Bacula 9.0.3 Compilation and Installation Commands

bacula.us /compilation/

Download Bacula Code (same for Server and Clients)

(This manual assumes you already installed MySQL or Postgresql to host Bacula Catalog Database)

Go to the url and fetch latest **bacula-x.x.x Source.tar.gz** file: http://blog.bacula.org/download-center/, or download directly from my website, uncompress and move to code directory (/usr/src/bacula*) with the bellow commands:

```
wget -qO- http://bacula.us/current | tar -xzvf - -C
/usr/src
```

1. wget -qO- http://bacula.us/current | tar -xzvf - -C /usr/src


```
wget -qO- http://bacula.us/current | tar -xzvf - -C
/usr/src
```


Bacula Linux Server Deps and Compilation (all daemons and bconsole)

a.1) Debian 8 / Ubuntu:

```
# Mysql:
apt-get install -y build-essential libreadline6-dev zlib1g-dev liblzo2-dev mt-st
mtx postfix libacl1-dev libssl-dev libmysql++-dev
# Postgresql:
apt-get install -y build-essential libreadline6-dev zlib1g-dev liblzo2-dev mt-st
mtx postfix libacl1-dev libssl-dev postgresql-server-dev-9.4
```

1. # Mysql:
2. apt-get install -y build-essential libreadline6-dev zlib1g-dev liblzo2-dev mt-st mtx postfix libacl1-dev libssl-dev libmysql++-dev
3. # Postgresql:
4. apt-get install -y build-essential libreadline6-dev zlib1g-dev liblzo2-dev mt-st mtx postfix libacl1-dev libssl-dev postgresql-server-dev-9.4


```
# Mysql:
apt-get install -y build-essential libreadline6-dev zlib1g-dev liblzo2-dev mt-st
mtx postfix libacl1-dev libssl-dev libmysql++-dev
# Postgresql:
apt-get install -y build-essential libreadline6-dev zlib1g-dev liblzo2-dev mt-st
mtx postfix libacl1-dev libssl-dev postgresql-server-dev-9.4
```


Proceed with the code configuration, changing the last options bellow accordingly (normally the last three):

```
# Mysql:
cd /usr/src/bacula*
./configure --with-readline=/usr/include/readline --disable-conio --
bindir=/usr/bin --sbindir=/usr/sbin --with-scriptdir=/etc/bacula/scripts --with-
working-dir=/var/lib/bacula --with-logdir=/var/log --enable-smartalloc --with-
mysql --with-archivedir=/mnt/backup --with-job-email=your@email.com --with-
hostname=ip_or_qualified_name

# Postgresql:
cd /usr/src/bacula*
./configure --with-readline=/usr/include/readline --disable-conio --
bindir=/usr/bin --sbindir=/usr/sbin --with-scriptdir=/etc/bacula/scripts --with-
working-dir=/var/lib/bacula --with-logdir=/var/log --enable-smartalloc --with-
postgresql --with-archivedir=/mnt/backup --with-job-email=your@email.com --with-
hostname=machine_ip_or_qualified_name
```

