

SCOPSERV
INTERNATIONAL INC.

ScopTEL™ IP PBX Software
DNS Server Configuration Wizard

Network Module - 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 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 ~]# █
```



Network Module – 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' omitting any quotes an IP address can be set statically and then used to login to the GUI.



```
[root@virtualbox1253 ~]# system-config-network_
```

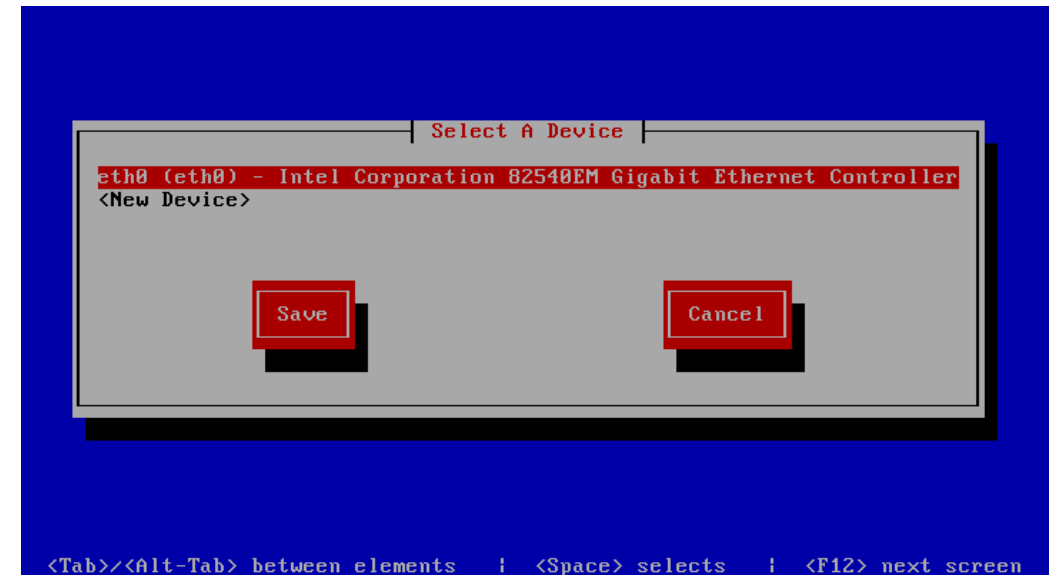


Network Module – system-config-network

Use the tab key on the keyboard to select Edit Devices

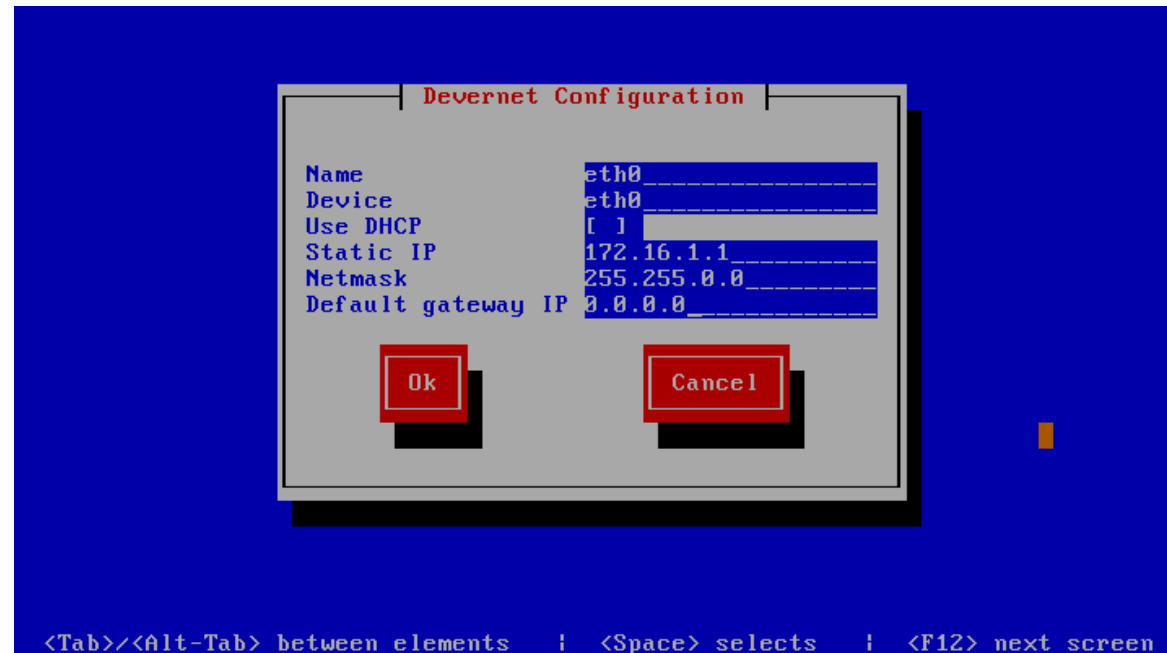


