

**SCOPSERV**  
INTERNATIONAL INC.

ScopTEL™ IP PBX Software  
Backup and Restore Using Putty and WinSCP

## Backup and Restore

REASON: You want to backup all ScopTEL data for disaster recovery or you need to upgrade your Operating System from CentOS4 to CentOS5.

- You need to copy recorded phone calls to remote location for backup
- You need to copy voicemails and greetings to remote location for backup
- You need to copy custom voicemail prompts to remote location for backup
- You need to copy moh files to remote location for backup
- You need to copy the entire server configuration to a MySQL file.

Before you can do a restore you must have a working ScopTEL server. You will need a new drive with all ScopTEL software pre-installed or you will need a ScopTEL ISO install DVD and an external DVD-ROM drive or other supported boot media.

WinSCP is the perfect resource for this but requires root access to the ScopTEL (contact your vendor for root access)

- Download WinSCP from <http://winscp.net>
- Install the software on a Windows PC

Putty is the perfect resource to install command line software on a Windows PC but requires root access to the ScopTEL (contact your vendor for root access)

- Download Putty from <http://www.openssh.org>
- Install the software on a Windows PC

Refer to the websites for documentation of these applications and instructions on their usage.





## BEFORE YOU BEGIN

If you are replacing an old server and doing a restore the hardware changes will cause the system code to change and you will require a new serial number. You must contact ScopServ to get a serial number for use in the new server or your new server will not have a working license.

Ensure you have a keyboard and monitor connected to the new server and the root password to make changes to the network configuration files after the restore process.

Document the MAC address for each Ethernet NIC in the new server because you will have to make changes to the ifcfg-eth\* files after you do the restore from the old server.



## WARNING

Since you are restoring the scopserv.mysql file to a new server the the new server's HWADDR addresses will be overwritten. These HWADDR configurations will have to be modified by editing the configuration files AFTER the restore process.

Old server example: /etc/sysconfig/network-scripts/ifcfg-eth0

```
# DO NOT EDIT THIS FILE
DEVICE=eth0
HWADDR=00:1F:D0:D8:5E:C2
IPV6INIT=no
IPV6_AUTOCONF=no
BOOTPROTO=dhcp
ONBOOT=yes
PEERDNS=no
USERCTL=no
```

New server example: /etc/sysconfig/network-scripts/ifcfg-eth0

```
# DO NOT EDIT THIS FILE
DEVICE=eth0
HWADDR=00:1F:D0:C3:4F:A6
IPV6INIT=no
IPV6_AUTOCONF=no
BOOTPROTO=dhcp
ONBOOT=yes
PEERDNS=no
USERCTL=no
```



## BACKUP

In order to backup all configuration files to a single MySQL file use putty to execute the following commands omitting any quotation marks :

- “mysqlcheck -A -r” This command checks and repairs the existing MySQL database. Use “mysqlcheck
- On a standard system execute “mysqldump scopserv > scopserv.sql”. This command writes all configuration data including all reports to a single file named “scopserv.sql”.
- If the server is the High Availability Master then execute “mysqldump scopserv > scopserv.sql” and “mysqldump scopserv\_repl > scopserv\_repl.sql”. These commands write all configuration data including all reports to files in the /root/ directory named “scopserv.sql” and “scopserv\_repl”.
- Start WinSCP on your desktop and login to the ScopTEL server using the username “root” and the root password (supplied by vendor).
- Locate the /root folder to find scopserv.sql and scopserv\_repl file(s) and drag and drop to a folder on your Windows PC.
- Locate the /var/lib/asterisk/moh/ folder and drag and drop this file to a folder on your Windows PC to backup all music on hold files in the default moh folder.
- Locate the /var/spool/asterisk/monitor folder and drag and drop this file to a folder on your Windows PC to backup all recorded phone calls.
- Locate the /var/spool/asterisk/voicemail folder and drag and drop this file to a folder on your Windows PC to backup all voicemail greetings and voicemail messages.
- Locate the /var/lib/asterisk/sounds/ folder and drag and drop this file to a folder on your Windows PC to backup all custom voice prompts.



