip> -p <port>

**iptables -A INPUT -p udp -m udp --dport 5060 -j ACCEPT**

**service network restart**

**check port listen :** netstat -anp | grep 5060

udp 0 0 0.0.0.0:5060 0.0.0.0:\* 22936/asterisk

# SIP on UDP port 5060. Other SIP servers may need TCP port 5060 as well

**chown –R <user>:<group> filename**

**chmod 755 <php-filename>**

**Asterisk SIP Configurations:**

1. **SIP – Session initiation protocol**

**vi /etc/asterisk/extensions.conf**

**Syntax: [<context-name>] exten => <extension-no| extension-name>, <priority>, <dialplan-function>**

**vi /etc/asterisk/sip.conf**

**Syntax: [<sip-user-name>] <parameter> = <value>**

* **Before**

**Asterisk Folder:**

**cd /var/lib/asterisk/agi-bin**

* **All asterisk gateway interface code must be there on the location**

**Asterisk Configuration Folder:**

**cd /etc/asterisk**

**- All configurations present in the folder like sip, dhadi …etc.**

**Asterisk Call Pick Start Folder:**

**For outgoing call: /var/spool/asterisk/outgoing**

**For Voice Mail: /var/spool/asterisk/voicemail**

* **Spool directory is a common auto threading on the Linux. Whatever file put inside the directory that will process and delete.**

**Asterisk CLI Enter & Exit:**

**User not in root case: asterisk –rvvvvvvvvv**

**User in root case: asterisk –v**

**Exit to Cli: exit or quit <enter>**

**- Which is helpful to monitor asterisk logs and configurations and modules...Etc.**

**Asterisk Sip & Cli:**

**Reference Link about all kind of cli commands:** [**http://www.voip-info.org/wiki/view/Asterisk+CLI**](http://www.voip-info.org/wiki/view/Asterisk+CLI)

**cd /etc/asterisk => sip.conf**

**After modified anything on the sip.conf**

**Enter into asterisk cli and reload module: sip reload**

**After sip reload module reload dialplan it may be useful: dialplan reload**

**Want to view peers on asterisk connects: sip show peers**

**Shell execution asterisk cli commands: asterisk –rx “<commands>”**

**- Our asterisk will work it like a sip trunk.**

**Asterisk Originate Call on Cli:**

**originate <SIP/PHONE/DHADI>/<phonenumber@sipuser/sipuser/phonenumber> application playback <playfileserverlocation>**

**Example: originate SIP/+14049425344@bandwidth application playback /home/barumugam/hike\_trans-20140609162525-hike**

**NFS MOUNT COMMAND (COPY FILE ONE TO ONE SERVERS):**

**Scenario**

In this how-to I use two systems running with CentOS 6.5, but it will work on all CentOS / RHEL / Scientific Linux 6.x distros.

NFS Server IP Address: 192.168.1.250/24

NFS Client IP Address: 192.168.1.251/24

**1. Install NFS in Server system**

# yum install nfs\* -y

**2. Start NFS service**

# service rpcbind start

# chkconfig rpcbind on

# service nfs start

# chkconfig nfs on

**3. Install NFS in Client System**

# yum install nfs\* -y

**4. Start NFS service**

# service rpcbind start

# chkconfig rpcbind on

# service nfs start

# chkconfig nfs on

**5. Create shared directories in server**

Create a shared directory named **‘/var/unixmen\_share’** in server and let the client users to read and write files in that directory.

# mkdir /var/unixmen\_share

# chmod 755 /var/unixmen\_share/

**6. Export shared directory on NFS Server**

Edit file **/etc/exports**,

# vi /etc/exports

Add the entry as shown below.

/var/unixmen\_share/     192.168.1.0/24(rw,sync,no\_root\_squash,no\_all\_squash)

where,

**/var/unixmen\_share**  – shared directory

**192.168.1.0/24**           – IP address range of clients

**rw**                               – Writable permission to shared folder

**sync**                            – Synchronize shared directory

**no\_root\_squash**          – Enable root privilege

**no\_all\_squash**             – Enable user’s authority

**7. Restart the NFS service.**

# service nfs restart

**8. Mount the share directory in client**

Create a mount point to mount the share directory **‘var/unixmen\_local’** which we created in the earlier step 5.

# mkdir /var/nfs\_share

Mount the share from server to client as shown below

# mount -t nfs 192.168.1.250:/var/unixmen\_share/ /var/nfs\_share/

mount.nfs: Connection timed out

Probably it will show a **connection timed out** error which means that the firewall is blocking NFS server. To allow NFS server to access from outbound, goto NFS server system and add the as shown below in the **‘etc/sysconfig/iptables’** file.

# vi /etc/sysconfig/iptables

Append the following lines shown in red colour.

# Firewall configuration written by system-config-firewall

# Manual customization of this file is not recommended.

\*filter

-A INPUT -m state --state NEW -m tcp -p tcp --dport 2049 -j ACCEPT

-A INPUT -m state --state NEW -m tcp -p tcp --dport 111 -j ACCEPT

-A INPUT -m state --state NEW -m tcp -p tcp --dport 32803 -j ACCEPT

-A INPUT -m state --state NEW -m tcp -p tcp --dport 892 -j ACCEPT

-A INPUT -m state --state NEW -m tcp -p tcp --dport 875 -j ACCEPT

-A INPUT -m state --state NEW -m tcp -p tcp --dport 662 -j ACCEPT

:INPUT ACCEPT [0:0]

:FORWARD ACCEPT [0:0]

:OUTPUT ACCEPT [0:0]

-A INPUT -m state --state ESTABLISHED,RELATED -j ACCEPT

-A INPUT -p icmp -j ACCEPT

-A INPUT -i lo -j ACCEPT

-A INPUT -m state --state NEW -m tcp -p tcp --dport 22 -j ACCEPT

-A INPUT -j REJECT --reject-with icmp-host-prohibited

-A FORWARD -j REJECT --reject-with icmp-host-prohibited

COMMIT

Now restart the iptables service.

