

Configuration Files and Tree

<https://campus.barracuda.com/doc/96026695/>

The directory structure of Barracuda CloudGen Firewall systems is split into organizational units. You will find the configuration files arranged in administrative subunits within subdirectories of the configuration root directory. This article provides information on the directories that contain system configuration files.

Directories Containing Configuration Files

Configuration files for the system are contained in the following directories:

/opt/phion/config/configroot

The */opt/phion/config/configroot* directory contains all configuration files that are constantly changed. The configuration tree of NG Admin starts in this directory. The box configuration is retrieved from this directory by Barracuda Firewall Admin. This directory will only contain empty configuration files for a fresh Barracuda CloudGen Firewall installation. If any service is added, the template files are copied from the corresponding directory at */opt/phion/modules/directory/box*.

The **Open configuration** column displays the file structure as it is in this directory.

/opt/phion/config/active

The */opt/phion/config/active* directory contains the active box configuration.

/opt/phion/modules/box

The */opt/phion/modules/box* directory contains all default configuration (*confdef*) files and required scripts for activation and verification. The directory itself is split into several subdirectories. Usually, a corresponding subdirectory for each configuration file is found in the */opt/phion/config/configroot* directory. Most subdirectories contain a *bin* directory with a verify and activate script or a binary or both.

Example for the directory structure:

```
[root@Bart:~]# cd /opt/phion/config/configroot/  
[2005-10-07 16:57 UTC] [-root shell-] [-powered by Cuda IT-]  
[root@Bart:  
/opt/phion/config/configroot]# ll  
total 176
```

```

drwxr-xr-x  9 root root      4096 Oct  7 15:40 .
drwxr-xr-x  8 root root      4096 Oct  7 15:40 ..
-rw-r--r--  1 root root      141 Oct  5 10:57 1
-rw-----  1 root root      421 Oct  5 10:31 boxadm.conf
-rw-----  1 root root      146 Oct  5 10:31 boxadm.desc
-rw-r--r--  1 root root      131 Oct  5 10:31 boxadm.param
-rw-----  1 root root      196 Oct  4 13:07 box.conf
-rw-----  1 root root      131 Oct  4 13:07 box.desc
-rw-----  1 root root     2580 Oct  4 13:07 boxkey.conf
-rw-----  1 root root      137 Oct  4 13:07 boxkey.desc
-rw-r--r--  1 root root      131 Oct  4 13:07 boxkey.param
-rw-----  1 root root     1490 Oct  4 13:07 boxnet.conf
-rw-----  1 root root      135 Oct  4 13:07 boxnet.desc
-rw-r--r--  1 root root      131 Oct  4 13:07 boxnet.param
drwxr-xr-x  2 root root      4096 Oct  4 13:07
boxother
-rw-----  1 root root      139 Oct  4 13:07 boxother.desc
-rw-r--r--  1 root root      131 Oct  4 13:07 boxother.param
-rw-r--r--  1 root root      131 Oct  4 13:07 box.param
-rw-----  1 root root      857 Oct  4 13:07 boxqos.conf
-rw-----  1 root root      165 Oct  4 13:07 boxqos.desc
-rw-r--r--  1 root root      131 Oct  4 13:07 boxqos.param
drwxr-xr-x  2 root root      4096 Oct  4 13:07
boxsrv
-rw-----  1 root root      142 Oct  4 13:07 boxsrv.desc
-rw-r--r--  1 root root      131 Oct  4 13:07 boxsrv.param
-rw-----  1 root root      217 Oct  4 13:07 boxsys.conf
-rw-----  1 root root      142 Oct  4 13:07 boxsys.desc
-rw-r--r--  1 root root      131 Oct  4 13:07 boxsys.param
drwxr-xr-x  2 root root      4096 Oct  7 15:07
data
-rw-----  1 root root      106 Oct  4 13:07 data.desc
-rw-r--r--  1 root root      131 Oct  4 13:07 data.param
drwxr-xr-x  3 root root      4096 Oct  4 13:07
gdata
-rw-----  1 root root      107 Oct  4 13:07 gdata.desc
-rw-r--r--  1 root root      131 Oct  4 13:07 gdata.param
drwxr-xr-x  3 root root      4096 Oct  4 04:51 LostAndFound
-rw-----  1 root root     3352 Oct  4 13:07 masterpub.conf
-rw-----  1 root root      167 Oct  4 13:07 masterpub.desc
-rw-r--r--  1 root root      131 Oct  4 13:07 masterpub.param
drwxr-xr-x  2 root root      4096 Oct  4 04:51
pool
-rw-----  1 root root     1227 Oct  4 13:07 roles.conf
rw-----
1 root root 164 Oct 4 13:07 roles.desc