## ARCHIVES

- If you have enabled archiving on your server you must also copy the archive folder to a remote folder using WinSCP.
- Since the archive path is set by the admin manually you must find the path first using the GUI the download the contents using WinSCP.

The screenshot displays the ScopServ web interface. The top navigation bar includes 'General', 'Configuration', 'Manager', 'Extensions', 'Lines', 'Interfaces', 'Virtual Fax', 'ACD', 'Applications', and 'Provisioning'. The left sidebar shows a tree view of the system configuration, with 'Telephony' expanded to show 'Recording/Monitoring'. The main content area is titled 'Telephony Settings: Configuration' and contains several sub-sections: 'Configuration', 'Channels', 'Language', 'Time Zones', 'Asterisk Manager', and 'External API'. The 'Recording/Monitoring' sub-section is active and shows the following settings:

- Use Native (SLN) format for Recording/Monitoring?:
- Allow to defined 'Tag' for recording?:  Default: True
- Enable Archiving?:  (highlighted with a red oval)
- Archive recording older than: 1 Month(s)
- \* Destination Folder: [Empty text field] (highlighted with a red oval)
- Compress File in 'Gzip' format?:

At the bottom of the configuration area are buttons for 'Save', 'Reset to Default', and 'Cancel'.



## New Server - ifconfig

- A newly installed server uses DHCP to get an IP address from a DHCP server on the network so make sure the eth0 interface is connected to the network so the server can get an IP address.
- Before you can login to the server you must know the IP address of at least one physical interface.
- From the Linux console login prompt, enter username 'root' omitting any quotation marks.
- From the password prompt enter the default root password 'scopserv' omitting any quotation marks.
- Once you are successfully logged as root type the command 'ifconfig' to determine at least one eth interface .
- In this example the eth0 IP address is 192.168.192.60 which is the IP address that will be used to login to the GUI later.
- Also notice that the HWaddr is the MAC address of the eth0 interface.

```
login as: root
root@192.168.192.60's password:
Last login: Mon Jul 16 13:31:19 2012 from 192.168.192.55
[root@virtualbox1253 ~]# ifconfig
eth0      Link encap:Ethernet  HWaddr 08:00:27:0E:20:B0
          inet addr:192.168.192.60  Bcast:192.168.192.255  Mask:255.255.255.0
          UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
          RX packets:1781 errors:0 dropped:0 overruns:0 frame:0
          TX packets:824 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:225143 (219.8 KiB)  TX bytes:348620 (340.4 KiB)

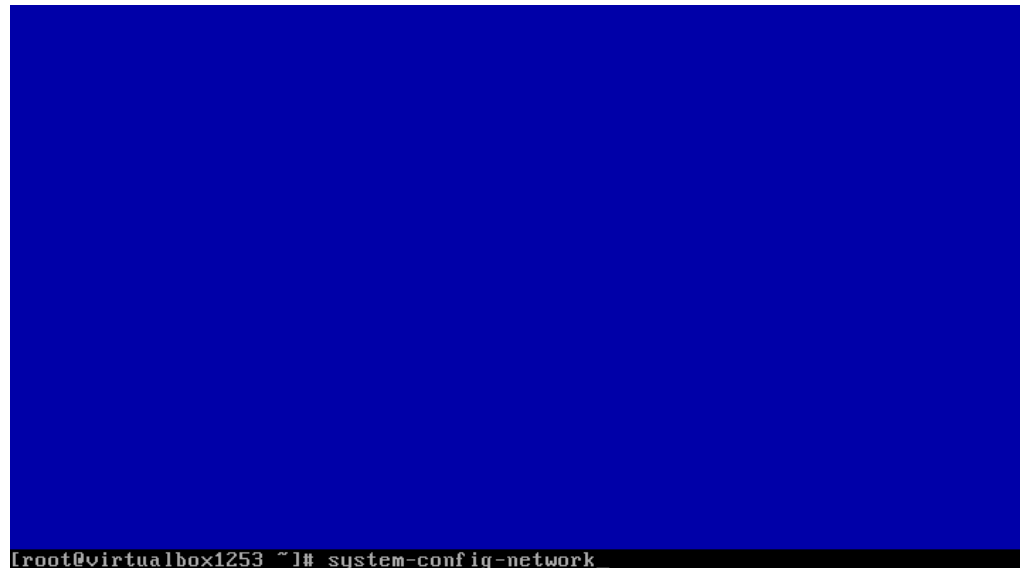
lo        Link encap:Local Loopback
          inet addr:127.0.0.1  Mask:255.0.0.0
          UP LOOPBACK RUNNING  MTU:16436  Metric:1
          RX packets:5493 errors:0 dropped:0 overruns:0 frame:0
          TX packets:5493 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:0
          RX bytes:359483 (351.0 KiB)  TX bytes:359483 (351.0 KiB)

[root@virtualbox1253 ~]#
```