1. # Mysql:
2. cd /usr/src/bacula*
3. ./configure --with-readline=/usr/include/readline --disable-conio --bindir=/usr/bin --sbindir=/usr/sbin --with-scriptdir=/etc/bacula/scripts --with-working-dir=/var/lib/bacula --with-logdir=/var/log --enable-smartalloc --with-mysql --with-archivedir=/mnt/backup --with-job-email=your@email.com --with-hostname=ip_or_qualified_name
4. # Postgresql:
5. cd /usr/src/bacula*
6. ./configure --with-readline=/usr/include/readline --disable-conio --bindir=/usr/bin --sbindir=/usr/sbin --with-scriptdir=/etc/bacula/scripts --with-working-dir=/var/lib/bacula --with-logdir=/var/log --enable-smartalloc --with-postgresql --with-archivedir=/mnt/backup --with-job-email=your@email.com --with-hostname=machine_ip_or_qualified_name

```
# Mysql:
cd /usr/src/bacula*
./configure --with-readline=/usr/include/readline --disable-conio --
bindir=/usr/bin --sbindir=/usr/sbin --with-scriptdir=/etc/bacula/scripts --with-
working-dir=/var/lib/bacula --with-logdir=/var/log --enable-smartalloc --with-
mysql --with-archivedir=/mnt/backup --with-job-email=your@email.com --with-
hostname=ip_or_qualified_name

# Postgresql:
cd /usr/src/bacula*
./configure --with-readline=/usr/include/readline --disable-conio --
bindir=/usr/bin --sbindir=/usr/sbin --with-scriptdir=/etc/bacula/scripts --with-
working-dir=/var/lib/bacula --with-logdir=/var/log --enable-smartalloc --with-
postgresql --with-archivedir=/mnt/backup --with-job-email=your@email.com --with-
hostname=machine_ip_or_qualified_name
```

a.2) CentOS 7 / RedHat:

Add proper exceptions needed by Bacula for IPTABLES / Firewalld:

```
# IPTABLES
-A FW-1-INPUT -m state --state NEW -m tcp -p tcp --dport 9101:9103 -j
ACCEPT

# Firewalld
firewall-cmd --permanent --zone=public –add-port=9101-9103/tcp
firewall-cmd --reload
```

1. # IPTABLES
2. -A FW-1-INPUT -m state --state NEW -m tcp -p tcp --dport 9101:9103 -j ACCEPT
3. # Firewalld
4. firewall-cmd --permanent --zone=public –add-port=9101-9103/tcp
5. firewall-cmd --reload


```
# IPTABLES
-A FW-1-INPUT -m state --state NEW -m tcp -p tcp --dport 9101:9103 -j
ACCEPT

# Firewalld
firewall-cmd --permanent --zone=public –add-port=9101-9103/tcp
firewall-cmd --reload
```


Disable Selinux temporarily and permanently, or research and apply a Bacula policy.

```
setenforce 0
sudo sed -i "s/enforcing/disabled/g" /etc/selinux/config
sudo sed -i "s/enforcing/disabled/g"
/etc/sysconfig/selinux
```

1. setenforce 0
2. sudo sed -i "s/enforcing/disabled/g" /etc/selinux/config
3. sudo sed -i "s/enforcing/disabled/g" /etc/sysconfig/selinux


```
setenforce 0
sudo sed -i "s/enforcing/disabled/g" /etc/selinux/config
sudo sed -i "s/enforcing/disabled/g"
/etc/sysconfig/selinux
```


Proceed installing the dependencies:

```
# Mysql:
yum -y install gcc-c++ readline-devel zlib-devel lzo-devel libacl-devel mt-st mtx
postfix libssl-dev mariadb-devel

# Postgresql:
yum -y install gcc-c++ readline-devel zlib-devel lzo-devel libacl-devel mt-st mtx
postfix libssl-dev postgresql-devel
```

1. # Mysql:

2. yum -y install gcc-c++ readline-devel zlib-devel lzo-devel libacl-devel mt-st mtx postfix libssl-dev mariadb-devel
3. # Postgresql:
4. yum -y install gcc-c++ readline-devel zlib-devel lzo-devel libacl-devel mt-st mtx postfix libssl-dev postgresql-devel

```
# Mysql:
yum -y install gcc-c++ readline-devel zlib-devel lzo-devel libacl-devel mt-st mtx
postfix libssl-dev mariadb-devel

# Postgresql:
yum -y install gcc-c++ readline-devel zlib-devel lzo-devel libacl-devel mt-st mtx
postfix libssl-dev postgresql-devel
```

