



# Bacula Enterprise Installation Guide

Bacula Systems Documentation

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## Contents

1	<b>Bacula Enterprise Installation on Linux</b>	2
2	<b>Bacula Enterprise Installation on Windows</b>	26
3	<b>Bacula Ansible Collection with Ansible Galaxy</b>	43
4	<b>Bacula Enterprise Setup Test</b>	43
5	<b>File Daemon (Client) Registration</b>	54

## Contents

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The following chapter aims at explaining how to install Bacula Enterprise. It is organized by operating systems.

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**Note:** Command line examples are for Bacula Enterprise 8.x and newer, but the installation method is similar for older versions.

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**Important:** The installation is conducted and set up with a PostgreSQL database backend. In general, Bacula Systems recommends using the latest stable version of PostgreSQL server available in your distribution's official repositories.

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Choose the operating system where you wish to have Bacula installed:

- *Bacula Enterprise Installation on Linux* (Director, Storage Daemon and Client)
- *Bacula Enterprise Installation on Windows* (Client only)

## 1 Bacula Enterprise Installation on Linux

The following chapter presents the ways of possible Bacula Enterprise installation on Linux, and lists the pros of choosing the recommended method. Bacula Enterprise can be installed in many ways, however, **using BIM is strongly recommended**. It automatically installs and sets up BE components in your system.

The program will:

- Detect the current distribution (Redhat, Debian, etc).
- Detect your personalized URL (*Download Area*) from the Customer Portal (*Your subscription* in the menu on the left). The URL has this format: <https://www.baculasystems.com/dl/@@customer@@>
- List the versions that are available for the current system.
- List the plugins that are available for the current version, system, and daemon being installed.
- Configure the package manager repository.
- Install the selected components.
- Configure Bacula daemons with a custom URL provided by the BWeb Registration module.

- Configure daemon services to start automatically.
- Configure firewalls automatically, according to the components installed.

Possible ways to install Bacula with Linux:

## 1.1 Linux: Bacula Enterprise Installation with BIM

The following article aims at explaining how to install Bacula Enterprise components (Director, File Daemon, Storage Daemon, bconsole), and Bweb with the use of Bacula Installation Manager and Linux OS. Bweb installation here is optional, however, it is recommended.

Bacula Installation Manager (BIM) supports the following platforms:

- RHEL 7, 8 and 9
- CentOS Linux 7 and 8 (Stream is not supported)
- Oracle Linux 8 and 9
- Rocky Linux 8 and 9
- Alma Linux 8 and 9
- Debian 9, 10 and 11
- Debian 12, Client/FD only (if you need DIR and SD, install the packages via apt)
- Ubuntu 18.04, 20.04 and 22.04

---

**Note:** BIM will take care of all aspects for your Bacula Enterprise installation with default advised parameters. If you need to customize it or link Bacula to PostgreSQL running on a different port or different server, use the *installation procedure via the packages*.

---

### Prerequisites

- One of the above operating systems (OS) successfully installed.
- Access to your network and to the Internet, or more specifically, to <https://www.baculasystems.com/> .
- Root or sudo access to install new software on the chosen OS.

**See also:**

See how to *verify your root or sudo access*.

- OS updated with the latest patches from your OS vendor.
- Python 2.7 or above installed.

**See also:**

See how to *check which Python version is installed* or *install the latest version of Python 3*.

## Steps

### Linux: Download BIM

1. Go to /tmp location.

```
cd /tmp
```

2. Download Bacula Installation Manager.

- when curl is installed, run:

```
curl -o bee_installation_manager https://baculasystems.com/ml/bee_installation_manager?  
↪chash=@@customer@@
```

---

**Note:** To install curl, you can use `sudo apt install curl` (for Ubuntu/Debian), or `sudo yum install curl` (for RHEL/CentOS).

---

or

- when curl is not installed, run:

```
wget -O bee_installation_manager https://www.baculasystems.com/ml/bee_installation_  
↪manager?chash=@@customer@@
```

---

**Note:** To install wget, you can use `sudo apt install wget` (for Ubuntu/Debian), or `sudo yum install wget` (for RHEL/CentOS).

---

3. Make BIM executable - run:

```
chmod +x bee_installation_manager
```

## Next Step

*Linux: Install Components*

### Linux: Install Components

The following article aims at presenting the reader with information on how to install specific Bacula Enterprise components.

---

**Important:** Now, we are installing Bacula Enterprise, so it is vital to remember that:

- A general command to install Bacula components is `./bee_installation_manager`, which installs File Daemon by default. If you wish to install other components, plugins or modify the command, use `./bee_installation_manager --help` to list all the possible options.
- In order to install other components (*File Daemon*, *Storage Daemon*) Bacula environment has to have at least one Director installed.

- With the installation of the Director, by default you install File Daemon, Storage Daemon and bconsole on the same host.
- 

## Linux: Install Director

The following article aims at presenting the reader with instructions on how to install a Director in a certain host.

---

**Important:** It is vital to remember that:

- With the installation of the Director, by default you install File Daemon, Storage Daemon and bconsole on the same host.
  - It is recommended to install Bweb plugin along with the installation of the Director. Other plugins can be added later.
  - When adding plugins later, Bacula will launch the installation/upgrade process.
  - While going through the installation/upgrade steps again, your configuration file will not be overwritten, and when it comes to File Daemon - you will not need to register the Client in Bweb again.
- 

## Prerequisites

General *Prerequisites* apply here.

## Steps

1. Run BIM and install the first component - Director:

```
./bee_installation_manager -t DIR
```

2. Confirm the Director and plugins installation with Y.

```
=====  
Installation of Director and associated plugins  
=====  
Proceed with Installation of Director and associated plugins? [Y/n] Y
```

3. Provide your download area address.

---

**Note:** To get your Download Area URL, go to your Customer Portal, click Your Subscription from the left menu, scroll down to the very bottom. You may copy your Download Area from Your Download Area section.

---

```
Please enter your Download Area URL. This information can be found in your Customer  
↳Portal in the "Your Subscription"  
menu : https://www.baculasystems.com/dl/@@customer@@
```

4. Choose the version to be installed.

```
Available versions found on your Download Area for your current operating system [rhel7-64]:
```

```
-----  
1 : 11.0.6    2 : 12.0.5    3 : 12.2.5    4 : 12.4.4    5 : 12.6.5  
6 : 12.8.4    7 : 14.0.7    8 : 16.0.3  
-----
```

```
Please, select the version of your Bacula Director ('16.0.3' by default) :
```

5. Choose the plugins to be installed (optional).

---

**Note:** It is recommended to install BWeb alongside the Director.

---

```
The following plugins available for the Director can be installed at version 14.0.3 :
```

```
-----  
1 : bweb          2 : callhome-dir  3 : totp-dir  
-----
```

```
Select the number(s) of the plugins you want to install, separated by commas.  
Leave empty and just press <Enter> to skip plugin selection : 1
```

6. Proceed with Managing Firewall rules.

---

**Note:** Choose the default options proposed for the firewall setting, unless the policies of your company require different rules.

---

```
=====  
Managing Firewall rules
```

```
=====  
Proceed with Managing Firewall rules? [Y/n]
```

```
Available Firewalls
```

```
-----  
1 : iptables      2 : firewall-cmd  
-----
```

```
Please, make your selection : ('firewall-cmd' by default) :
```

7. Confirm the process with Y.

```
=====  
Ready to process the following operations
```

```
=====  
[X] Installation of : Bacula, bweb
```

```
[X] Managing Firewall rules
```

```
Continue or (r)etry? [Y/n/r]
```

## Result

Bacula Director (+ optionally Bweb) is installed.

```
Installation of Director Successfully completed
=====
If you wish to use the Bacula CLI, please type "sudo -u bacula /opt/bacula/bin/bconsole"
BWeb has been installed. It can be accessed on https://<Bweb's IP or FQDN>:9180/
=====
Bacula Enterprise Installation Manager. Done.
=====
```






## Post-installation Suggestions

If you installed Bweb, open a browser and copy/type the address you have received in the final message from the BIM installation wizard.

1. When prompted, enter the login and password as was entered in BIM for BWeb, the username being *admin*.
2. On the welcome screen, click “Next”.

## Welcome to Bacula Enterprise 16.0.5

### BWeb Management Console

-  **Director**
-  **File Daemon**
-  **Storage Daemon**
-  **Console**
-  **Catalog**

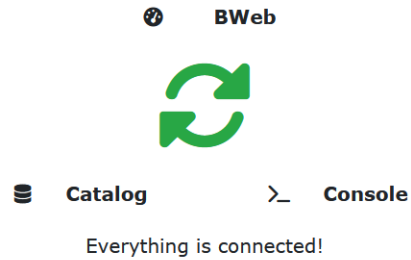
You have installed the Bacula Enterprise core components, or some core components were already installed

 Next

You will be presented with the Checking Connection screen.

## BWeb Management Console

Checking connections



After the connection is checked, you will be presented with the following screen:

## BWeb Management Console

How would you like to configure your Bacula Enterprise?

Use BWeb to configure with guidance and wizards

or

Use any IDE or text editor to edit Bacula Enterprise configuration files

[See Manually configuring Bacula Enterprise](#)

[Exit](#) Configure manually

[Next](#)

3. Click "Next".

4. Choose the preferred option.



## BWeb Management Console

### Job reporting

BWeb makes it easy to monitor jobs, but you can also set the job reporting to send emails or output to the console. The reporting settings via the Messages resource can be adapted later.

Job logs in console

Activated

Job logs by email

Deactivated

Change Email address (default)

5. Click “Save new configuration”.

Now, you will be able to verify the connection to the Catalog from Bweb, and the connection to bconsole from Bweb.

6. On the main page of Bweb, navigate to “Configuration” -> “Bweb Configuration” on the left navigational panel.

7. On the right side of the page, click “Edit” on the “Actions” panel.

8. In edit mode, click on the icon “SQL Link Status” to verify the link with the Catalog, and on the second icon “Bconsole Link Status” to verify the link to bconsole.

Once clicked, both should have a green check mark indicator.

Both of these are essential for BWeb. If you have installed BWeb on the same operating system than the DIR, the Catalog and the SD, you have nothing else to do on this page. Finalize your configuration by clicking “Save”.

Go back to *Install Components on Linux*

Go back to *the main Bacula Installation page*

## Linux: Install File Daemon (Client)

The following article aims at presenting the reader with instructions on how to install a File Daemon (Client), how to install chosen FD plugins, and manage firewall rules.

The File Daemon allows backing up any data stored in the system on which it is installed via the Client resource defined in the Director.

---

**Important:** If you wish to modify arguments, run: `bee_installation_manager --help`.

---

### Prerequisites

General *Prerequisites* apply here.

Also:

- Director already installed.

### Steps

1. Run BIM:

```
./bee_installation_manager
```

2. Confirm the File Daemon and plugins installation with Y.

```
=====  
Installation of File Daemon (Client) and associated plugins  
=====  
Proceed with Installation of Director and associated plugins? [Y/n] Y
```

3. Provide your download area address.

---

**Note:** To get your Download Area URL, go to your Customer Portal, click Your Subscription from the left menu, scroll down to the very bottom. You may copy your Download Area from Your Download Area section.

---

```
Please enter your Download Area URL. This information can be found in your Customer  
↳Portal in the "Your Subscription" menu : https://www.baculasystems.com/dl/@@customer@@
```

4. Choose the version to be installed.

---

**Important:** The version of the File Daemon must not be higher than the version of the Bacula Director.

---

```
Available versions found on your Download Area for your current operating system [rhel7-  
↳64]:  
-----  
↳-----  
1 : 11.0.6   2 : 12.0.5   3 : 12.2.5   4 : 12.4.4   5 : 12.6.5  
6 : 12.8.4   7 : 14.0.7   8 : 16.0.3
```

(continues on next page)

```
-----
↵-----
Please, select the version of your Bacula Director ('16.0.3' by default) :
```

5. Choose the plugins to be installed (optional).

```
The following plugins available for the File Daemon can be installed at version 16.0.3 :
-----
 1 : antivirus           2 : azure-vm           3 : cdp
 4 : db2                 5 : delta              6 : docker
 7 : google-workspace   8 : hdfs               9 : inventory
10 : kubernetes         11 : ldap              12 : m365
13 : mysql              14 : ndmp              15 : netapp-hfc
16 : nutanix            17 : openshift        18 : oracle
19 : postgresql        20 : rhv               21 : s3
22 : sap-hana           23 : security          24 : snapshot
25 : sybase             26 : vsphere
-----
Select the number(s) of the plugins you want to install, separated by commas.
Leave empty and just press <Enter> to skip plugin selection :
```

6. Confirm the process with Y.

```
=====
Registration of File Daemon (Client) via Bweb
=====
Proceed with Installation of Director and associated plugins? [Y/n] Y
Please enter the Automatic Configuration URL provided by Bweb :
```

Along with the File Daemon (Client) installation, you must proceed to register the File Daemon via Bweb. You must have the Director and BWeb installed for this. See *File Daemon (Client) Creation and Registration*.