Use the tab key on the keyboard to select eth0 and press enter



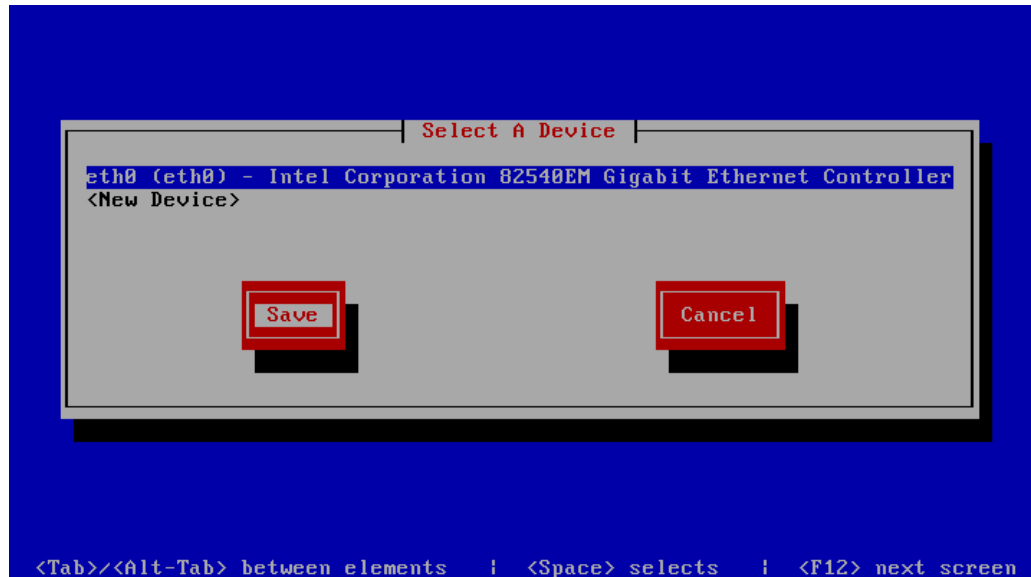
Network Module – system-config-network

- 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 and Netmask for this local server as in this example using the IP address table from the System Networking Lab – Table 1
- Use the tab key to select Ok.
- Press Enter when finished.

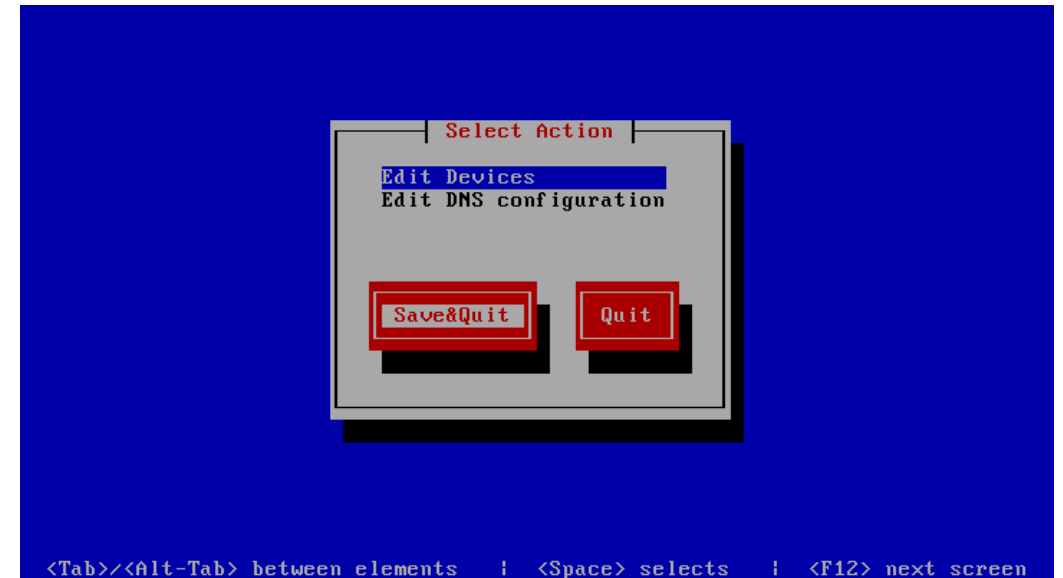


Network Module – system-config-network

- 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



Server Module – 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_
```