Proceed with the code configuration, changing the last options bellow accordingly (normally the last three):

```
# Mysql:
cd /usr/src/bacula*
./configure --with-readline=/usr/include/readline --disable-conio --
bindir=/usr/bin --sbindir=/usr/sbin --with-scriptdir=/usr/libexec/bacula/ --with-
working-dir=/var/spool/bacula/ --with-logdir=/var/log --enable-smartalloc --with-
mysql --with-archivedir=/mnt/backup --with-job-email=your@email.com --with-
hostname=ip_or_qualified_name

# Postgresql:
cd /usr/src/bacula*
./configure --with-readline=/usr/include/readline --disable-conio --
bindir=/usr/bin --sbindir=/usr/sbin --with-scriptdir=/usr/libexec/bacula/ --with-
working-dir=/var/spool/bacula/ --with-logdir=/var/log --enable-smartalloc --with-
postgresql --with-archivedir=/mnt/backup --with-job-email=your@email.com --with-
hostname=ip_or_qualified_name
```

1. # Mysql:
2. cd /usr/src/bacula*
3. ./configure --with-readline=/usr/include/readline --disable-conio --bindir=/usr/bin --sbindir=/usr/sbin --with-scriptdir=/usr/libexec/bacula/ --with-working-dir=/var/spool/bacula/ --with-logdir=/var/log --enable-smartalloc --with-mysql --with-archivedir=/mnt/backup --with-job-email=your@email.com --with-hostname=ip_or_qualified_name
4. # Postgresql:
5. cd /usr/src/bacula*
6. ./configure --with-readline=/usr/include/readline --disable-conio --bindir=/usr/bin --sbindir=/usr/sbin --with-scriptdir=/usr/libexec/bacula/ --with-working-dir=/var/spool/bacula/ --with-logdir=/var/log --enable-smartalloc --with-postgresql --with-archivedir=/mnt/backup --with-job-email=your@email.com --with-hostname=ip_or_qualified_name

```
# Mysql:
cd /usr/src/bacula*
./configure --with-readline=/usr/include/readline --disable-conio --
bindir=/usr/bin --sbindir=/usr/sbin --with-scriptdir=/usr/libexec/bacula/ --with-
working-dir=/var/spool/bacula/ --with-logdir=/var/log --enable-smartalloc --with-
mysql --with-archivedir=/mnt/backup --with-job-email=your@email.com --with-
hostname=ip_or_qualified_name

# Postgresql:
cd /usr/src/bacula*
./configure --with-readline=/usr/include/readline --disable-conio --
bindir=/usr/bin --sbindir=/usr/sbin --with-scriptdir=/usr/libexec/bacula/ --with-
working-dir=/var/spool/bacula/ --with-logdir=/var/log --enable-smartalloc --with-
postgresql --with-archivedir=/mnt/backup --with-job-email=your@email.com --with-
hostname=ip_or_qualified_name
```

b) To build, install and enable Bacula daemons start at boot time:

```
make -j8 && make install && make install-
autostart
```

1. make -j8 && make install && make install-autostart


```
make -j8 && make install && make install-
autostart
```


c) Preparing Database:

Run the create database, tables and database bacula user creation scripts:

```
# Debian:
/etc/bacula/scripts/create_bacula_database -u root -p &&
\
/etc/bacula/scripts/make_bacula_tables -u root -p && \
/etc/bacula/scripts/grant_bacula_privileges -u root -p

# Centos:
/usr/libexec/bacula/create_bacula_database -u root -p &&
\
/usr/libexec/bacula/make_bacula_tables -u root -p && \
/usr/libexec/bacula/grant_bacula_privileges -u root -p
```

1. # Debian:
2. /etc/bacula/scripts/create_bacula_database -u root -p && \
3. /etc/bacula/scripts/make_bacula_tables -u root -p && \
4. /etc/bacula/scripts/grant_bacula_privileges -u root -p
5. # Centos:
6. /usr/libexec/bacula/create_bacula_database -u root -p && \