7. Confirm your Director address.

```
A potential Director address is detected and will be used by default: 10.0.XX.XXX
Press Enter to use 10.0.XX.XXX, or type a new Director address or type * to accept any
↵incoming
address [10.0.XX.XXX|dir-addr|*] :
```

8. Confirm the operations with ``Y`.

```
=====
Ready to process the following operations
=====
[X] Installation of : Bacula
[X] Registration of File Daemon (Client) via BWeb
[X] Managing Firewall rules

Continue or (r)etry? [Y/n/r]
```

9. Proceed with Managing Firewall rules.

**Note:** Choose the default options proposed for the firewall setting, unless the policies of your company require

different rules.

---

```
=====
Managing Firewall rules
=====
Proceed with Managing Firewall rules? [Y/n]

Available Firewalls
-----
 1 : iptables          2 : nft                3 : firewall-cmd
-----
Please, make your selection : ('firewall-cmd' by default) :
```

10. Confirm the process with Y.

```
=====
Ready to process the following operations
=====
[X] Installation of : Bacula
[X] Managing Firewall rules

Continue or (r)etry? [Y/n/r]
```

## Result:

Bacula remote File Daemon is installed and registered in the Director.

## Post-installation Suggestions

### Verify the Access to a Newly Installed Client

1. Go to BWeb.
2. Click “Clients” → “Client Overview”.
3. Select the newly installed Client and click “Status”.

**Client Overview**

**Overview**

**Client Version**

**Client Os**

Name	Select	Desc	Auto Prune	File Retention	Job Retention	Tags
aga-Dir-BWeb-BIM-tst-fd	<input checked="" type="checkbox"/>	16.0.3 (09Mar23) x86_64-redhat-linux-gnu-bacula-enterprise,redhat,(Sky	1	60 days	180 days	
aga-FD-BIM-tst-fd	<input type="checkbox"/>		1	60 days	180 days	
bp-lin2023-mssql-client	<input type="checkbox"/>		1	60 days	180 days	

You should reach the following page:

**Client Status**

Client: aga-Dir-BWeb-BIM-tst-fd

Version: 16.0.3 (09 March 2023)

Uname: x86\_64-redhat-linux-gnu-bacula-enterprise,redhat,(Sky

Client Started: 2023-03-23 05:12:12

Running Jobs: 0/1

No. Jobs: 61

No. Bytes: 113.7 MB

No. Files: 4494

No. Errors: 0

File/Job Retention: 2 months / 6 months

AutoPrune: Yes

FIPS: No

Debug: Disabled

Plugins: bpipe

Job Duration: 'aga-Dir-BWeb-BIM-tst-fd'/all Job Rate: 'aga-Dir-BWeb-BIM-tst-fd'/all

Job status rating

JobBytes sum: 'aga-Dir-BWeb-BIM-tst-fd'/all

If you can read the Client name and its Version, then it means you can start backing up and restoring this Client.

**Note:** The same operation is possible also from bconsole with the use of the command: `status client=ClientName`

Go back to [the main Bacula Installation page regarding Linux](#)

Go back to [the main Bacula Installation page](#)

## Linux: Install Storage Daemon

The following article aims at presenting the reader with instructions on how to install Storage Daemon.

---

**Important:** It is vital to remember that:

- It is possible to install plugins along with the installation of the component.
  - When adding plugins later, Bacula will launch the installation/upgrade process.
  - While going through the installation steps again, your configuration file will not be overwritten.
- 

### Prerequisites

General *Prerequisites* apply here.

### Steps

1. Run BIM and install SD:

```
./bee_installation_manager -t SD
```

2. Confirm the Director and plugins installation with Y.

```
=====  
Installation of Director and associated plugins  
=====  
Proceed with Installation of Director and associated plugins? [Y/n] Y
```

3. Provide your download area address.

---

**Note:** To get your Download Area URL, go to your Customer Portal, click Your Subscription from the left menu, scroll down to the very bottom. You may copy your Download Area from Your Download Area section.

---

```
Please enter your Download Area URL. This information can be found in your Customer  
↳Portal in the "Your Subscription"  
menu : https://www.baculasystems.com/dl/@@customer@@
```

4. Choose the version to be installed.

```
Available versions found on your Download Area for your current operating system [rhel7-  
↳64]:  
-----  
↳-----  
 1 : 11.0.6   2 : 12.0.5   3 : 12.2.5   4 : 12.4.4   5 : 12.6.5  
 6 : 12.8.4   7 : 14.0.7   8 : 16.0.3  
-----  
↳-----  
Please, select the version of your Bacula Director ('16.0.3' by default) :
```

5. Choose the plugins to be installed (optional). - Do people need to give some password here? I'm using QA download area, and I'm asked for the password to admin account.

---

**Note:** It is recommended to install BWeb alongside the Director.

---

The following plugins available **for** the Director can be installed at version 14.0.3 :

```
-----
 1 : aligned          2 : cloud-azure      3 : cloud-glacier
 4 : cloud-google     5 : cloud-oracle    6 : cloud-s3
 7 : cloud-swift      8 : dedup           9 : key-manager
-----
```

Select the number(s) of the plugins you want to install, separated by commas.  
Leave empty **and** just press <Enter> to skip plugin selection :

6. Proceed with Managing Firewall rules.

---

**Note:** Choose the default options proposed for the firewall setting, unless the policies of your company require different rules.

---

```
=====
Managing Firewall rules
=====
Proceed with Managing Firewall rules? [Y/n]

Available Firewalls
-----
 1 : iptables          2 : firewall-cmd
-----
Please, make your selection : ('firewall-cmd' by default) :
```

7. Confirm the process with Y.

```
=====
Ready to process the following operations
=====
[X] Installation of : Bacula
[X] Managing Firewall rules

Continue or (r)etry? [Y/n/r]
```

## Result

Bacula Storage Daemon is installed.

```
Installation of Storage Daemon Successfully completed
=====
Bacula Enterprise Installation Manager. Done.
=====
```

Go back to *Install Components on Linux*



Go back to *the main Bacula Installation page*

## Check Python Version Installed

To check the Python version installed:

1. Run:

```
python --version
```

or

```
python3 --version
```

### Result:

If the Python version installed is 2.7 or above, proceed with the *Linux BE installation with BIM*.

If there is no Python installed or the version is older than 2.7, *install the latest version of Python 3*.

## Install Python 3

The following article presents how to install Python 3 on Ubuntu/Debian, or RHEL/CentOS.

### Ubuntu/Debian

To install the latest version of Python 3:

1. Run:

```
apt install python3
```

### RHEL/CentOS

1. Run:

```
yum install python3
```

Go to: *Linux BE installation with BIM*.

## Verify Root/Sudo Access

To verify your root access:

1. Open a terminal
2. Run:

```
sudo /bin/bash
```

or

```
su -
```

**Result:**

If you have root/sudo, you will be prompted with a root console denoted by a # sign.

Go to: [Linux: Bacula Enterprise Installation with BIM](#).

## 1.2 Linux: Installation with Package Manager

The following article aims at explaining how to install Bacula Enterprise components with the use of Package Manager.

Following this guide, the software below will be installed:

- PostgreSQL (Catalog)
- Bacula Enterprise

---

**Note:** PostgreSQL is highly recommended, however, if you intend to use MySQL instead, adapt the commands in this guide and replace 'postgres' with 'mysql'. We encourage the usage of PostgreSQL for performance reasons as Bacula Enterprise was specially fine-tuned for it.

---

### Linux: Bacula Enterprise Installation with Package Manager on Debian/Ubuntu

The following article aims at explaining how to install Bacula Enterprise components with the use of Package Manager on Debian/Ubuntu.

#### Prerequisites

- XXX (APT transport for downloading via the HTTP Secure protocol (HTTPS) package and sudo installed ([link](#)))

```
apt-get install apt-transport-https sudo
```

- signature keys imported:
  - download:

```
wget -P /tmp https://www.baculasystems.com/dl/@@customer@@/BaculaSystems-Public-  
Signature-08-2017.asc
```

@@customer@@ refers to your personalized area string. You can find your personalized URL (*Download Area*) from the Customer Portal (*Your subscription* in the menu on the left). The URL has this format: <https://www.baculasystems.com/dl/@@customer@@>

- import:

```
apt-key add /tmp/BaculaSystems-Public-Signature-08-2017.asc
```

After successful import, you can remove the file:

```
rm /tmp/BaculaSystems-Public-Signature-08-2017.asc
```

---

**Note:** Since apt-key is deprecated in more recent linux versions, we recommend to use:

```
/usr/lib/apt/apt-helper download-file https://www.baculasystems.com/dl/@@customer@@/
BaculaSystems-Public-Signature-08-2017.asc \
```

```
/tmp/BaculaSystems-Public-Signature-08-2017.asc && sudo mv /tmp/BaculaSystems-Public-Signature-08-2017.
asc /etc/apt/trusted.gpg.d
```

---

- PostgreSQL installed, run this command to install it:

```
apt-get install postgresql postgresql-client
```

By default, PostgreSQL uses the IDENT method and accepts the local “bacula” user credentials.

## Steps

1. Configure package manager:

Add the following to a file /etc/apt/sources.list.d/bacula.list

```
#Bacula Enterprise
deb https://www.baculasystems.com/dl/@@customer@@/debs/bin/@@bee-version@@/@@os-
↪version@@-@@arch@@/ @@os-version@@ main
```

@@bee-version@@ should be replaced by the version of Bacula Enterprise you purchased (14.x.y, 12.x.y)

@@os-version@@ is the code name of the distribution (buster/stretch/jessie)

@@arch@@ Architecture: 32 or 64 bit

---

**Note:** On Ubuntu 64 bit systems you will need to write **deb [arch=amd64]** instead of **deb**

---

A complete example might look like this:

Debian:

```
#Bacula Enterprise
deb https://www.baculasystems.com/dl/Customer-123456/debs/bin/14.0.6/buster-64/ buster.
↪main
```

Ubuntu:

```
#Bacula Enterprise
deb https://www.baculasystems.com/dl/Customer-123456/debs/bin/14.0.6/bionic-64/ bionic.
↪main
```

2. Update your package manager and verify your Bacula Enterprise repositories are correctly configured:

```
apt-get update
```

3. Run this command to install the Bacula Enterprise packages:

```
apt-get install bacula-enterprise-postgresql
```

will ask if you want to “Configure database for bacula-enterprise-postgresql with dbconfig-common?” Choose Yes then enter a password and confirm it.

## Result

PostgreSQL: Director, Storage Daemon and Client installed.

Post-installation actions to make Bacula jobs available:

Launch the Bacula daemons:

```
systemctl start bacula-fd.service
```

```
systemctl start bacula-sd.service
```

```
systemctl start bacula-dir.service
```

## Post-installation Suggestions

If you are using tape libraries, you might want to add the bacula user to the “tape” group.

```
gpasswd -a bacula tape
```

### See also:

Go to:

- [Linux: BWeb Installation with Package Manager on Debian/Ubuntu](#)
- [PackageManagerBERHELCentOS](#)
- [Linux: BWeb Installation with Package Manager on RHEL/CentOS](#)

Go back to [Linux: Installation with Package Manager](#)

## Linux: BWeb Installation with Package Manager on Debian/Ubuntu

The following article aims at explaining how to install Bweb with the use of Package Manager on Debian/Ubuntu.

## Prerequisites

Bacula Enterprise (Director) installed (click [Linux: Bacula Enterprise Installation with Package Manager on Debian/Ubuntu](#)).

## Steps

1. Configure package manager:

Add the following to a file `/etc/apt/sources.list.d/bacula.list`

```
#Bacula Enterprise
deb https://www.baculasystems.com/dl/@@customer@@/debs/bweb/@@bee-version@@/@@os-
↳version@@-@@arch@@/ @@os-version@@ bweb
```

`@@customer@@` refers to your personalized area string. You can find your personalized URL (*Download Area*) from the Customer Portal (*Your subscription* in the menu on the left). The URL has this format: `https://www.baculasystems.com/dl/@@customer@@`

`@@bee-version@@` should be replaced by the version of Bacula Enterprise you purchased (12.x.y, 10.x.y)

`@@os-version@@` is the code name of the distribution (buster/stretch/jessie)

`@@arch@@` Architecture: 32 or 64 bit

---

**Note:** `[arch=amd64]` is mandatory only for 64 bit systems

---

A complete example might look like this:

Debian:

```
#Bacula Enterprise
deb https://www.baculasystems.com/dl/Customer-123456/debs/bweb/14.0.6/buster-64/ buster_
↳bweb
```

Ubuntu:

```
#Bacula Enterprise
deb [arch=amd64] https://www.baculasystems.com/dl/Customer-123456/debs/bweb/14.0.6/
↳bionic-64/ bionic bweb
```

---

**Note:** On Ubuntu 64 bit systems you will need to write `deb [arch=amd64]` instead of `deb`

---

2. Update your package manager and verify your BWeb Management Suite repository is correctly configured:

```
apt-get update
```

3. Install BWeb

```
apt-get install bacula-enterprise-bweb
```

This will pull a lot of Perl dependencies that must be installed because BWeb depends on them.

4. As mentioned in the install output, you need to run the following script to finalize the installation of BWeb

```
/opt/bweb/bin/install_bweb.sh
```

## Result

Bweb is installed.