Network Module – Web GUI Login

- Once logged into the GUI the eth1 interface must be configured in order to enable routing.
- The ifconfig command displays the MAC address of eth1 which is needed to add another network interface to the system.
- The eth1 MAC address in this example is 00:E0:81:D8:5D:BD.

```
login as: root
root@192.168.192.65's password:
Last login: Tue Jul 17 13:10:05 2012 from 192.168.100.103
[root@demo ~]# ifconfig
eth0      Link encap:Ethernet  HWaddr 00:E0:81:D8:5D:BC
          inet addr:192.168.100.1  Bcast:192.168.100.255  Mask:255.255.255.0
          UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
          RX packets:226 errors:0 dropped:0 overruns:0 frame:0
          TX packets:317 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:119217 (116.4 KiB)  TX bytes:296051 (289.1 KiB)
          Interrupt:169 Memory:f4080000-f40a0000

eth1      Link encap:Ethernet  HWaddr 00:E0:81:D8:5D:BD
          inet addr:192.168.192.65  Bcast:192.168.192.255  Mask:255.255.255.0
          UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
          RX packets:183 errors:0 dropped:0 overruns:0 frame:0
          TX packets:151 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:28483 (27.8 KiB)  TX bytes:26050 (25.4 KiB)
          Interrupt:177 Memory:f4180000-f41a0000

lo        Link encap:Local Loopback
          inet addr:127.0.0.1  Mask:255.0.0.0
```



Server Module – Network Configuration

- Set the Fully Qualified Domain Name (FQDN).
- Set the network configuration as static.
- Set the DNS server information for the local system
- NOTE: The system is a fully capable DNS server and can resolve DNS for the network but a third party DNS server can also be used.
- Press Next.

The screenshot shows the 'ScopServ Initial Server Configuration Wizard' window, specifically the 'Network Configuration' step. The window has a blue header and a sidebar on the left with a list of steps: 1. Introduction to ScopServ Telephony Server, 2. End-User License Agreement, 3. General Settings, 4. Software Registration, 5. Authentication, 6. Date and Time, 7. Network Configuration (highlighted), 8. High Availability, 9. Firewall Configuration, 10. Telephony, and 11. Summary. The main area is titled 'Network Configuration' and contains three sections: 'General', 'Network Configuration (LAN)', and 'DNS Configuration'. The 'General' section has a 'Hostname' field with the value '1000.scopserv.local'. The 'Network Configuration (LAN)' section has a 'Type' dropdown set to 'Fixed IP (Static)', an 'IP Address' field with '172.16.1.1', a 'Subnet Mask' field with '255.255.0.0', and a 'Gateway' field with '0.0.0.0'. The 'DNS Configuration' section has a 'Primary' field with '172.16.1.1' and a 'Secondary' field with '8.8.8.8'. At the bottom, there are 'Previous' and 'Next' buttons, and the text 'Step 7 of 11' is visible in the bottom right corner.