7. /usr/libexec/bacula/make_bacula_tables -u root -p && \
8. /usr/libexec/bacula/grant_bacula_privileges -u root -p

```
# Debian:
/etc/bacula/scripts/create_bacula_database -u root -p &&
\
/etc/bacula/scripts/make_bacula_tables -u root -p && \
/etc/bacula/scripts/grant_bacula_privileges -u root -p

# Centos:
/usr/libexec/bacula/create_bacula_database -u root -p &&
\
/usr/libexec/bacula/make_bacula_tables -u root -p && \
/usr/libexec/bacula/grant_bacula_privileges -u root -p
```

You will be required to inform MySQL root password or may need to run scripts using: **sudo -u postgres [script]** in case of using Postgresql. For the last, it might be necessary also to copy the above scripts to **e.g.: /tmp**, in order to avoid postgres user permission errors.

d) Start Bacula daemons for the first time. E.g.:

```
service bacula-fd start && service bacula-sd start && service bacula-dir
start
```

1. service bacula-fd start && service bacula-sd start && service bacula-dir start

```
service bacula-fd start && service bacula-sd start && service bacula-dir
start
```

Type bconsole at shell to access Bacula CLI (asterisk "*" prompt).

```
bconsole
Connecting to Director localhost:9101
1000 OK: debian-dir Version: 7.4.0 (16 January
2016)
Enter a period to cancel a command.
*
```

1. bconsole
2. Connecting to Director localhost:9101
3. 1000 OK: debian-dir Version: 7.4.0 (16 January 2016)
4. Enter a period to cancel a command.
5. *

```
bconsole
Connecting to Director localhost:9101
1000 OK: debian-dir Version: 7.4.0 (16 January
2016)
Enter a period to cancel a command.
*
```

CLIENT ONLY Linux Deps, Compilation and Installation

Assuming you **downloaded and uncompressed Bacula source code (step 1) from last manual**, proceed:

a.1) Debian 8 / Ubuntu:

```
apt-get install -y build-essential zlib1g-dev liblzo2-dev libacl1-dev
cd /usr/src/bacula*
./configure --enable-client-only --enable-build-dird=no --enable-build-stored=no --bindir=/usr/bin --sbindir=/usr/sbin --with-scriptdir=/etc/bacula/scripts --with-working-dir=/var/lib/bacula --with-logdir=/var/log --enable-smartalloc
```

1. apt-get install -y build-essential zlib1g-dev liblzo2-dev libacl1-dev
2. cd /usr/src/bacula*
3. ./configure --enable-client-only --enable-build-dird=no --enable-build-stored=no --bindir=/usr/bin --sbindir=/usr/sbin --with-scriptdir=/etc/bacula/scripts --with-working-dir=/var/lib/bacula --with-logdir=/var/log --enable-smartalloc


```
apt-get install -y build-essential zlib1g-dev liblzo2-dev libacl1-dev
cd /usr/src/bacula*
./configure --enable-client-only --enable-build-dird=no --enable-build-stored=no --bindir=/usr/bin --sbindir=/usr/sbin --with-scriptdir=/etc/bacula/scripts --with-working-dir=/var/lib/bacula --with-logdir=/var/log --enable-smartalloc
```


a.2) CentOS 7 / RedHat:

Add proper exceptions needed by Bacula for IPTABLES:

```
# Iptables
-A FW-1-INPUT -m state --state NEW -m tcp -p tcp --dport 9102 -j ACCEPT

# Firewalld
firewall-cmd --permanent --zone=public –add-port=9102/tcp
firewall-cmd --reload
```

1. # Iptables
2. -A FW-1-INPUT -m state --state NEW -m tcp -p tcp --dport 9102 -j ACCEPT
3. # Firewalld
4. firewall-cmd --permanent --zone=public –add-port=9102/tcp
5. firewall-cmd --reload

```
# Iptables
-A FW-1-INPUT -m state --state NEW -m tcp -p tcp --dport 9102 -j
ACCEPT

# Firewalld
firewall-cmd --permanent --zone=public –add-port=9102/tcp
firewall-cmd --reload
```