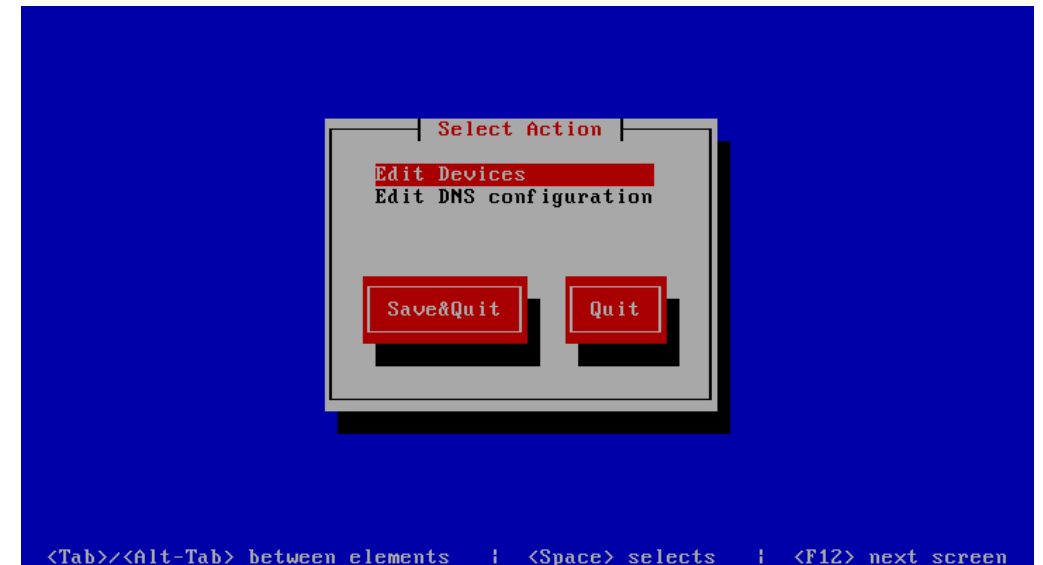


## New Server – system-config-network

- If there is no DHCP server on the network the server will not get an IP address.
- Using the command 'system-config-network' an IP address can be set statically and then used to login to the GUI or SSH.