## Post-installation Suggestions

Start and enable the BWeb system service:

```
systemctl start bweb.service
```

```
systemctl enable bweb.service
```

### See also:

Go back to:

- [Linux: Bacula Enterprise Installation with Package Manager on Debian/Ubuntu](#)

Go to:

- [PackageManagerBERHELCentOS](#)
- [Linux: BWeb Installation with Package Manager on RHEL/CentOS](#)

Go back to [Linux: Installation with Package Manager](#)

## Linux: Bacula Enterprise Installation with Package Manager on RHEL/CentOS

The following article aims at explaining how to install Bacula Enterprise components with the use of Package Manager on RedHat/CentOS 7/Rocky Linux/Alma Linux.

### Prerequisites

- signature keys imported:
  - download:

```
wget -P /tmp https://www.baculasystems.com/dl/@@customer@@/BaculaSystems-Public-  
->Signature-08-2017.asc
```

**@@customer@@** refers to your personalized area string. You can find your personalized URL (*Download Area*) from the Customer Portal (*Your subscription* in the menu on the left). The URL has this format: <https://www.baculasystems.com/dl/@@customer@@>

-import:

```
rpm --import /tmp/BaculaSystems-Public-Signature-08-2017.asc
```

- remove:

```
rm /tmp/BaculaSystems-Public-Signature-08-2017.asc
```

- PostgreSQL installed, please run this command to

install it:

```
yum install postgresql-server
```

Initialize the PostgreSQL database engine:

```
postgresql-setup initdb
```

Configure the PostgreSQL service to start at boot time:

```
systemctl enable postgresql.service
```

Start PostgreSQL:

```
systemctl start postgresql.service
```

By default, PostgreSQL uses the IDENT method and accepts the local “bacula” user credentials.

## Steps

1. Configure package manager:

**Warning:** RHEL7 uses rpm version 4.11 which does not support GPG with subkeys. Bacula Systems uses subkeys to sign newer distribution packages. In RHEL7 / CentOS7 one must disable gpg check `gpgcheck=0` in order to avoid *NOKEY* warnings.

If you would like to enable gpgcheck, you can install dnf (which supports subkeys) and use it to install Bacula Enterprise instead of yum.

[Fedora bug tracker:](#)

[RPM Release notes:](#)

Add the following to a file `/etc/yum.repos.d/bacula.repo`

```
[Bacula-Enterprise]
name= Bacula Enterprise
baseurl=https://www.baculasystems.com/dl/@@customer@@/rpms/bin/@@bee-version@@/@@rhel@@-
-@@arch@@/
enabled=1
protect=0
gpgcheck=1
```

`@@bee-version@@` should be replaced by the version of Bacula Enterprise you purchased (14.x.y, 12.x.y)

`@@rhel@@` is the version of your RedHat/CentOS distribution (8/7)

`@@arch@@` Architecture: 32 or 64 bit

A complete example may look like this:

```
[Bacula-Enterprise]
name=Red Hat Enterprise - Bacula - Enterprise
baseurl=https://www.baculasystems.com/dl/Customer-123456/rpms/bin/14.0.6/rhel7-64/
enabled=1
protect=0
gpgcheck=1
```

2. Update your package manager and verify your Bacula Enterprise repositories are correctly configured:

```
yum update
```

3. Run this command to install the Bacula Enterprise packages:

```
yum install bacula-enterprise-postgresql
```

4. Run the following commands to create the database and grant ownership:

```
su - postgres
```

```
/opt/bacula/scripts/create_postgresql_database
```

```
/opt/bacula/scripts/make_postgresql_tables
```

```
/opt/bacula/scripts/grant_postgresql_privileges
```

```
exit
```

## Result

PostgreSQL: Director, Storage Daemon and Client installed.

## Post-installation Suggestions

Launch the Bacula daemons:

```
systemctl start bacula-fd.service
```

```
systemctl start bacula-sd.service
```

```
systemctl start bacula-dir.service
```

Post-installation advice:

If you are using tape libraries, you might want to add the bacula user to the “tape” group.

```
gpasswd -a bacula tape
```

### See also:

Go back to:

- [Linux: Bacula Enterprise Installation with Package Manager on Debian/Ubuntu](#)
- [Linux: BWeb Installation with Package Manager on Debian/Ubuntu](#)

Go to:

- [Linux: BWeb Installation with Package Manager on RHEL/CentOS](#)

Go back to [Linux: Installation with Package Manager](#)



## Linux: BWeb Installation with Package Manager on RHEL/CentOS

The following article aims at explaining how to install Bweb with the use of Package Manager on RedHat/CentOS 7/Rocky Linux/Alma Linux.

### Prerequisites

Bacula Enterprise installed ([click here](#)).

Configure package manager:

Add the following to a file `/etc/yum.repos.d/bacula.repo`

```
[Bacula-Enterprise-BWeb]
name = BWeb Management Suite
baseurl = https://www.baculasystems.com/dl/@@customer@@/rpms/bweb/@@bee-version@@/
--@@rhel@@-@@arch@@/
enabled = 1
protect = 0
gpgcheck = 1

[Bacula-Enterprise-DAG]
name = Bacula Systems DAG for BWeb
baseurl = https://www.baculasystems.com/dl/DAG/@@rhel@@-@@arch@@/
enabled = 1
protect = 0
gpgcheck = 0
```

`@@customer@@` refers to your personalized area string. You can find your personalized URL (*Download Area*) from the Customer Portal (*Your subscription* in the menu on the left). The URL has this format: `https://www.baculasystems.com/dl/@@customer@@`

`@@bee-version@@` should be replaced by the version of Bacula Enterprise you purchased (12.x.y, 10.x.y)

`@@rhel@@` is the version of your RedHat/CentOS distribution (7/8)

`@@arch@@` Architecture: 32 or 64 bit

A complete example may look like this:

```
[Bacula-Enterprise-BWeb]
name = BWeb Management Suite
baseurl = https://www.baculasystems.com/dl/Customer-123456/rpms/bweb/14.0.6/rhel7-64/
enabled = 1
protect = 0
gpgcheck = 1

[Bacula-Enterprise-DAG]
name = Bacula Systems DAG for BWeb
baseurl = https://www.baculasystems.com/dl/DAG/rhel7-64/
enabled = 1
protect = 0
gpgcheck = 0
```

Update your package manager and verify your Bacula Enterprise repositories are correctly configured:

```
yum update
```

Install BWeb

```
yum install bacula-enterprise-bweb
```

As mentioned in the install output, you need to run the following script to finalize the installation of BWeb

```
/opt/bweb/bin/install_bweb.sh
```

## Result

Bweb is installed.

## Post-installation Suggestions

Start and enable the BWeb system service:

```
systemctl start bweb.service
```

```
systemctl enable bweb.service
```

### See also:

Go back to:

- [Linux: Bacula Enterprise Installation with Package Manager on Debian/Ubuntu](#)
- [Linux: BWeb Installation with Package Manager on Debian/Ubuntu](#)
- [PackageManagerBERHELCentOS](#)

Go back to [Linux: Installation with Package Manager](#)

Look into your download area for any other platform support like SLES, Mac OS X, Solaris, FreeBSD and more available.

Go back to [the main Installation page](#).

## 2 Bacula Enterprise Installation on Windows

---

**Important:** Since it is possible to install only Client on Windows, it is recommended to start with [Bacula Enterprise Installation on Linux](#) to install Director and Storage Daemon.

---

The following chapter presents the ways of possible Bacula Enterprise installation on Windows. Bacula Enterprise can be installed in many ways, however, **using Windows Installer is strongly recommended**.

## 2.1 Windows: Bacula Enterprise Installation with Windows Installer

The following article aims at explaining how to install Bacula Enterprise components (File Daemon, Storage Daemon, consoles) with the use of Windows Installer and Windows OS.

### Prerequisites

- Windows operating systems (OS) successfully installed.
- Access to your network and to the Internet, or more specifically, to <https://www.baculasystems.com/>
- OS updated with the latest patches from your OS vendor.
- Director installed.

---

**Important:** Bacula Director binary can't be installed on a Windows host, it needs to be done on a separate Unix or Linux host

---

### Install Components

#### Install FD with Windows Installer

The File Daemon will permit you to backup any data stored on the system on which it is installed via the Client resource defined in the Director.

### Prerequisites

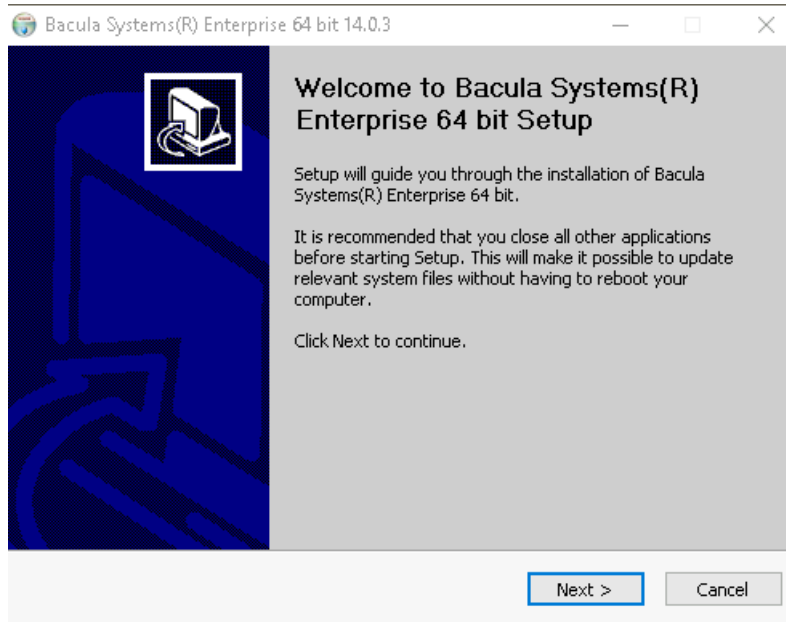
The Bacula Installer on Windows supports Windows server and desktop operating systems.

General *Prerequisites* apply here.

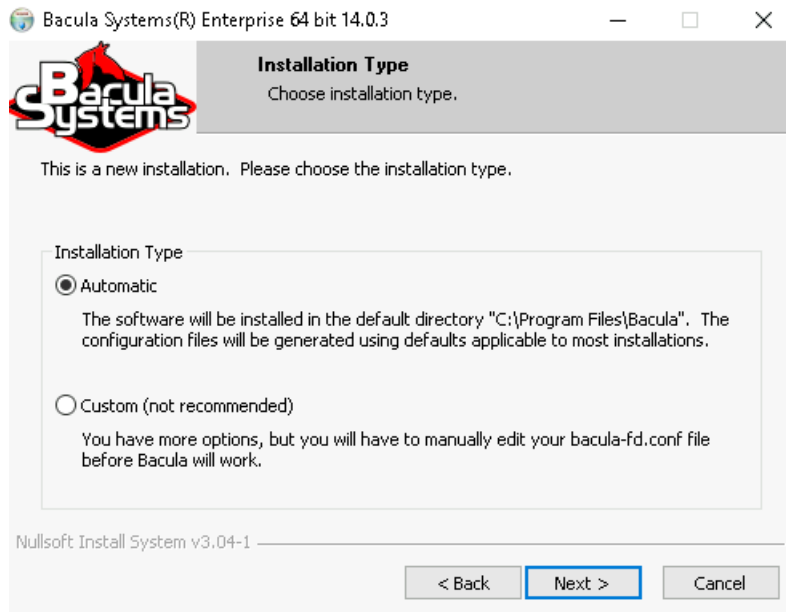
### Steps

1. Download the .exe Windows Installer from your download area under Windows/<Bacula version>/win64/.
2. Run the program.

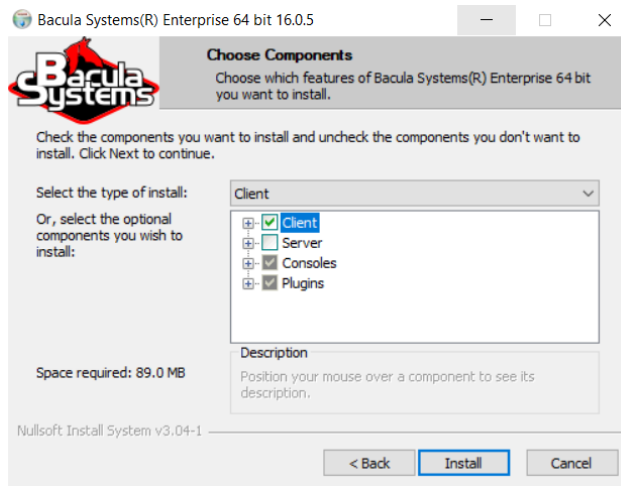
You will get to the first screen of the Bacula Windows Installer.