Network Configuration – Hostname

- In this example the hostname configuration is 1000.scopserv.local and you will use the eth0 LAN address as the DNS server address.
- Edit the default Hostname and when finished click on Save.

The screenshot shows the 'Network' configuration page in the ScopTEL IP PBX web interface. The 'Configuration' tab is selected, and the 'General' sub-tab is active. The 'Hostname' field is set to '1000.scopserv.local'. The 'DNS Configuration' section shows 'Obtain DNS server addresses from?' set to 'Custom DNS configuration'. The 'Primary' DNS server is set to '172.16.1.1' and the 'Secondary' is set to '8.8.8.8'. The 'Enable Dynamic DNS?' checkbox is unchecked. 'Save' and 'Cancel' buttons are at the bottom.

Network:

Configuration Interfaces IP Routing Static Hosts

Configuration

General

* Hostname : 1000.scopserv.local

DNS Configuration

Obtain DNS server addresses from? : Custom DNS configuration
Default: Custom DNS configuration

* Primary : 172 . 16 . 1 . 1
Secondary : 8 . 8 . 8 . 8

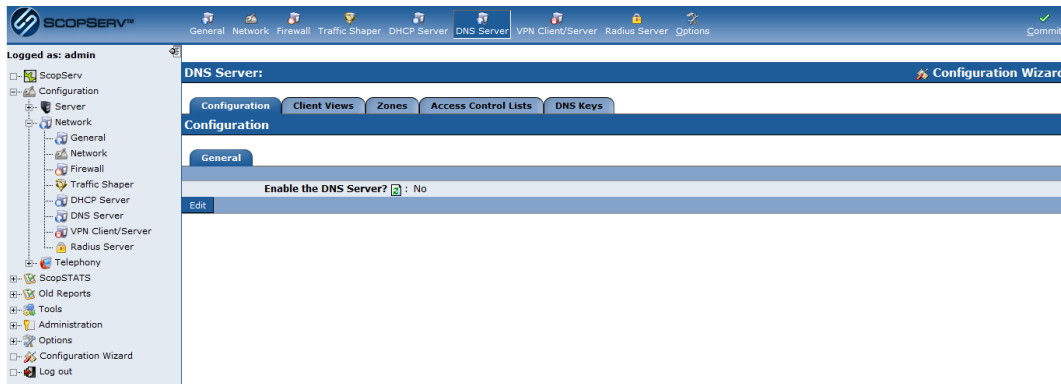
Enable Dynamic DNS ? :

