DHCP Broadband ™ Installation Guide

Contents

Introduction

This guide covers installing DHCP Broadband on Linux.

⚠ **Important**

If any step fails, do not skip the step or force the installation of any rpm package. An installation that has unmet dependencies will not operate correctly, and manual intervention will be required to complete the first time initialization process.

Install the OS

Install one of the supported operating systems.

Update the OS

Ensure that your operating system is fully updated with this command:

```
$ sudo yum update
```

Download the packages for your platform

```
wget http://www.weird-solutions.com/download/products/dhcp_broadband-retail-rhel5-i386.tar. ←
    gz
wget http://www.weird-solutions.com/download/products/dhcp_broadband-retail-rhel5-x86_64. ←
    tar.gz
wget http://www.weird-solutions.com/download/products/dhcp_broadband-retail-rhel6-i386.tar. ←
    gz
wget http://www.weird-solutions.com/download/products/dhcp_broadband-retail-rhel6-x86_64. ←
    tar.gz

wget http://www.weird-solutions.com/download/3rdparty/i686/FirebirdCS-2.1.3.18185-0.i686. ←
    rpm
wget http://www.weird-solutions.com/download/3rdparty/x86_64/FirebirdCS-2.1.3.18185-0.amd64 ←
    .rpm
```

Install Extra Required Packages

```
sudo yum install xinetd compat-libstdc++-33 net-snmp-libs net-snmp net-snmp-utils boost- ←
    date-time boost-filesystem boost-program-options boost-regex boost-signals boost-system  ←
    boost-thread libpng openssl
```

The stock Firebird 64 bit rpm has dependencies on two 32 bit libraries: ncurses-lib and compat-libstdc++-33. In order to install these, for 64 bit systems, use:

You may need to specify i386 instead of i686

```
$ sudo yum install ncurses-libs.i686
$ sudo yum install compat-libstdc++-33.i686
```

Install EPEL

Install only ONE of the following:

```
wget http://download.fedoraproject.org/pub/epel/5/i386/epel-release-5-4.noarch.rpm
wget http://download.fedoraproject.org/pub/epel/5/x86_64/epel-release-5-4.noarch.rpm
wget http://download.fedoraproject.org/pub/epel/6/i386/epel-release-6-8.noarch.rpm
wget http://download.fedoraproject.org/pub/epel/6/x86_64/epel-release-6-8.noarch.rpm
```

Install Monit

yum install monit

Ensure that chkconfig shows monit starting on boot.

Install the database

Use the command below to install the database. If this step fails, double check that you have compat-libstdc++-33 installed.

```
sudo rpm -ivh Firebird*.rpm
```

Increase Database Connections

The default installation of Firebird does not allow enough database connections through xinetd. To remedy this, add the following two settings to the /etc/xinetd.d/firebird file (at the bottom, but before the ending '}' character):

```
instances = UNLIMITED
per_source = UNLIMITED
```

After modifying that file, restart xinetd:

```
$ sudo /etc/init.d/xinetd restart
```

Stop the Monit daemon

service monit stop

This step ensures that monit does not attempt to start the daemon until installation is complete.

Unzip the application

Extract the rpms with this command:

```
tar -xzvf dhcp_broadband*.tar.gz
```

This will create a **dhcp_broadband** directory with all the RPMS.

Install the Packages

You can now install all of the packages with one command. In the **dhcp_broadband** directory, execute this command:

```
sudo rpm -ivh *.rpm
```

Manually creating a Firebird database account

Note
This step is NOT NORMALLY REQUIRED. Is is **only** required if the previous rpm installation failed because it could not create a database account.

If the RPM package installation failed to create a Firebird database account for the DHCP server, you can create the required account manually with the following steps:

First check to see if there's a DHCPT account in Firebird:

```
$ sudo grep ISC_USER /opt/firebird/SYSDBA.password
ISC_USER=sysdba
$ sudo grep ISC_PASS /opt/firebird/SYSDBA.password
ISC_PASSWD=pIRKQ8hV
$ sudo /opt/firebird/bin/gsec -display -user sysdba -password pIRKQ8hV | grep DHCPT
DHCPT                                    0       0
```

If this user doesn't exist, run the command below, then check that the account exists as shown in the commands above:

```
$ sudo /opt/firebird/bin/gsec -add dhcpt -pw dhcpt -user sysdba -password pIRKQ8hV
```

Install ntp

Install and configure ntp

Create log archive folders

By default, the service logs into the file /var/log/dhcptd.log. This file is periodically archived with logrotate into the dhcptd folder that you create in the step below:

```
$ sudo mkdir /var/log/dhcptd
```

Set DHCP Unique Server Index

Every server that will interoperate with another server must have a unique index. This index must be unique across all servers that can "see" each other.

If this is a single server install, there is no need to set the server index. The default index is 0.

To set this value in the config file `/etc/dhcpt/dhcptd.conf`:

system.index=0

Warning
The server index may only be between 0 and 15!

Check service startup

At this point you should set the service to start on boot:

```
$ chkconfig dhcptd on
$ chkconfig wsiwebuid on
```

Start the Monit daemon

```
$ service monit start
```

Monit should start the dhcptd service for you. Check that it's running with this command:

```
$ sudo service dhcptd start
$ ps axf | grep dhcptd
```

Logging In

Your DHCP service is now ready for configuration. Launch the user interface on any machine and enter the host name or ip address of the DHCP server to log in.

Configuring Failover (Command line interface instructions only)

Run **dhcpti** on the BACKUP server and enter this command:

```
set_system
mode=paused
```

Run **dhcpti** on the PRIMARY server and add a replication peer, assuming BACKUP is 192.168.6.6:

ON PRIMARY

```
insert_replicate_peer
classes=*
console_pass=
console_user=
description=
enabled=true
hb_monitor=192.168.6.6
logdir=backup1
mod_time=
target=192.168.6.6
```

Wait for the /var/lib/dhcptd/sync/192.168.6.6/resync directory to be removed. After removal, the backup is fully synchronized.

Run **dhcpti** on the BACKUP server and add a replication peer, assuming the PRIMARY is 192.168.6.3:

Note

This replication peer entry is **initially disabled**. This bypasses full automatic resync.

ON BACKUP

```
insert_replicate_peer
classes=*
console_pass=
console_user=
description=
enabled=false
hb_monitor=192.168.6.3
logdir=primary1
mod_time=
target=192.168.6.3
```

Note the OID of the new record, then update the record:

```
update_replicate_peer
where=T.oid=N
enabled=true
```

Run **dhcpti** on the BACKUP and set to `standby` mode:

```
set_system
mode=standby
```

Failover should now be fully functional.

Backup and Restore

Backup a database

```
$ grep ISC_PASS /opt/firebird/SYSDBA.password
$ /opt/firebird/bin/gbak -g -user SYSDBA -password <password> /var/lib/dhcptd/database/ ←
   dhcpt.fdb /var/lib/dhcptd/database/dhcpt.fbk
```

The resulting file is a backup, but it is **not** directly usable as a production database. Firebird will not even recognize it as a database, so you have to restore from this backup before you can use it.

> **Note**
> The **-g** option skips garbage collection, making the backup faster.

Restore a database

```
$ grep ISC_PASS /opt/firebird/SYSDBA.password
$ /opt/firebird/bin/gbak -c -user SYSDBA -password <password> /var/lib/dhcptd/database/ ←
   dhcpt.fbk /var/lib/dhcptd/database/dhcpt.fdb
```

The source file for the restore (`dhcpt.fbk`) must be a gbak backup file that was originally created with gbak.

Contact

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