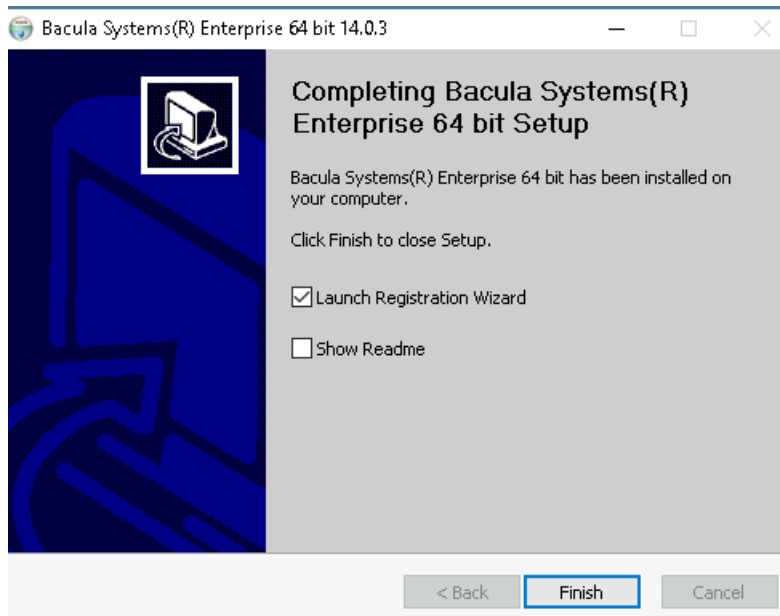
3. Click “Next”.
4. Accept the license agreement.
5. Select the *Automatic* installation type.



6. Click Next.
7. On the *Choose Components* screen, keep the default selections.



8. Click Install.
9. On the next screen, keep *Launch Registration Wizard* selected.
10. Click “Finish”.



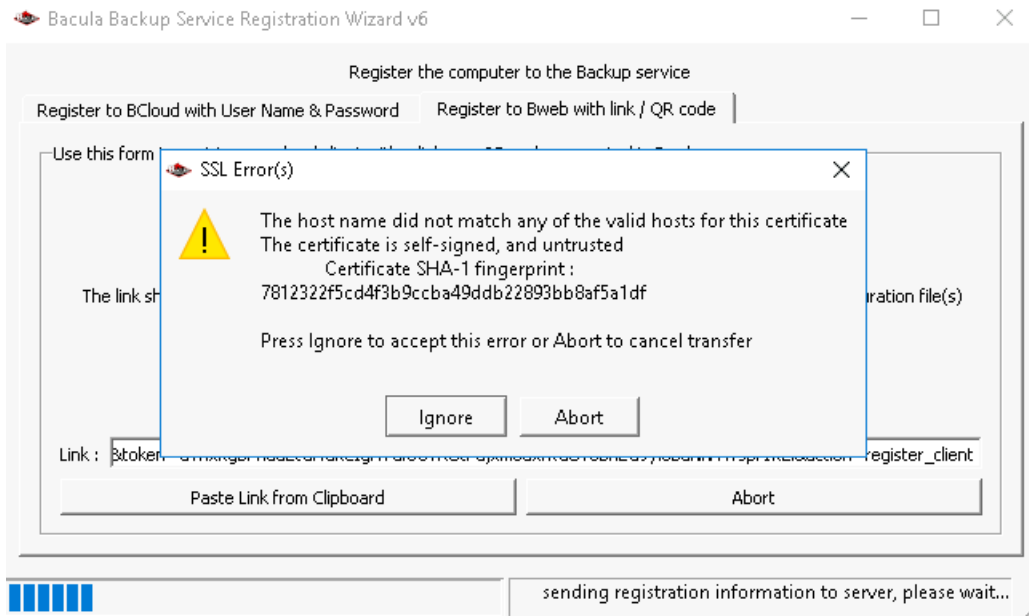
A new window will appear, possibly behind any other open window.

11. Click on the *Register to BWeb with link/QR Code* tab.

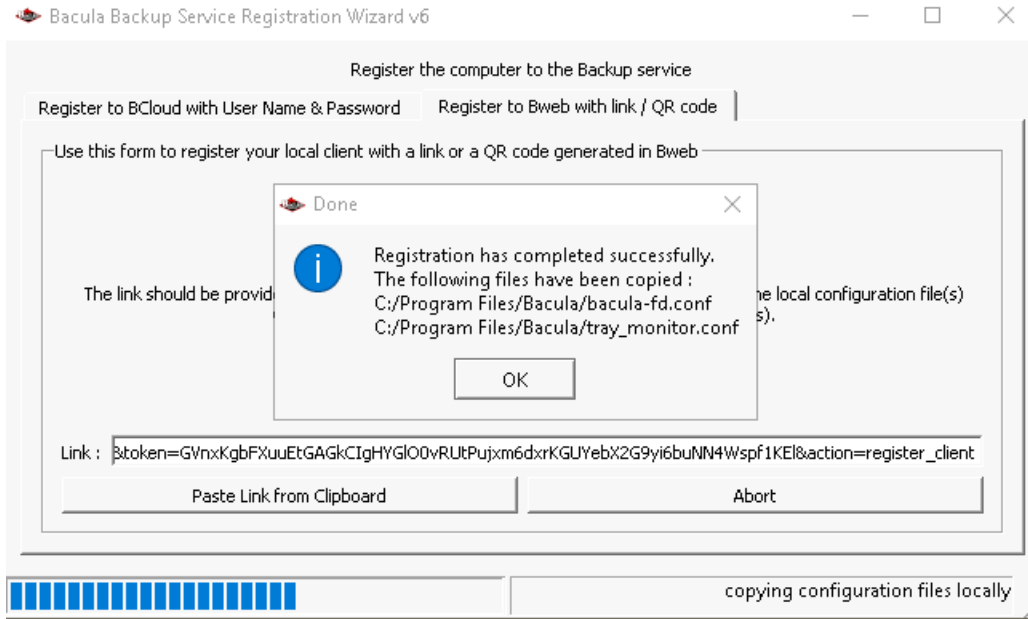


12. Continue the registration process in *FD Registration - Client to Be Created in BWeb*
13. Paste the URL to the *Link* field.
14. Click “Register”.

If your SSL certificate is self-signed as it is by default with the BWeb installation with BIM, you will see a SSL certificate error that you can *Ignore*.



The registration is successful.



You may restart the Bacula File Daemon right from the wizard or close it.

## Result

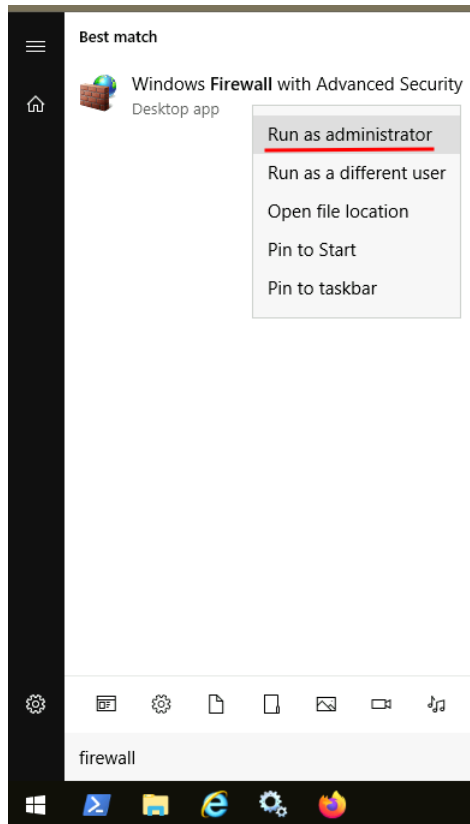
File Daemon installed.

## Set Firewall Rules

*Set Firewall Rules on Windows*

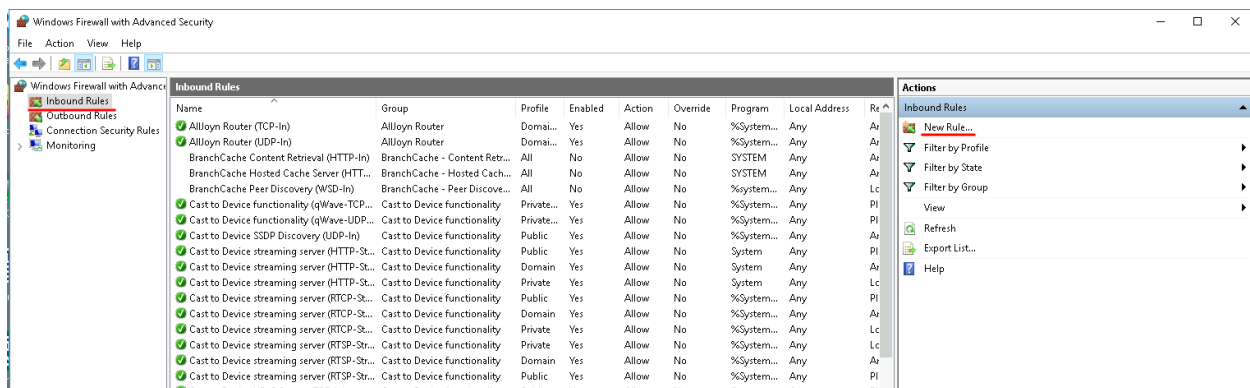
### Set Firewall Rules on Windows

1. Run the Firewall as Administrator in order to create the inbound rules to the Bacula File Daemon.



An inbound rule must be created to accept all incoming connection to port TCP 9102. You may add at a later stage once Bacula File Daemon will be installed that this rule should permit inbound connection to port 9102 only to bacula.exe under C:\Program FilesBaculabacula.exe

2. Click on *Inbound Rules* then *New Rule* on the right pane.



3. Choose *Port* as a *Rule Type*.
4. Under *Protocol and Ports*, choose *TCP* and set *Specific local ports* to 9102.
5. Choose *Allow the connection* under *Action*.
6. Choose to apply the rule to the adequate profile, usually *Domain* and *Private*.
7. Set the name to *Bacula-fd* for example. Click on *Finish*.

Go back to *Install FD with Windows Installer*.



Go back to *Bacula Installation with Windows Installer*.

Go back to *main Bacula Installation on Windows*.

## Install SD with Windows Installer

### Prerequisites

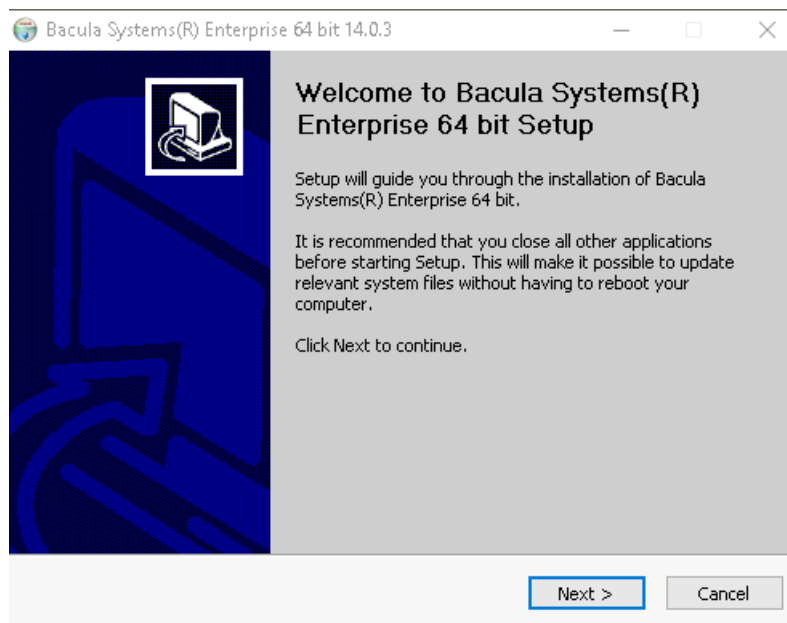
The Bacula Installer on Windows supports Windows server and desktop operating systems.

General *Prerequisites* apply here.

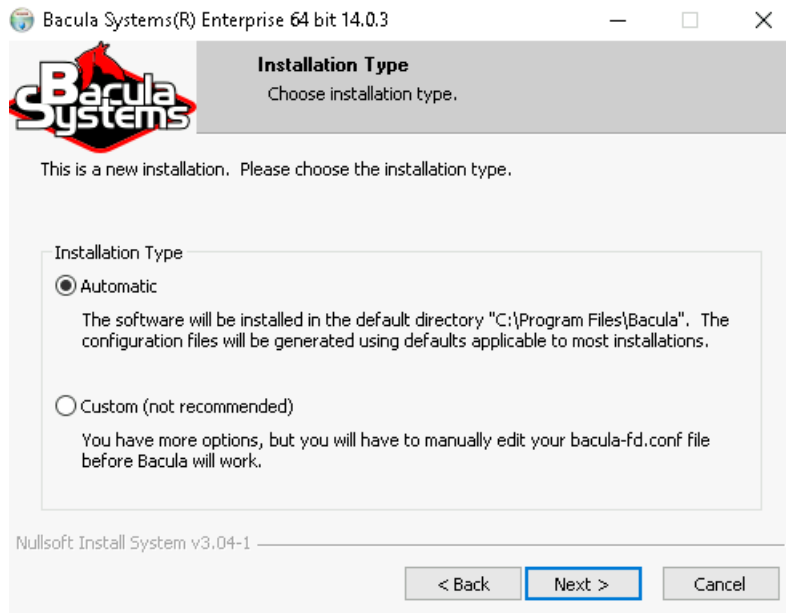
### Steps

1. Download the .exe Windows Installer from your download area under Windows/<Bacula version>/win64/.
2. Run the program.

You will get to the first screen of the Bacula Windows Installer.