Save Cancel

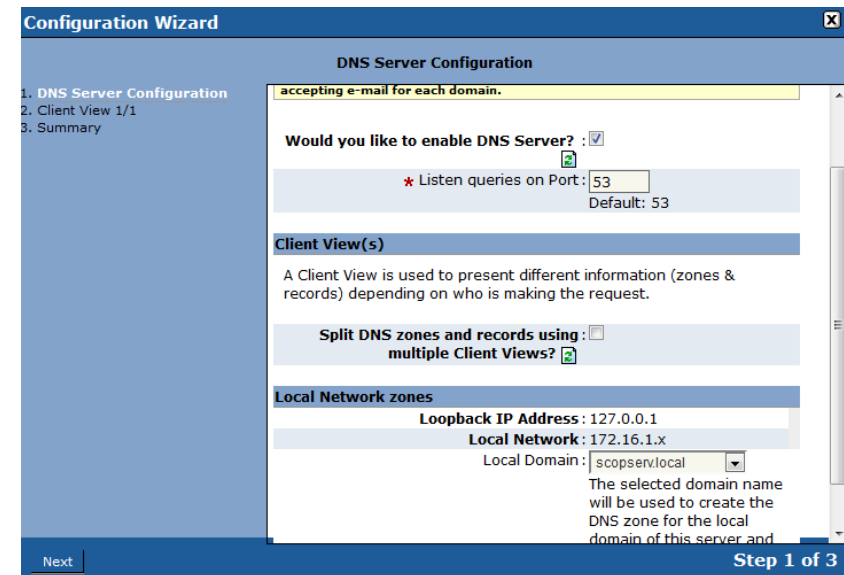


Network Configuration – DNS Configuration Wizard

- From the DNS tree click on Configuration Wizard.



- From the drop down list select the Local Domain scopserv.local.
- Click Next.



Network Configuration – DNS Configuration Wizard

- Enter a View Name in the text box that corresponds with the server in this network.
- 1000local was chosen for this system.
- Click Next
- Click a checkbox into Apply Changes and click Finish

Configuration Wizard

Client View 1/1

1. DNS Server Configuration
2. Client View 1/1
3. Summary

* View Name : 1000local

Description :

Apply this view to:
 Any Host(s)/IP Address(es)
 Specify Host(s)/IP Address(es)

Clients from:

Except Local Host?

Except Local Network(s)?

Except Host(s) / IP Address(es) :

DNS Zones

Create a Zone for the Loopback Interface?

Create a DNS Zone for 'localhost' and for the Loopback Network (127.0.0.x) including a record for the Loopback IP address (127.0.0.1).

Previous Next

Step 2 of 3

Configuration Wizard

Summary

1. DNS Server Configuration
2. Client View 1/1
3. Summary

Except Local Network(s)? : No

Except Host(s) / IP Address(es) :

DNS Zones

Create a Zone for the Loopback Interface? : Yes

Local Domain

Create a Zone for the Local Domain? : Yes

Primary Name Server (SOA) :

Local Network

Create a Zone for the Local Network? : Yes

Primary Name Server (SOA) :

Do you really want to apply these changes?

Updated Data : DNS Server Configuration
DNS Zones
DNS Records

Removed Data : Client Views
DNS Zones
DNS Records

* Apply Changes? :