```

This example shows the `/opt/phion/config/configroot` directory containing the `boxnet.conf` file. In the `/opt/phion/modules/box` directory, the `boxnet` subdirectory contains the `.conf` files and links to the activation and verification files.

The `/opt/phion/modules/box` directory contains two important subdirectories:

- `/opt/phion/modules/box/boxother` – This directory corresponds to **Box Misc**.
- `/opt/phion/modules/box/boxsrv` – This directory corresponds to **Box Services**.

Generally, all box services, such as the Firewall, Event, and Statistics services, are located in `boxsrv`. Other configuration items, such as authentication schemes, bootloader, or box licenses, are located in `boxother`. The `confdef` file determines the look of a window in Barracuda Firewall Admin (input fields, labels, buttons).

`/opt/phion/modules/box/boxother`

When a node is opened in the **Box Misc** branch, the configuration is read from the `/opt/phion/modules/box/boxother` directory.

`/opt/phion/modules/box/boxsrv`

When a node is opened in the **Box Services** branch, the configuration is read from the `/opt/phion/modules/box/boxsrv` directory.

Subdirectories for the Configuration Tree Directory

On every Barracuda CloudGen Firewall system there is a configuration tree that contains all necessary information to keep the system up and running. The tree is at `/opt/phion/config` and contains the following subdirectories:

Manual changes within these directories can damage your system. For any necessary manual changes, you should contact [Barracuda Networks Technical Support](#).

active

The `active` subdirectory contains the active configuration that is used by the currently running services. It contains two important files: `boxadmin.conf` and `boxnet.conf`.

configroot

The *configroot* directory is the directory for the GUI's management configuration tree.

history

The *history* directory contains the DB files for internal use only. This directory must not be changed manually.

Do not make any changes to this directory.

sessions

The *sessions* directory contains information for opened sessions.

update

The *update* directory contains all files that are required for syncing with another system (e.g., high availability system).

Checking the Integrity of Configuration Files

To check the integrity of the *boxnet.conf* and *boxadm.conf* files, use the *verify (/etc/phion/bin/verify)* script. This script is also used for network configuration checks from the Barracuda Firewall Admin GUI.

The following table displays example output from running the *verify* script:

```
[root@winix:/var/phion/logs]# verify /opt/phion/config/configroot/boxnet.conf
SUCCESS: No obvious critical consistency errors in box configuration
Info:      [0140000]  ^ boxnet(k,ARGS): box reaches MC@10.0.6.3 from 10.0.6.31
via »10.0.6.0/8 dev eth0 src 10.0.6.31 realm internal«
Info:      [0140000]  ^ boxnet(k,ARGS): box reaches MC@10.0.6.2 from 10.0.6.31
via »10.0.6.0/8 dev eth0 src 10.0.6.31 realm internal«
Info:      [0140000]  ^ boxnet(k,ARGS): box reaches server NTP@10.0.6.96 from
10.0.6.31 via »10.0.6.0/8 dev eth0 src 10.0.6.31 realm
internal«
Info:      [0140000]  ^ boxnet(k,ARGS): box reaches server DNS@10.0.6.90 from
all via »10.0.6.0/8 dev eth0 src 10.0.6.31 realm
internal«
```

```

Info:      [0140000]  ^ boxnet(k,ARGS): logical check passed
[ local networks ]
      |name      |addr              |dev      |ping |mgmt |ntpd
-----net0
net1  |loop      |127.0.0.1/8      |lo       |y    |y    |n
net2  |fw        |127.0.1.1/8      |tap0     |y    |n    |n
net3  |vpn       |127.0.2.1/8      |tap1     |y    |n    |n
net4  |vpnpers   |127.0.3.1/8      |tap2     |y    |n    |n
net5  |mip0      |10.0.6.31/8      |eth0     |y    |y    |y
      |ospfVP    |10.0.151.33/8    |eth1     |y    |n    |n
[ management IPs ]
      |addr
-----ip0
ip1   |127.0.0.1/0
      |10.0.6.31/0
[ servers ]
1:  mw
    primary box:  winix [*]      10.0.6.31
    secondary box: linux        10.0.6.32
    1st server ip: 172.31.1.33   pingable=yes
    2nd server ip: 10.0.60.33   pingable=yes
2:  win0
    primary box:  winix [*]      10.0.6.31
    secondary box: -- none -
    1st server ip: 172.31.1.33   pingable=yes
    2nd server ip: 172.31.70.2   pingable=yes
    add server ip: 10.0.60.32    pingable=yes
    add server ip: 10.0.61.32    pingable=yes
    add server ip: 172.16.0.1    pingable=yes
    add server ip: 172.16.1.1    pingable=yes
    add server ip: 10.0.6.33     pingable=yes
    add server ip: 10.0.150.33   pingable=yes
[ IP tunnels ]
      |status |name      |mode  |dev/src addr  |      local <->
remote
-----tu0
      |ready  |tun1      |gre   |10.0.150.33/8  |      10.0.151.33 <->
10.0.151.8
[ routing structure ]
  