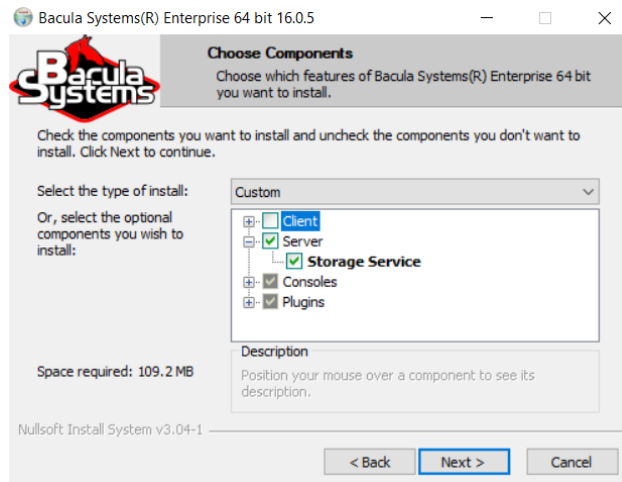


3. Click “Next”.
4. Accept the license agreement.
5. Select the *Automatic* installation type.

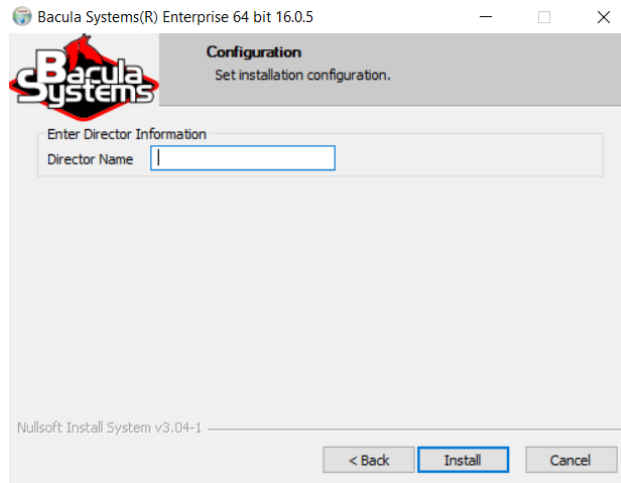


6. Click Next.

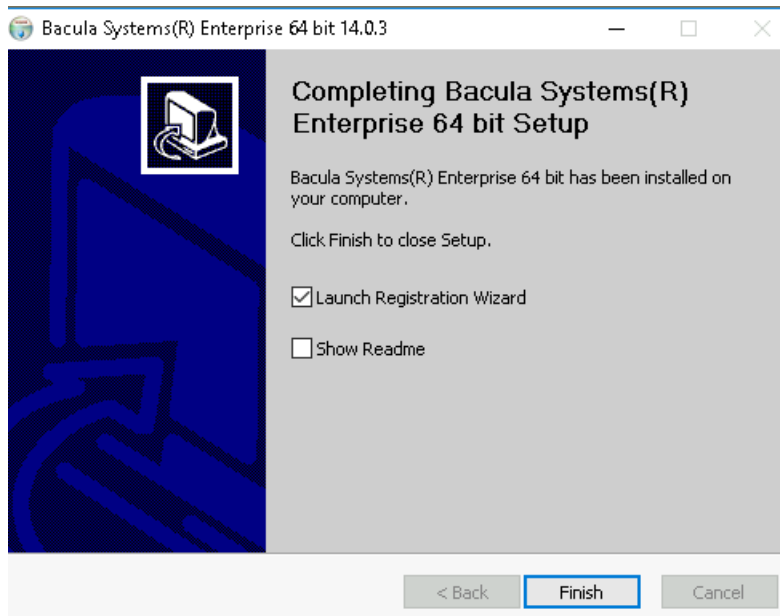
7. On the *Choose Components* screen, choose “Server”.



8. Provide the Director name.



9. Click Install.
10. On the next screen, keep *Launch Registration Wizard* selected.
11. Click “Finish”.



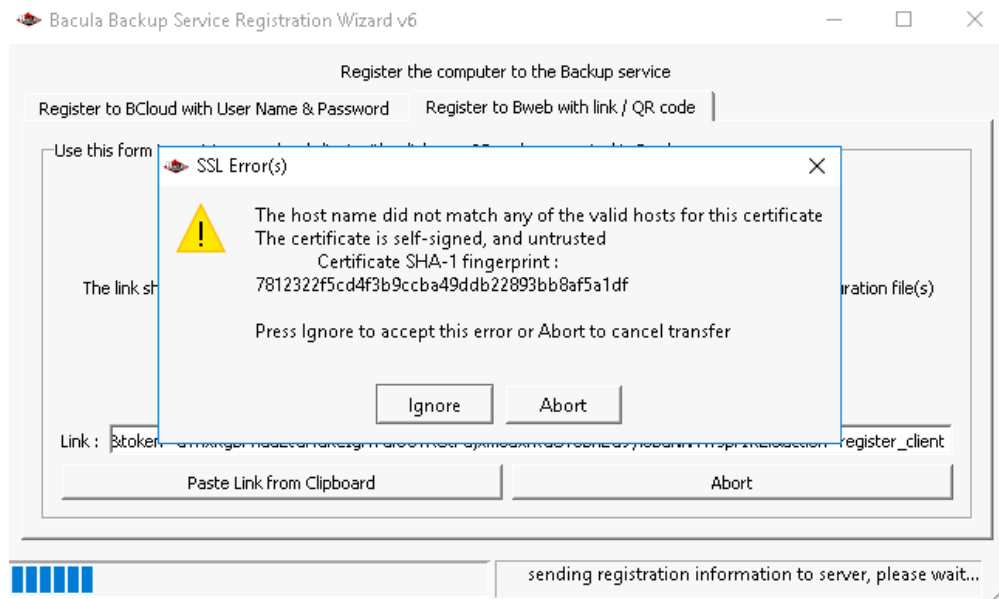
A new window will appear, possibly behind any other open window.

12. Click on the *Register to BWeb with link/QR Code* tab. - Do I do that with SD?

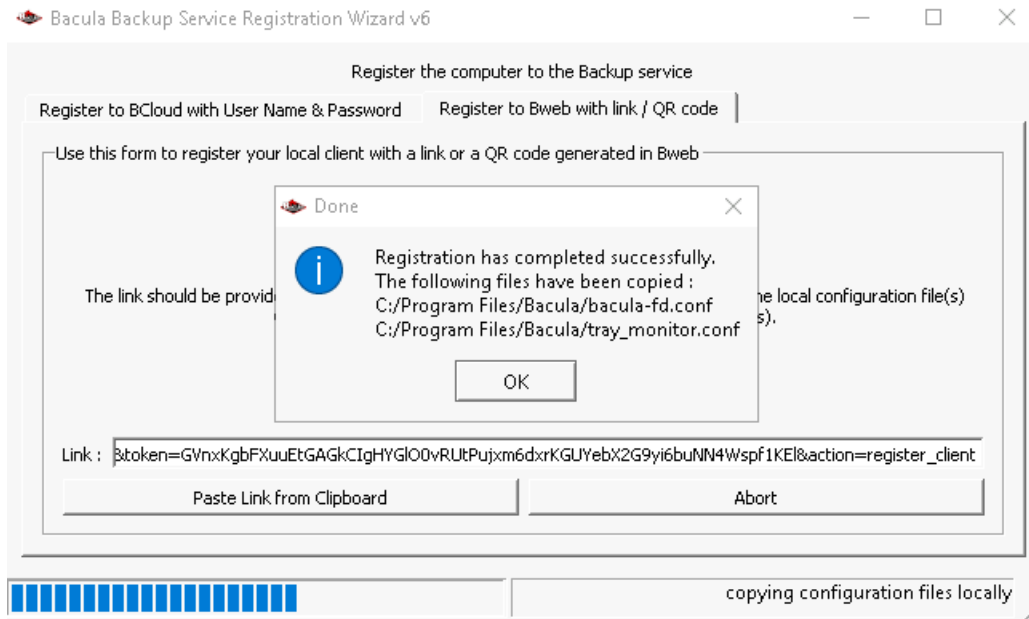


13. Continue the registration process in *FD Registration - Client to Be Created in BWeb*
14. Paste the URL to the *Link* field.
15. Click “Register”.

If your SSL certificate is self-signed as it is by default with the BWeb installation with BIM, you will see a SSL certificate error that you can *Ignore*.



The registration is successful.



You may restart the Bacula File Daemon right from the wizard or close it.

Go back to *Bacula Installation with Windows Installer*.

Go back to *main Bacula Installation on Windows*.

## 2.2 Windows: Bacula Enterprise Installation with BIM

The following article aims at explaining how to install Bacula Enterprise components (Director, File Daemon, Storage Daemon, bconsole) on one host with the use of Bacula Installation Manager and Windows OS. Bweb installation here is optional, however, it is recommended.

### Prerequisites

- Access to your network and to the Internet, or more specifically, to <https://www.baculasystems.com/>

### Steps

#### Windows: Download BIM

1. Download BIM:

- a. In a browser, type:

```
https://www.baculasystems.com/ml/bee_installation_manager.exe
```

or

- b. In a PowerShell, type:

```
wget https://www.baculasystems.com/ml/bee_installation_manager.exe -Outfile C:\bee_
↪installation_manager.exe
```

## Next Step

*Windows: Install Bacula Enterprise.*

## Windows: Install Components

The following article aims at presenting the reader with information on how to install specific Bacula Enterprise components.

---

**Important:** Now, we are installing Bacula Enterprise, so it is vital to remember that:

- A general command to install Bacula components is `./bee_installation_manager`, which installs File Daemon by default. If you wish to install other components, plugins or modify the command, use `./bee_installation_manager --help` to list all the possible options.
- 

## Windows: Install File Daemon (Client)

The following article aims at presenting the reader with instructions on how to install a File Daemon (Client), how to install chosen FD plugins, and manage firewall rules.

The File Daemon allows backing up any data stored in the system on which it is installed via the Client resource defined in the Director.

---

**Important:** If you wish to modify arguments, run: `bee_installation_manager --help`.

---

## Prerequisites

The Bacula Installation Manager (BIM) can be used on any Windows version starting with 2012 R2.

General *Prerequisites* apply here.

Also:

- Director already installed.
- Bweb installed on the same host as the Director.

## Steps

1. *Download BIM.*
  2. Open `bee_installation_manager.exe` with elevated privileges.
- 

**Note:** Check your antivirus settings to prevent it from blocking the software download.

---

3. Confirm the Client and plugins installation with Y.

```
=====  
Installation of File Daemon (Client) and associated plugins  
=====
```

```
Proceed with Installation of Director and associated plugins? [Y/n] Y
```

4. Provide your download area address.

---

**Note:** To get your Download Area URL, go to your Customer Portal, click Your Subscription from the left menu, scroll down to the very bottom. You may copy your Download Area from Your Download Area section.

---

```
Please enter your Download Area URL. This information can be found in your Customer  
Portal in the "Your Subscription"  
menu : https://www.baculasystems.com/dl/@@customer@@
```

5. Choose the version to be installed.

---

**Important:** The version of the File Daemon must not be higher than the version of the Bacula Director.

---

```
Available versions found on your Download Area for your current operating system [nt]:
```

```
-----  
->-----  
 1 : 11.0.6   2 : 12.0.5   3 : 12.2.5   4 : 12.4.4   5 : 12.6.5  
 6 : 12.8.4   7 : 14.0.7   8 : 16.0.3  
-----
```

```
->-----  
Please, select the version of your Bacula Director ('16.0.3' by default) :
```

6. Choose the plugins to be installed (optional).

```
The following plugins available for the File Daemon can be installed at version 16.0.3 :
```

```
-----  
 1 : DeltaPlugin      2 : HypervPlugin      3 : MSSQLPlugin  
 4 : SapPlugin        5 : SharepointPlugin  6 : VssPlugin  
-----
```

```
Select the number(s) of the plugins you want to install, separated by commas.  
Leave empty and just press <Enter> to skip plugin selection :
```

7. Confirm the process with Y.

```
=====  
Registration of File Daemon (Client) via Bweb  
=====
```

```
Proceed with Installation of Director and associated plugins? [Y/n] Y  
Please enter the Automatic Configuration URL provided by Bweb :
```

Along with the File Daemon (Client) installation, you must proceed to register the File Daemon via Bweb. You must have the Director and BWeb installed for this. See *File Daemon (Client) Creation and Registration*.

8. Proceed with Managing Firewall rules.

---

**Note:** Choose the default options proposed for the firewall setting, unless the policies of your company require

different rules.

```
=====
Managing Firewall rules
=====
Proceed with Managing Firewall rules? [Y/n]

Available Firewalls
-----
  1 : netsh
-----
Please, make your selection : ('netsh' by default) :
```

9. Confirm your Director address.

```
A potential Director address is detected and will be used by default: 10.0.XX.XXX
Press Enter to use 10.0.XX.XXX, or type a new Director address or type * to accept any
↵incoming
address [10.0.XX.XXX|dir-addr|*] :
```

10. Confirm the operations with `Y`.

```
=====
Ready to process the following operations
=====
[X] Installation of : Bacula
[X] Registration of File Daemon (Client) via BWeb
[X] Managing Firewall rules

Continue or (r)etry? [Y/n/r]
```

11. Confirm the process with Y.

## Result:

Bacula remote File Daemon is installed and registered in the Director.