Disable Selinux temporarily and permanently, or research and apply a Bacula policy.

```
setenforce 0
sudo sed -i "s/enforcing/disabled/g" /etc/selinux/config
sudo sed -i "s/enforcing/disabled/g"
/etc/sysconfig/selinux
```

1. setenforce 0
2. sudo sed -i "s/enforcing/disabled/g" /etc/selinux/config
3. sudo sed -i "s/enforcing/disabled/g" /etc/sysconfig/selinux


```
setenforce 0
sudo sed -i "s/enforcing/disabled/g" /etc/selinux/config
sudo sed -i "s/enforcing/disabled/g"
/etc/sysconfig/selinux
```


Proceed with dependencies and configure:

```
yum -y install gcc-c++ zlib-devel lzo-devel libacl-devel
cd /usr/src/bacula*
./configure --enable-client-only --enable-build-dird=no --enable-build-stored=no -
-bindir=/usr/bin --sbindir=/usr/sbin --with-scriptdir=/usr/libexec/bacula/ --with-
working-dir=/var/spool/bacula/ --with-logdir=/var/log --enable-smartalloc
```

1. yum -y install gcc-c++ zlib-devel lzo-devel libacl-devel
2. cd /usr/src/bacula*
3. ./configure --enable-client-only --enable-build-dird=no --enable-build-stored=no --bindir=/usr/bin --sbindir=/usr/sbin --with-scriptdir=/usr/libexec/bacula/ --with-working-dir=/var/spool/bacula/ --with-logdir=/var/log --enable-smartalloc


```
yum -y install gcc-c++ zlib-devel lzo-devel libacl-devel
cd /usr/src/bacula*
./configure --enable-client-only --enable-build-dird=no --enable-build-stored=no -
-bindir=/usr/bin --sbindir=/usr/sbin --with-scriptdir=/usr/libexec/bacula/ --with-
working-dir=/var/spool/bacula/ --with-logdir=/var/log --enable-smartalloc
```


b) To build, install and enable bacula-fd daemons start at boot time:

```
make -j8 && make install && make install-autostart-
fd
```

1. make -j8 && make install && make install-autostart-fd

```
make -j8 && make install && make install-autostart-
fd
```

c) Start Bacula Client daemon for the first time. E.g.:

```
service bacula-fd start
```

1. service bacula-fd start

```
service bacula-fd start
```

Windows Client Installation:

Go to theURL: http://blog.bacula.org/download-center/, and fetch most recent Windows Installation Packages **according to your operating system architecture (32 or 64 bits),** or download both here from my website:

http://www.bacula.us/winclients

Run the installer.

When asked, choose: **Automatic Installation; Client installation.**

Installer will also prompt to provide information about the actual **Director** name (that one that runs in the Linux Backup Server). You can fetch this information just accessing bconsole in that machine:

```
bconsole
Connecting to Director localhost:9101
1000 OK: debian-dir Version: 7.4.0 (16 January
2016)
Enter a period to cancel a command.
*
```

1. bconsole
2. Connecting to Director localhost:9101
3. 1000 OK: debian-dir Version: 7.4.0 (16 January 2016)
4. Enter a period to cancel a command.
5. *

```
bconsole
Connecting to Director localhost:9101
1000 OK: debian-dir Version: 7.4.0 (16 January
2016)
Enter a period to cancel a command.
*
```

In this case my Director name is: **debian-dir**.

Proceed with the installation untill it is done. Close further dialog boxes.

Windows bacula-fd should be running (you can see it in services.msc) and it’s safe to attach it to Bacula Director adding a new respective Client Resource in bacula-dir.conf. But this should be covered by advanced topics.