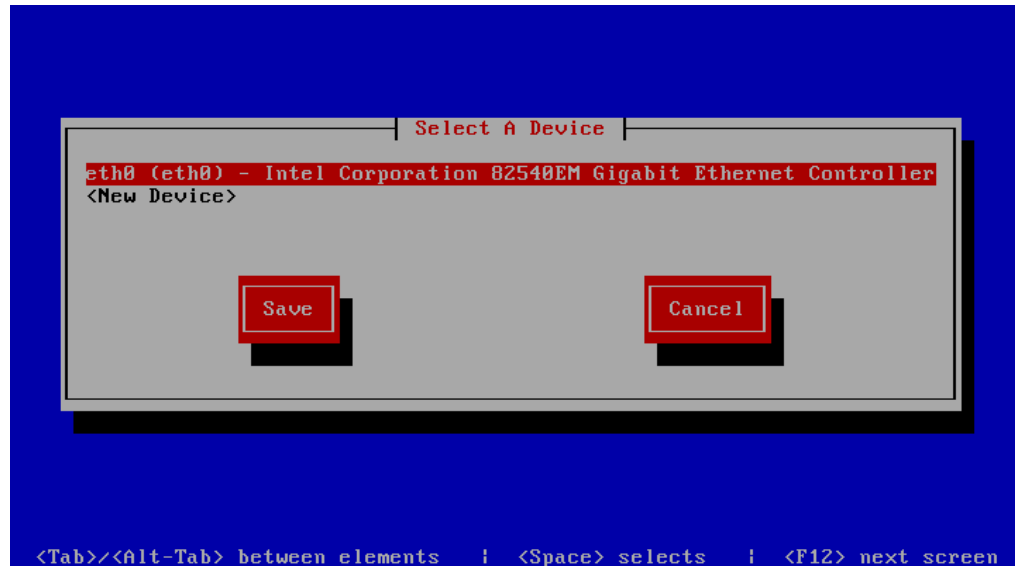
- Use the tab key on the keyboard to select Edit Devices.



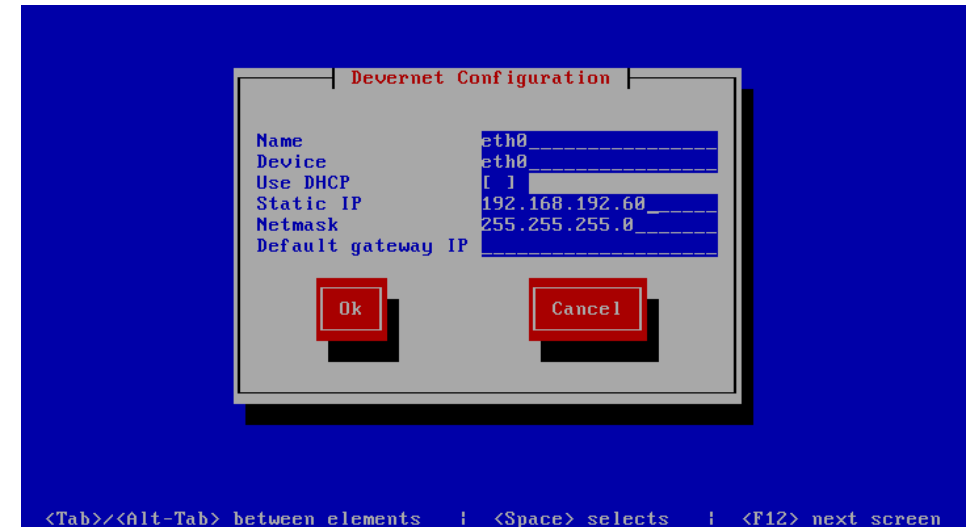


## New Server – system-config-network

- Use the tab key on the keyboard to select eth0 and press enter.