```

```
Type indicators: 'u' .... unicast, 'Ø' .... unreachable, '⌘' .... stop
lookup
State indicators: '®' .... ready, '×' .... pending, '¿' .... dynamic, '¬'
.... inactive
1:      u from 0.0.0.0/32 prio 0 table local
2:      u from 0.0.0.0/32 prio 3 table vpnlocal
3:      u from 0.0.0.0/32 prio 10000 table main
```

Activating Configuration Changes

Manual changes in the `/opt/phion/config/configroot` and `/opt/phion/config/active` directories can damage your system. For any necessary manual changes, you should contact [Barracuda Networks Technical Support](#). Always back up the running files in the `/opt/phion/config/active` directory before changing the configuration manually.

From the CLI, you can change your system configuration by editing the files in the `/opt/phion/config/configroot` directory. After checking the integrity of the edited files, copy them to the `/opt/phion/config/active` directory that contains active system configurations. Then execute the `activate` command to activate your changes. You must also refresh Barracuda Firewall Admin to display your new configurations.

To change and activate configuration changes from the CLI:

1. Back up the files in the `/opt/phion/config/active` directory.
2. At the command line, change to the `/opt/phion/config/configroot` directory.
3. Make the required changes to the appropriate file. For example, you can edit the `boxnet.conf` file.
4. Change to the `/bin` directory at `/opt/phion/modules/box/` for the configuration file that you edited. Enter:
 - **cd /opt/phion/modules/box/<config file>/bin**
 For example, to change to the `/bin` directory for the `boxnet.conf` file:
 - **cd /opt/phion/modules/box/boxnet/bin**
5. Verify the integrity of the configuration file that you edited in the `/opt/phion/config/configroot` directory. Enter:
 - **verify <path to the file in configroot directory>**
 For example, to verify the integrity of the `boxnet.conf` file:
 - **verify /opt/phion/config/configroot/boxnet.conf**
6. After the edited configuration file has been successfully checked, copy it to the `/opt/phion/config/active` directory.

To avoid the Box activation alert symbol being displayed on the screen, you can also use the command:
mv /opt/phion/preserve/boxnet.conf /opt/phion/config/active/boxnet.conf , instead of

copying the file.

7. Change into the */bin* directory at */opt/phion/modules/box/* and activate the configuration.

- **cd /opt/phion/modules/box/<config file>/bin**
- **activate**

For example, to activate changes to the *boxnet.conf* file:

- **cd /opt/phion/modules/box/boxnet/bin**
- **activate**

8. Refresh the configurations in Barracuda Firewall Admin. You have two options:

- Click **Disconnect** and then click **Reconnect**.
- In the Config Tree, right-click the top node and select **Refresh Complete Tree**.

Because Barracuda Firewall Admin displays configurations from the */opt/phion/config/configroot* directory and not the */opt/phion/config/active* directory, it is important that you refresh the Config Tree after making configuration changes in the CLI. Otherwise, Barracuda Firewall Admin overwrites your changes and displays settings from a cache of the previous configuration.

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