## Post-installation Suggestions

### Verify the Access to a Newly Installed Client

1. Go to BWeb.
2. Click “Clients” -> “Client Overview”.
3. Select the newly installed Client and click “Status”.



**Client Overview**

**Client Version**

**Client Os**

Name	Select	Desc	Auto Prune	File Retention	Job Retention	Tags
aga-Dir-BWeb-BIM-tst-fd	<input checked="" type="checkbox"/>	16.0.3 (09Mar23) x86_64-redhat-linux-gnu-bacula-enterprise,redhat,(Sky	1	60 days	180 days	
aga-FD-BIM-tst-fd	<input type="checkbox"/>		1	60 days	180 days	
bp-lin2023-mssql-client	<input type="checkbox"/>		1	60 days	180 days	

You should reach the following page:

**Client Status**

Client: **aga-Dir-BWeb-BIM-tst-fd**

Version: 16.0.3 (09 March 2023)

Uname: x86\_64-redhat-linux-gnu-bacula-enterprise,redhat,(Sky

Client Started: 2023-03-23 05:12:12

Running Jobs: 0/1

No. Jobs: 61

No. Bytes: 113.7 MB

No. Files: 4494

No. Errors: 0

File/Job Retention: 2 months / 6 months

AutoPrune: Yes

FIPS: No

Debug: Disabled

Plugins: bpipe

Job Duration: 'aga-Dir-BWeb-BIM-tst-fd'/all Job Rate: 'aga-Dir-BWeb-BIM-tst-fd'/all 76.3 MiB

Job status rating

JobBytes sum: 'aga-Dir-BWeb-BIM-tst-fd'/all

If you can read the Client name and its Version, then it means you can start backing up and restoring this Client.

Go back to [the main Bacula Installation page regarding Linux](#)

Go back to [the main Bacula Installation page](#)

## Install Storage Daemon

The following article aims at presenting the reader with instructions on how to install Storage Daemon.

---

**Important:** It is vital to remember that:

- It is recommended to install plugins along with the installation of the component. You may omit adding a plugin, however, if you wish to add it later, you will have to go through the steps of the installation of the component again as it can also be used for upgrade.
  - While going through the installation steps again, your configuration file will not be overwritten.
- 

## Prerequisites

General *Prerequisites* apply here.

## Steps

1. From the command line, run BIM and install SD:

```
C:\LocationWhereYouInstalledBIM\bee_installation_manager.exe -t SD
```

2. Confirm the Director and plugins installation with Y.

```
=====  
Installation of Storage Daemon and associated plugins  
=====  
Proceed with Installation of Storage Daemon and associated plugins? [Y/n] Y
```

3. Provide your download area address.

---

**Note:** To get your Download Area URL, go to your Customer Portal, click Your Subscription from the left menu, scroll down to the very bottom. You may copy your Download Area from Your Download Area section.

---

```
Please enter your Download Area URL. This information can be found in your Customer  
↳Portal in the "Your Subscription"  
menu : https://www.baculasystems.com/dl/@@customer@@
```

4. Choose the version to be installed.

```
Available versions found on your Download Area for your current operating system [nt]:  
-----  
↳-----  
1 : 11.0.6   2 : 12.0.5   3 : 12.2.5   4 : 12.4.4   5 : 12.6.5  
6 : 12.8.4   7 : 14.0.7   8 : 16.0.3  
-----  
↳-----  
Please, select the version of your Bacula Director ('16.0.3' by default) :
```

## Result

Bacula Storage Daemon is installed.

```
Installation of Storage Daemon Successfully completed
```

```
=====
Bacula Enterprise Installation Manager. Done.
=====
```

Go back to *Install Components on Linux*

Go back to *the main Bacula Installation page*

Go back to *the main Installation page*.

## 3 Bacula Ansible Collection with Ansible Galaxy

Bacula Enterprise is proud to offer a fully integrated solution with Ansible in order to deploy Bacula Enterprise and very soon Bacula Community components.

Ansible Collections are a new and flexible standard to distribute content like playbooks and roles. This new format helps to easily distribute and automate your environment. These pre-packaged collections can also be modified to meet the needs of your environment, especially by using templates and variables. Our Bacula Enterprise Ansible Collection will help you to easily deploy Directors, Clients, and Storages in your environment.

Since Bacula Enterprise version 12.6.4, a new option was introduced to the BWeb configuration split script to allow the configuration to be “re-split” when deploying new resources with the Bacula Enterprise Ansible Collection playbooks. Our collection will create configuration files that can be integrated to your current BWeb configuration by using the tests/re-split-configuration.yml playbook provided in the collection. This is useful to know and use when BWeb is being used to manage your Bacula Enterprise environment. We strongly recommend to use the BWeb configuration split script if you use Bacula Enterprise Ansible Collection to deploy new Clients and Storages and you use BWeb to manage configuration files, because it will verify that all the resources being added to the current BWeb structure are correctly defined.

Bacula Enterprise plugins can also be deployed using the Ansible Collection. Please adapt the templates provided to take advantage of the specific configuration needs of your environment. More information about Ansible Galaxy Collections may be found in a blog post called “Getting Started With Ansible Content Collections” available on the official Ansible website here: <https://www.ansible.com/blog/getting-started-with-ansible-collections>

The Bacula Enterprise Ansible Collection is publicly available in Ansible Galaxy ([https://galaxy.ansible.com/baculasystems/bacula\\_enterprise](https://galaxy.ansible.com/baculasystems/bacula_enterprise)).

Go back to *the main Installation page*.

## 4 Bacula Enterprise Setup Test

In the following article, the reader is presented with initial actions to take after installation, such as checking the status of Bacula daemons, testing the network, and verifying your configuration using BWeb.

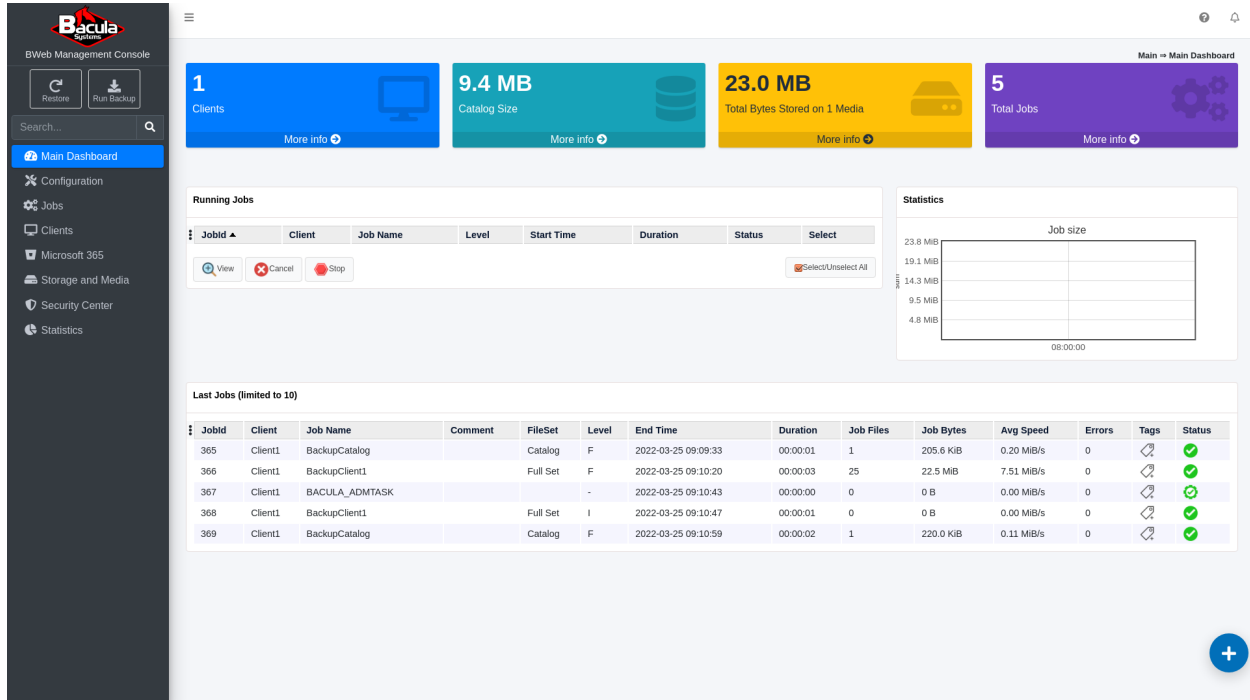
## 4.1 Check the Status of Bacula Daemons

In the following article, the reader is presented with information on where and how to check the status of Bacula daemons: Director, File Daemon (Client), Storage Daemon.

### Check Director Status

The following article presents information on where and how to check the status of Bacula Director.

The overall status of the Bacula Director can be seen at any time on the *Main Dashboard* page of BWeb.



This page contains the following information:

- Number of configured Clients (File Daemons)
- Size of the Catalog database
- Total amount of back up data stored
- Total number of Jobs in the Catalog
- List of currently *Running Jobs*
- *Statistics* of backed up data quantity over time
- List of 10 *Last Jobs* run.

If you can access and see the contents of the *Main Dashboard* page, you can be sure that Bacula Director is running and ready to be managed and configured.

## Possible Next Steps

Go to the [Check File Daemon Status](#) article.

Go to the [Check Storage Daemon Status](#) article.

Go to the [Network Test](#) article.

Go to the [Verify Job Status and Configuration](#) article.

## Check File Daemon (Client) Status

The following article presents information on where and how to check the status of Bacula File Daemon (Client).

The status of the Bacula Clients (File Daemons) can be verified by navigating to *Clients* -> *Client Overview*, then selecting the appropriate Client (check the box in the *Select* column) and clicking on the *Status* button.

The screenshot displays the Bacula BWeb Management Console interface. The left sidebar contains navigation options: Main Dashboard, Configuration, Jobs, Clients, Client Overview, Add New Client, Groups, Microsoft 365, Storage and Media, Security Center, and Statistics. The main content area is titled 'Client Status' and shows details for 'Client: Client1'. The client information includes: Version: 14.0.3 (09 March 2022), Username: x86\_64-redhat-linux-gnu-bacula-enterprise.redhat.(Core), Client Started: 2022-03-25 08:28:46, Running Jobs: 0/1, No. Jobs: 35, No. Bytes: 48.2 MB, No. Files: 63, No. Errors: 0, File/Job Retention: 2 months / 6 months, AutoPrune: Yes, FIPS: No, Debug: Disabled, and Plugins: bpipes. Below this, there are buttons for 'Set Bandwidth', 'Set Debug', 'Edit', and 'Disable Client'. The 'Running Jobs' section shows 'No job running on the Client.' The 'Terminated Jobs' section contains a table with columns: JobId, Name, Type, Level, Job Bytes, Job Files, Start Time, Errors, and Status. The table lists three terminated jobs with IDs 386, 387, and 389, all with a status of 'Success'. To the right of the client information are three charts: 'Job Duration: Client1/all' (a bar chart showing duration for Client1/BackupJob1, Client1/BackupCatalog, and Client1/BackupClient1), 'Job Rate: Client1/all' (a bar chart showing job rate for the same categories), and 'JobBytes sum: Client1/all' (a line chart showing the cumulative job bytes over time). A 'Job status rating' pie chart is also present, showing 100% completion success.

This page contains the following information:

- The name of the Client followed by information about it retrieved from the Catalog database
- List of Bacula File Daemon *Plugins* installed (bpipes plugin shown in the image)
- Various statistical information graphs that depict *Job Duration*, *Job Rate* and *JobBytes*
- List of currently *Running Jobs* on this Client
- List of last 10 *Terminated Jobs*

The *Client Status* page will be refreshed automatically. The Client resource and the refresh interval can both be changed using the two drop-down menus in the top right corner of the screen.

You will be able to quickly verify whether or not a Bacula File Daemon is running and is accessible from the Bacula Director if you can access and see the content of the appropriate *Client Status* page.

## Possible Next Steps

Go to the [Check Director Status](#) article.

Go to the [Check Storage Daemon Status](#) article.

Go to the [Network Test](#) article.

Go to the [Verify Job Status and Configuration](#) article.

## Check Storage Daemon

The following article presents information on where and how to check the status of Bacula Storage Daemon.

The status of the Bacula Storage (Storage Daemon) can be accessed by navigating to *Storage and Media* -> *Storage Overview* and then selecting the appropriate Storage from the drop-down list.