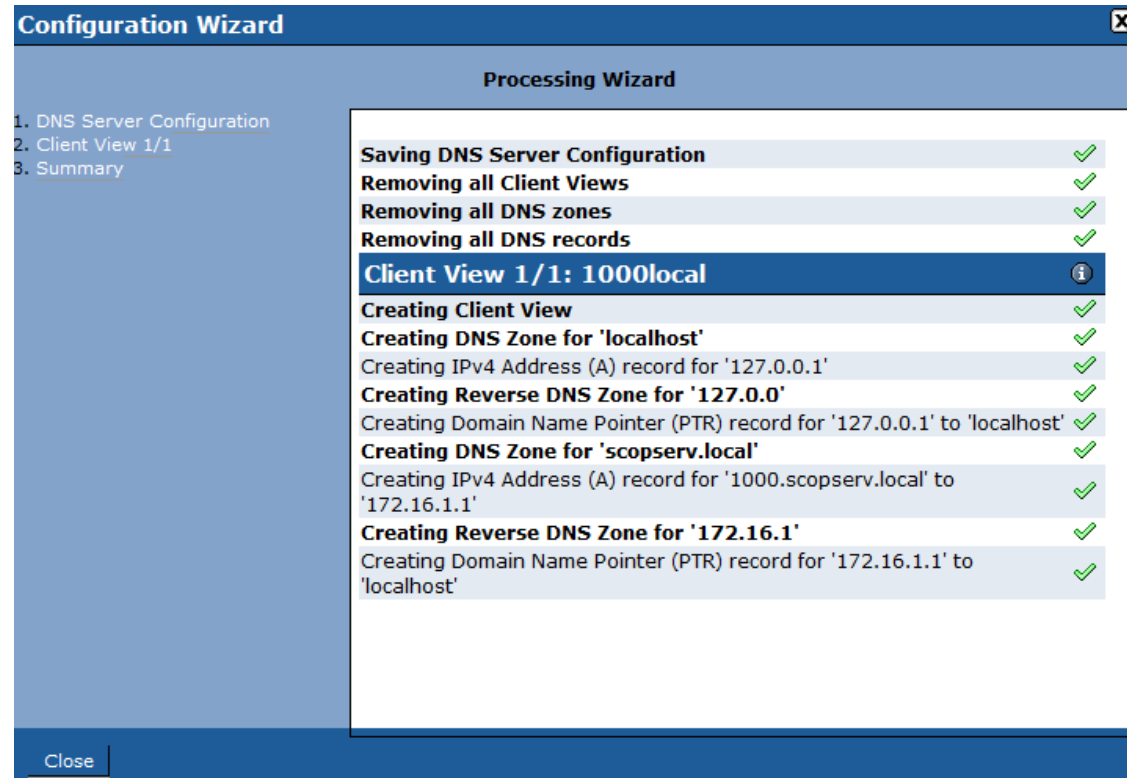
Previous Finish

Step 3 of 3



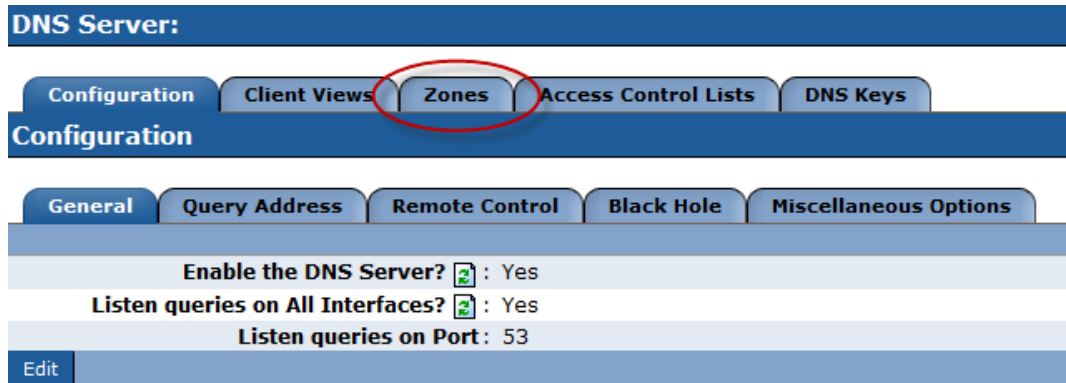
Network Configuration – DNS Configuration Wizard

- The Summary screen appears.
- Click Close.



Network Configuration – DNS Zone Configuration

- Click on Zones.



DNS Server:

Configuration Client Views **Zones** Access Control Lists DNS Keys

Configuration

General Query Address Remote Control Black Hole Miscellaneous Options

Enable the DNS Server? : Yes

Listen queries on All Interfaces? : Yes

Listen queries on Port : 53

Edit

- Edit the scopserv.local zone.



DNS Server: Configuration Wizard

Configuration Client Views **Zones** Access Control Lists DNS Keys

Domain (Hostnames to IP Addresses) [1 to 2 of 2] Add a new DNS Zone

Search: Search

Zone Domain	Zone Type	Client View	Records	
<input checked="" type="checkbox"/> localhost	Master (Primary) Zone	1000local	1	<input type="checkbox"/> <input type="checkbox"/>
<input checked="" type="checkbox"/> scopserv.local	Master (Primary) Zone	1000local	1	<input type="checkbox"/> <input type="checkbox"/>

Action: - select an action - Columns to display: Select

Reverse DNS (IP Addresses to Hostnames) [1 to 2 of 2]

Search: Search

Network IP Address	Zone Type	Client View	Records	
<input checked="" type="checkbox"/> 127.0.0.0	Master (Primary) Zone	1000local	1	<input type="checkbox"/> <input type="checkbox"/>
<input checked="" type="checkbox"/> 172.16.1.0	Master (Primary) Zone	1000local	1	<input type="checkbox"/> <input type="checkbox"/>

Action: - select an action - Columns to display: Select



Network Configuration – DNS A Record Configuration

- Choose Record Type IPv4 Address (A).
- Enter the Host name.
- Enter the IPv4 address.
- Make sure to use the data from the DNS A Records Table for each system.