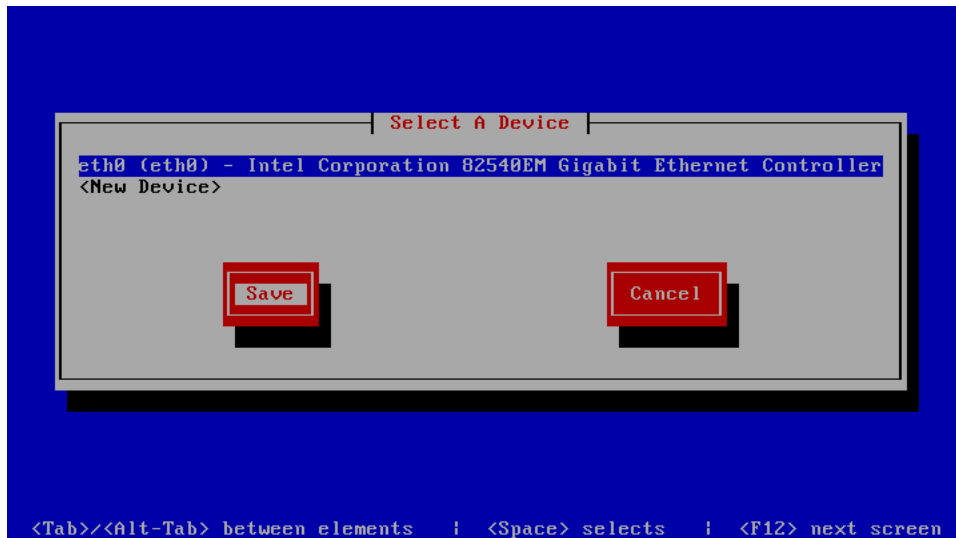


- Use the tab key on the keyboard to select elements.
- Use the space bar to uncheck or check DHCP.
- Use the keyboard to enter a Static IP as in this example.
- Use the tab key to select Ok.
- Press Enter when finished.

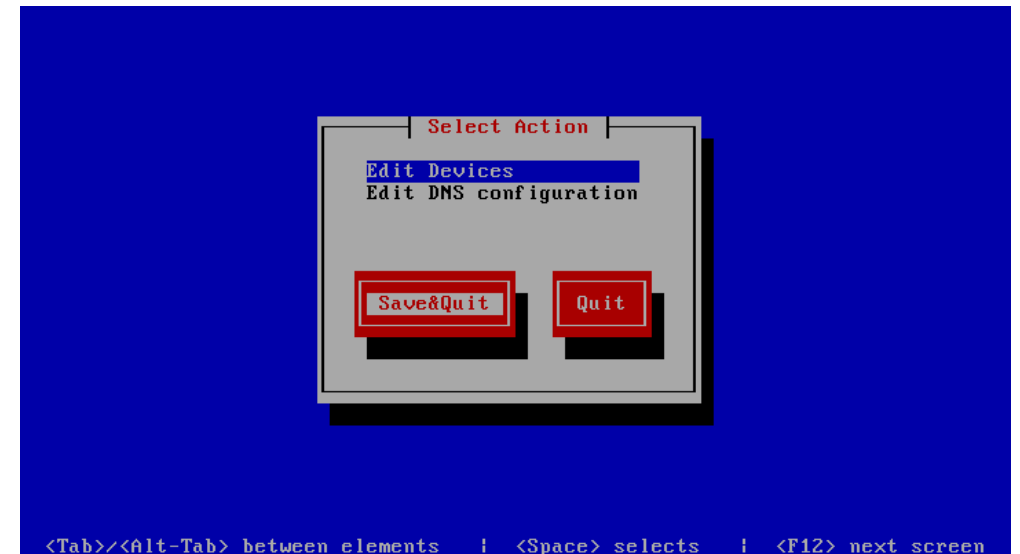


## New Server – system-config-network

- Use the tab key on the keyboard to select Save.
- Press Enter when finished.



- Use the tab key on the keyboard to select Save&Quit.
- Press Enter when finished.