Storage Overview

Uptime: 0 min | FIPS: No | Average Write Speed: 0.00 MB/s | Total Average Devices Speed: 0.00 MB/s

Version: 14.0.3 (09 March 2022) | Username: x86\_64-redhat-linux-gnu-bacula-enterprise redhat (Core) | Running Jobs: 0

**Autochanger: FileChgr1**

Device Name	Status	Loaded	Volume Name	Slot	Running Jobs/Max. Jobs	Speed
FileChgr1-Dev1	-	-	-	-	0/5	-
FileChgr1-Dev2	-	-	-	-	0/5	-

**Autochanger: FileChgr2**

Device Name	Status	Loaded	Volume Name	Slot	Running Jobs/Max. Jobs	Speed
FileChgr2-Dev1	-	-	-	-	0/5	-
FileChgr2-Dev2	-	-	-	-	0/5	-

**Device: Single Device**

Device Name	Status	Loaded	Volume Name	Slot	Running Jobs/Max. Jobs	Speed
FileDisk	-	-	-	-	0/5	-

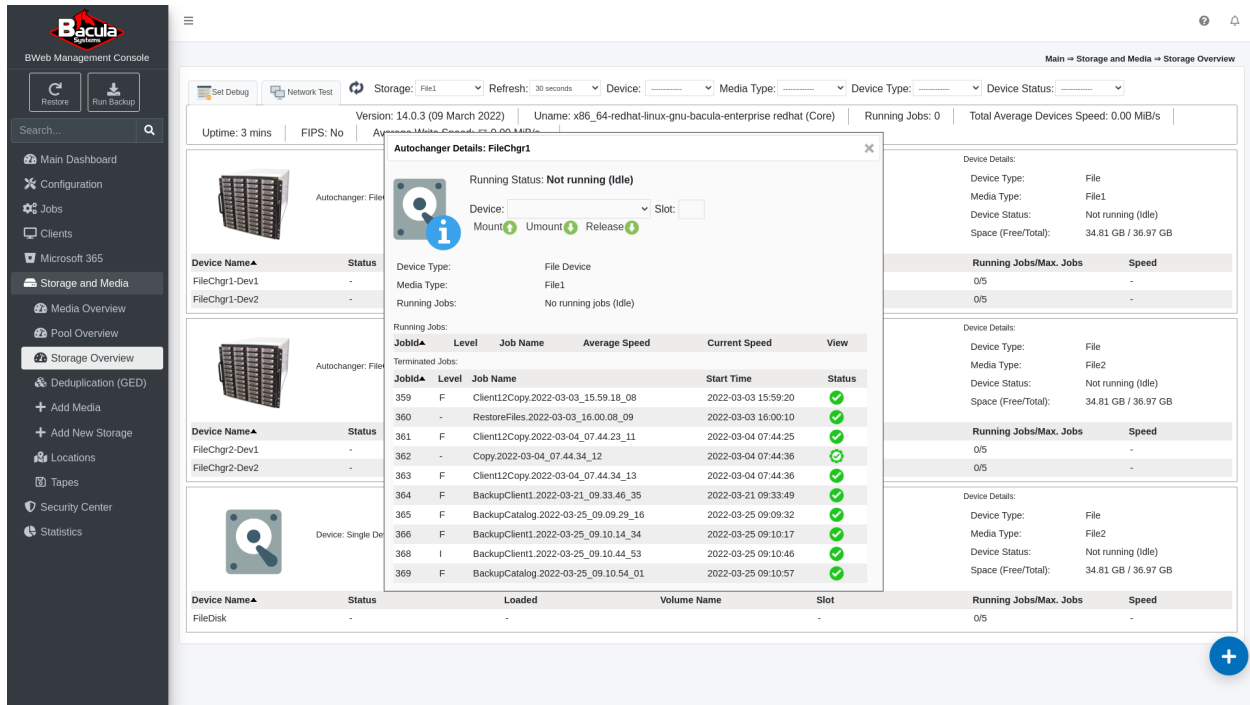
This page contains the following information:

- Basic information and statistical data retrieved from the Catalog database about the Bacula Storage Daemon on which the selected Storage resource resides.
- List of all Storage resources (Autochangers or single Devices) that reside on the Bacula Storage Daemon with list of Device resources belonging to each of them with basic information about each.

The *Storage Overview* page will be refreshed automatically. The Storage resource and the refresh interval can both be changed using the drop-down menus in the header row.

In addition, the header row offers the ability to filter the output shown on the *Storage Overview* page by *Device*, *Media Type*, *Device Type* and *Device Status*.

Also, by clicking on the picture icon that belongs to specific Storage resource (Autochanger or single Device) an additional *Autochanger/Device Details* page will be shown.



This *Autochanger/Device Details* pop-up window contains the following information:

- Basic information about the Autochanger/Device resource
- Autochanger/Device manipulation commands
- List of currently *Running Jobs*
- List of last 10 *Terminated Jobs*.

You will be able to quickly verify whether or not Bacula Storage Daemon is running and is accessible from the Bacula Director if you can access and see the content of the appropriate *Storage Overview* page.

## Possible Next Steps

Go to the [Check Director Status](#) article.

Go to the [Check File Daemon Status](#) article.

Go to the [Network Test](#) article.

Go to the [Verify Job Status and Configuration](#) article.

### See also:

Go to:

- [Test the Network](#)
- [Verify Job Status and Configuration](#)

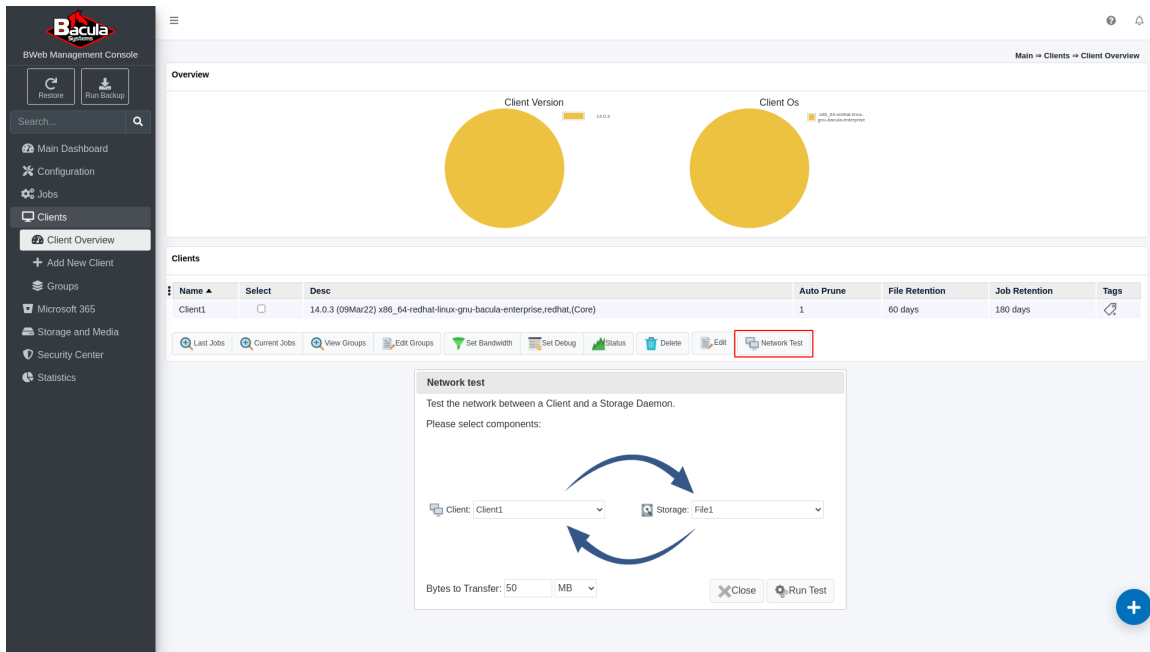
Go back to the [testingyoursetup](#) chapter.

Go back to the [Fundamentals](#) chapter.

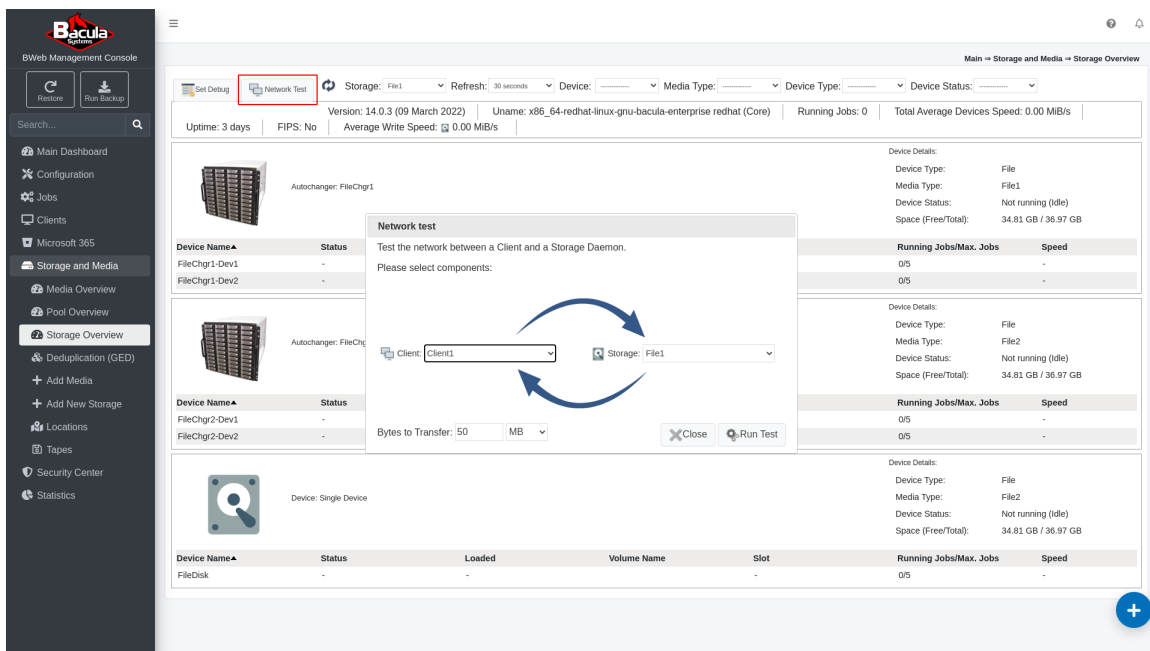
## 4.2 Test the Network

The following article presents information on how to perform the network test.

In order to estimate the network throughput during a backup job execution, it is possible to run a network test.

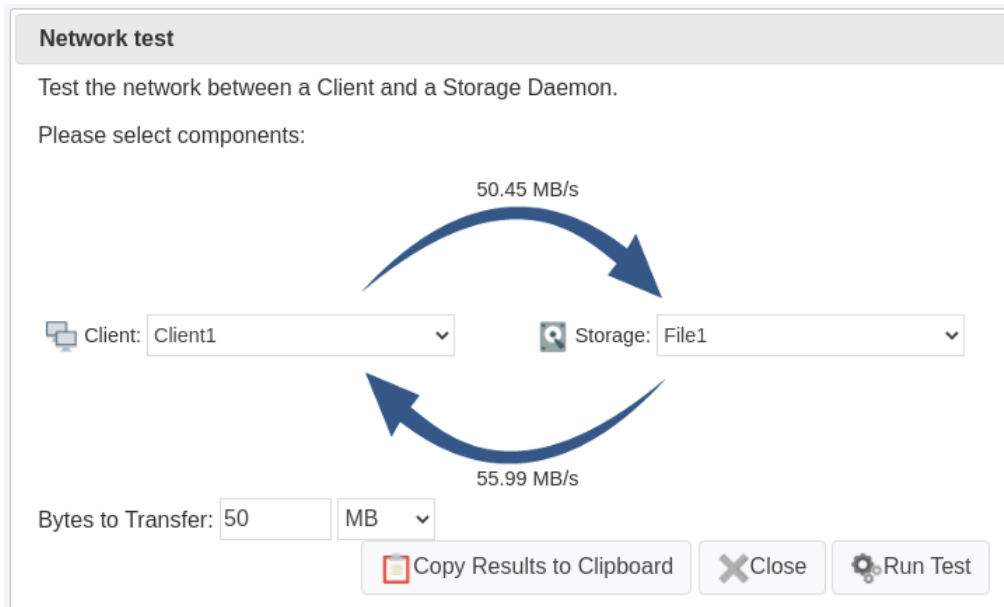


The network test can be initiated from both the *Client Overview* and *Storage Overview* pages by clicking on the *Network Test* button.



The test itself is simple to run. All that it is required is to set the appropriate *Client* and *Storage*, and optionally modify the *Bytes to Transfer*. When all options are set the test is initiated by clicking on the *Run Test* button.





When the test completes, the network throughput measurements for Client to Storage and Storage to Client communication directions will be shown. The network test can be used to verify that the Client and the Storage resources are able to communicate over the network.

**See also:**

Go back to:

- Check the Status of Bacula Daemons

Go to:

- Verify Job Status and Configuration

Go back to the [testingyoursetup](#) chapter.

Go back to the [Fundamentals](#) chapter.

## 4.3 Verify Job Status and Configuration

The following article presents verification techniques to verify job execution status, and gives advice on the choice of adequate job-related resource definitions to fulfill the intended use case.

### Job Overview

The list of latest jobs run can be accessed by navigating to *Jobs -> Job Overview*.

The list of jobs shown can be filtered based on different criteria and sorted differently by clicking on different header row fields.

The detailed information about a specific job execution instance can be seen by clicking on the status icon located in the *Status* column inside the specified job's row.

The detailed joblog is shown on the Job Information page. Apart from the joblog, there is a row of buttons that can be used in order to view additional information or execute certain actions.