The screenshot displays the 'DNS Server' configuration interface. At the top, there are tabs for 'Configuration', 'Client Views', 'Zones', 'Zone Records for scopserv.local', 'Access Control Lists', and 'DNS Keys'. Below these is the 'Edit Zone Record' section, which includes a 'General' tab. The form contains the following fields:

- Record Type:** A dropdown menu set to 'IPv4 Address (A)'.
- Host name:** A text input field containing '2000', with '.scopserv.local' displayed below it.
- IPv4 address:** A required field (indicated by a red asterisk) with four input boxes containing '192', '168', '100', and '2'.
- Comments:** A large text area for entering notes.

At the bottom of the form are 'Save', 'Copy', and 'Cancel' buttons. A legend at the very bottom explains the asterisk as a 'Required Field' and a refresh icon as 'Page Refresh on Change'.



Network Configuration – DNS A Record Configuration

- NOTE that the default A record for the local system is already created by the DNS Configuration Wizard and uses the LAN address of the server.
- Make sure each other A record is configured before proceeding to the next module.

DNS Server:

Configuration Client Views Zones **Zone Records for scopserv.local** Access Control Lists DNS Keys

IPv4 Address (A) [1 to 6 of 6]

Search: Search

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Host name	IP Address
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1000.scopserv.local	172.16.1.1
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2000.scopserv.local	192.168.100.2
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3000.scopserv.local	192.168.100.3
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4000.scopserv.local	192.168.100.4
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5000.scopserv.local	192.168.100.5
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6000.scopserv.local	192.168.100.6



Network Configuration – General Services Startup

- From the tab General>Bootup Services click on Edit and put a checkbox next to Network, DNS Server.
- Apply Change when done.

Bootup Services:

Start at bootup:

Network :	<input checked="" type="checkbox"/>
Firewall :	<input checked="" type="checkbox"/>
Traffic Shaper :	<input type="checkbox"/>
DHCP Server :	<input checked="" type="checkbox"/>
Dynamic DNS :	<input type="checkbox"/>
DNS Server :	<input checked="" type="checkbox"/>
VPN Server (PPTPd) :	<input type="checkbox"/>
Radius Server (AAA) :	<input type="checkbox"/>

Apply Change Cancel



Network Configuration – Network Commit

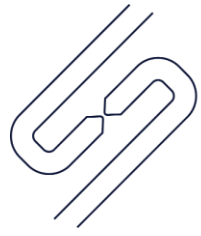
- Click on Commit to write all of the changes.

The screenshot shows the configuration interface for ScopTEL IP PBX. At the top, there is a navigation bar with tabs for General, Network, Firewall, Traffic Shaper, DHCP Server, DNS Server, VPN Client/Server, Radius Server, and Options. The 'Commit' button is circled in red. Below the navigation bar, a yellow message box states: 'Configuration saved. You must click on Commit button in order to apply Change.' The 'Services Status' section lists various services and their current states, along with control buttons for each.

Service	Status	Actions
Network	Running	Restart Network
Firewall	Stopped	Start Service
Traffic Shaper	Service Disabled	
DHCP Server	Stopped	Start Service
Dynamic DNS	Service Disabled	
DNS Server	Running	Restart Service, Stop Service
VPN Server (PPTPd)	Service Disabled	
Radius Server (AAA)	Service Disabled	

Buttons: Edit Services, Refresh





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Congratulations