# service iptables restart

Again mount the share in client system with command:

# mount -t nfs 192.168.1.250:/var/unixmen\_share/ /var/nfs\_share/

Now the NFS share will mount without any connection timed out error.

**9. Verify NFS**

Verify the share from the server is mounted or not using ‘mount’ command.

# mount

Sample output:

/dev/mapper/vg\_client-lv\_root on / type ext4 (rw)

proc on /proc type proc (rw)

sysfs on /sys type sysfs (rw)

devpts on /dev/pts type devpts (rw,gid=5,mode=620)

tmpfs on /dev/shm type tmpfs (rw,rootcontext="system\_u:object\_r:tmpfs\_t:s0")

/dev/sda1 on /boot type ext4 (rw)

none on /proc/sys/fs/binfmt\_misc type binfmt\_misc (rw)

sunrpc on /var/lib/nfs/rpc\_pipefs type rpc\_pipefs (rw)

nfsd on /proc/fs/nfsd type nfsd (rw)

192.168.1.250:/var/unixmen\_share/ on /var/nfs\_share type nfs (rw,vers=4,addr=192.168.1.250,clientaddr=192.168.1.251)

**10.  Automount the Shares**

To mount the shares automatically instead of mounting them manually at every reboot, add the following lines shown in red colour in the **‘/etc/fstab’** file of your client system.

# vi /etc/fstab

#

# /etc/fstab

# Created by anaconda on Sun Mar 3 22[root@client unixmen]:10:15 2013

#

# Accessible filesystems, by reference, are maintained under '/dev/disk'

# See man pages fstab(5), findfs(8), mount(8) and/or blkid(8) for more info

#

/dev/mapper/vg\_client-lv\_root / ext4 defaults 1 1

UUID=1aa7d041-056b-48f4-a773-f713759e981f /boot ext4 defaults 1 2

/dev/mapper/vg\_client-lv\_swap swap swap defaults 0 0

tmpfs /dev/shm tmpfs defaults 0 0

devpts /dev/pts devpts gid=5,mode=620 0 0

sysfs /sys sysfs defaults 0 0

proc /proc proc defaults 0 0

192.168.1.250:/var/unixmen\_share/ /var/nfs\_share/ nfs rw,sync,hard,intr 0 0

Reboot the client system and check the share whether it is automatically mounted or not.

# mount

Sample output:

/dev/mapper/vg\_client-lv\_root on / type ext4 (rw)

proc on /proc type proc (rw)

sysfs on /sys type sysfs (rw)

devpts on /dev/pts type devpts (rw,gid=5,mode=620)

tmpfs on /dev/shm type tmpfs (rw,rootcontext="system\_u:object\_r:tmpfs\_t:s0")

/dev/sda1 on /boot type ext4 (rw)

none on /proc/sys/fs/binfmt\_misc type binfmt\_misc (rw)

sunrpc on /var/lib/nfs/rpc\_pipefs type rpc\_pipefs (rw)

nfsd on /proc/fs/nfsd type nfsd (rw)

**192.168.1.250:/var/unixmen\_share/ on /var/nfs\_share type nfs (rw,vers=4,addr=192.168.1.250,clientaddr=192.168.1.251)**

Thats it. Now NFS server is ready to use.

**FOR API CREATION directory**

**api\_audio** on the root

**api\_csv** on the root

**audio\_wav,** **tmp** on the root

**References:**

**Firewall Configurations :** [**http://www.voip-info.org/wiki/view/Asterisk+firewall+rules**](http://www.voip-info.org/wiki/view/Asterisk+firewall+rules)

**AGI :** [**http://www.voip-info.org/wiki/view/Asterisk+AGI+php**](http://www.voip-info.org/wiki/view/Asterisk+AGI+php)

**Verifying ports :** [**https://access.redhat.com/documentation/en-US/Red\_Hat\_Enterprise\_Linux/3/html/Security\_Guide/s1-server-ports.html**](https://access.redhat.com/documentation/en-US/Red_Hat_Enterprise_Linux/3/html/Security_Guide/s1-server-ports.html)

**Mysql :https://www.digitalocean.com/community/tutorials/how-to-install-linux-apache-mysql-php-lamp-stack-on-centos-6**

**Apache :** [**http://www.rackspace.com/knowledge\_center/article/centos-apache-and-php-install**](http://www.rackspace.com/knowledge_center/article/centos-apache-and-php-install)

**Custom ringtone : http://www.voip-info.org/wiki/view/Asterisk+cmd+MusicOnHold** [**https://www.youtube.com/watch?v=iS1KWMa7bxA**](https://www.youtube.com/watch?v=iS1KWMa7bxA)

**Copy file from one server to another server :** [**http://www.unixmen.com/nfs-server-installation-and-configuration-in-centos-6-3-rhel-6-3-and-scientific-linux-6-3/**](http://www.unixmen.com/nfs-server-installation-and-configuration-in-centos-6-3-rhel-6-3-and-scientific-linux-6-3/)