## New Server – service network restart

- From the root prompt type 'service network restart' omitting any quotes to restart the network with the new static IP address.



```
[root@virtualbox1253 ~]# service network restart_
```



## RESTORE

- To restore the configuration and reporting data in a standard installation you must upload the file “scopserv.sql” back to the /root/ folder in the new server. After the upload execute this command using Putty omitting any quotation marks while in the “/root/” folder.
- “mysql scopserv < scopserv.sql”
- To restore an High Availability system you must upload scopserv.sql and scopserv\_repl files to /root/ and then execute:
  - mysql scopserv < scopserv.sql
  - mysql scopserv\_repl < scopserv\_repl.sql
- Login to the new server’s GUI and make sure the license and serial number are valid after the restore since a new server will have a new System Code and the Serial Number will no longer be valid on the new server.
- Login to each section of the GUI and edit the services to startup section and select each required service to startup. After saving each of the edited services to startup, click on the commit button to rewrite all MySQL configurations and config files.



## Restore, cont'd

During the backup process you downloaded additional folders to a remote Windows folder.

Using WinSCP drag and drop the backed up folders to the following ScopTEL folder locations to restore the files:

- Upload Windows backup location of music on hold folder(s) to `"/var/lib/asterisk/moh/"`
- Upload Windows backup location of recorded phone calls upload to `"/var/spool/asterisk/monitor"`
- Upload Windows backup location of voicemail greetings and voicemails to `"/var/spool/asterisk/voicemail"`
- Upload Windows backup location of custom voice prompts to `/var/lib/asterisk/sounds/`
- Upload Windows backup location of custom archives folder to the path specified in Telephony>Configuration>Recording/Monitoring/Enable Archiving>Destination Folder

After all folders are restored to the new server the permissions must be fixed with the following commands issued as root (omitting " marks)

- `"chown -R scopserv:scopserv /var/spool/asterisk/monitor"`
- `"chown -R scopserv:scopserv /var/spool/asterisk/voicemail"`
- `"chown -R scopserv:scopserv /var/lib/asterisk/moh"`
- `"chown -R scopserv:scopserv /var/lib/asterisk/sounds"`
- `"chown -R scopserv:scopserv <custom archive path>"`



## After restoring to a new server, follow this procedure

- Login to the new server with the keyboard and monitor
- Type the following commands omitting any quotes (nano is a text editor)
- 'service network stop'
- 'cd /etc/sysconfig/network-scripts'
- 'nano /etc/sysconfig/network-scripts/ifcfg-eth0'
  - Edit and replace the existing HWADDR with the corresponding MAC address from the NIC in the new server
  - Save the file
  - Repeat this process for each ifcfg-eth\* file in the directory
- 'service network start'
- Login to the GUI and enter the new MAC address for each interface Network>Interfaces>eth<x>>Hardware Address (MAC):
- Save and Commit.
  
- The last step is to reboot the server.

The screenshot shows the 'Edit Interface' configuration page in a web-based GUI. The 'General' tab is selected. The following fields are visible:

- Interface Name: eth0 (Default: eth0)
- Mode: WAN
- Type: Dynamic
- Hardware Address (MAC): 00:1F:D0:D8:5E:C2 (This field is circled in red)

At the bottom of the form, there are three buttons: Save, Copy, and Cancel.



The last step is to reboot the server

To display your CentOS release information use putty: “cat /etc/redhat-release”

Centos4 commands:

- “ifconfig” displays all network interfaces/IP addresses
- “service network restart” restarts all network scripts
- “netconfig” used to configure network interfaces
- “cat” command prints a files contents to the CLI console
- “cd” command changes to a new directory
- “reboot” issues a reboot command to the operating system
- “shutdown –h now” shuts down the server (requires power button to turn server back on)



## USEFUL OS COMMANDS, cont'd

To display your CentOS release information use putty: “cat /etc/redhat-release”

CentOS5 commands:

- “ifconfig” displays all network interfaces/IP addresses
- “service network restart” restarts all network scripts
- “system-config-network” used to configure network interfaces
- “cat” command prints a files contents to the CLI console
- “cd” command changes to a new directory
- “reboot” issues a reboot command to the operating system
- “shutdown –h now” shuts down the server (requires power button to turn server back on)