## See also:

Go to:

- [View File List](#)
- [View FileSet](#)
- [Next Jobs](#)

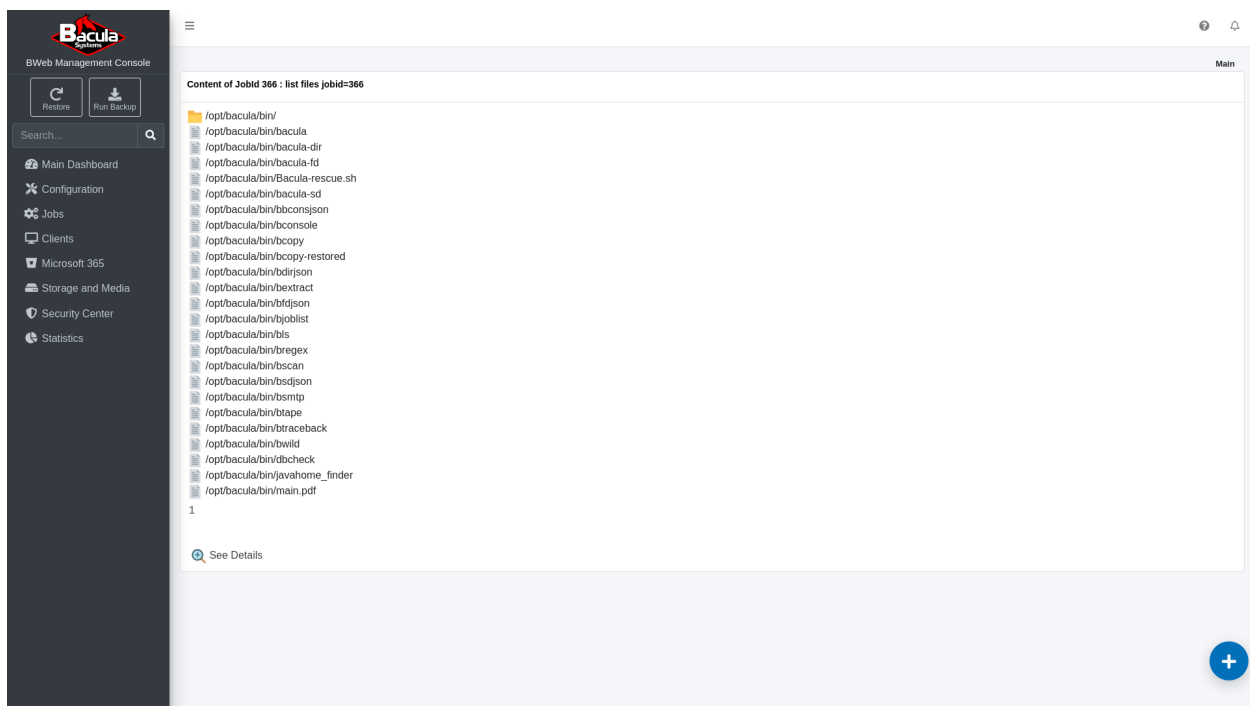
Go to the [VerifyJobStatusAndConfiguration](#) chapter.

Go back to the [testingyoursetup](#) chapter.

Go back to the [Fundamentals](#) chapter.

## View File List

By clicking on the *View File List* button, a page is displayed which shows a list of full file names that have been backed up by the specific job execution.



This page can be used in order to verify the exact content of the backed up data set.

## See also:

Go back to:

- [JobOverview](#)

Go to:

- [View FileSet](#)
- [Next Jobs](#)

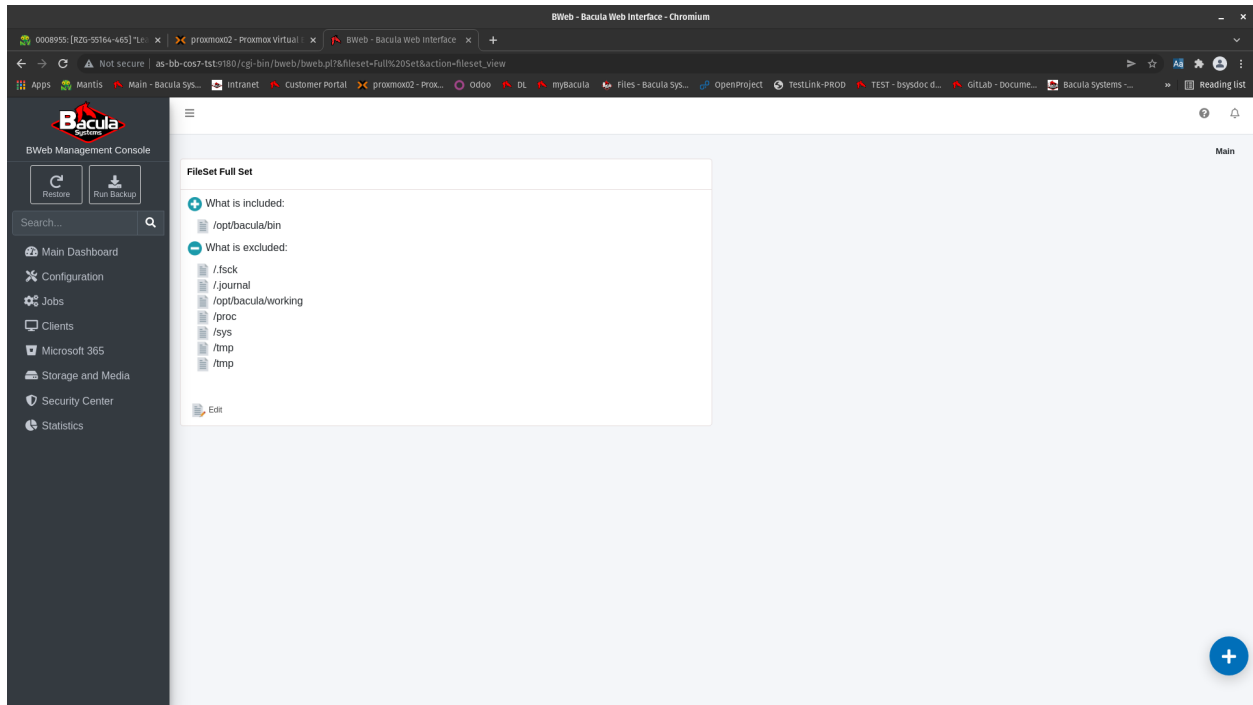
Go to the [VerifyJobStatusAndConfiguration](#) chapter.

Go back to the [testingyoursetup](#) chapter.

Go back to the Fundamentals chapter.

## View FileSet

By clicking on the *View FileSet* button, a page is displayed which shows the content of the File Set definition and lists all the included and excluded backup paths.



This page can be used in order to verify the actual configuration introduced by the FileSet resource definition.

### See also:

Go back to:

- JobOverview
- View File List

Go to:

- Next Jobs

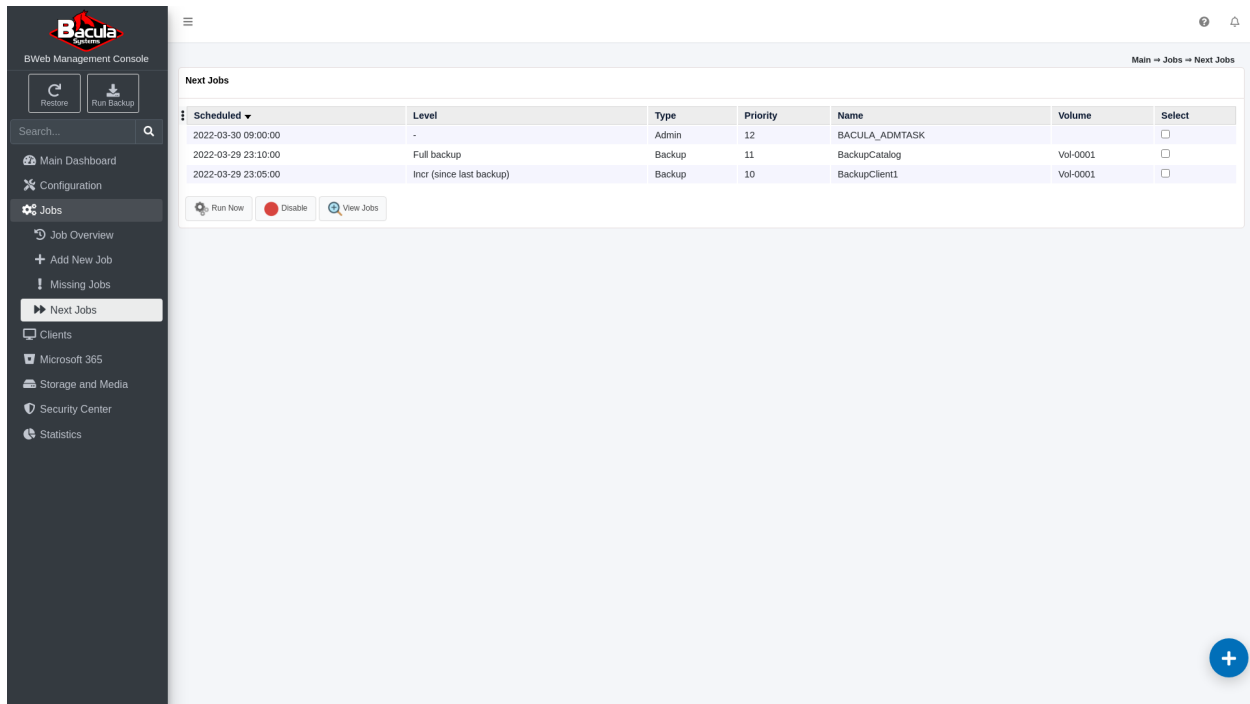
Go to the VerifyJobStatusAndConfiguration chapter.

Go back to the testingyoursetup chapter.

Go back to the Fundamentals chapter.

## Next Jobs

The list displaying the next scheduled time of execution of every job defined can be accessed by navigating to *Jobs -> Next Jobs*.



The screenshot shows the Bacula BWeb Management Console interface. The left sidebar contains navigation options: Main Dashboard, Configuration, Jobs (selected), Job Overview, Add New Job, Missing Jobs, Next Jobs, Clients, Microsoft 365, Storage and Media, Security Center, and Statistics. The main content area is titled 'Next Jobs' and displays a table with the following data:

Scheduled	Level	Type	Priority	Name	Volume	Select
2022-03-30 09:00:00	-	Admin	12	BACULA_ADMTASK		<input type="checkbox"/>
2022-03-29 23:10:00	Full backup	Backup	11	BackupCatalog	Vol-0001	<input type="checkbox"/>
2022-03-29 23:05:00	Incr (since last backup)	Backup	10	BackupClient1	Vol-0001	<input type="checkbox"/>

Below the table are buttons for 'Run Now', 'Disable', and 'View Jobs'. A blue plus button is visible in the bottom right corner of the main content area.

This page can be used to verify the Schedule resource definition by presenting the next time and in what backup level the specific Job resource instance is scheduled to be executed in.

### See also:

Go back to:

- JobOverview
- View File List
- View FileSet

Go to the VerifyJobStatusAndConfiguration chapter.

Go back to the testingyoursetup chapter.

Go back to the Fundamentals chapter.

### See also:

Go back to:

- Check the Status of Bacula Daemons
- Test the Network

Go back to the testingyoursetup chapter.

Go back to the Fundamentals chapter.

Go back to *the main Installation page*.

## 5 File Daemon (Client) Registration

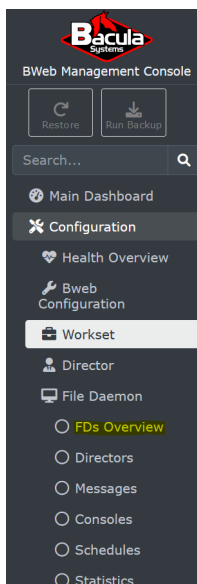
The following article describes how to use BWeb in order to generate an Automatic Configuration URL that is pushed to BIM or to the Windows Registration Wizard in order to register a new Client in BWeb with its configuration files.

This guide applies to Linux and Windows clients.

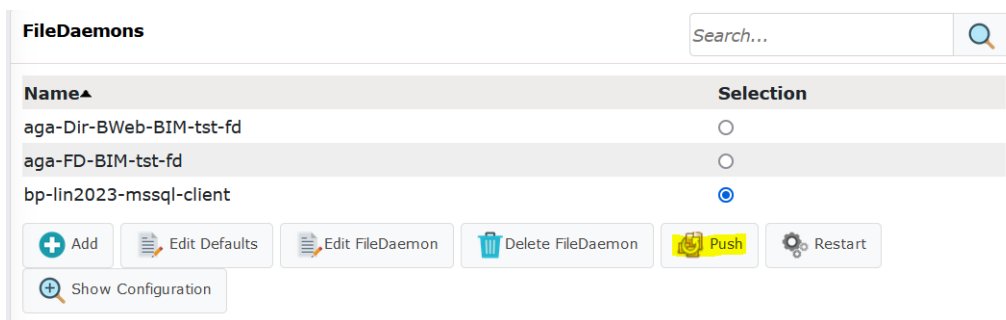
### 5.1 FD Registration - Client Already Created in BWeb

#### Steps

1. From the left menu of BWeb, click “Configuration” -> “Workset” -> “File Daemon” -> “FDs Overview”.



2. Select the Client to register and click “Push”.



3. From the drop list, select the “QR Code/Registration Wizard”.

#### Push Configuration to bp-lin2023-mssql-client

This assistant can automatically configure the component configuration file located on your remote component host using SSH or SMB.

Push Method:

Token validity period:  \*

4. Click “Next”.
5. Scan the QR code or click on “Copy to clipboard” to copy the URL.

#### Push Configuration to bp-win2016-mssql-client

URL to copy to the Installation Manager script:

QR Code to scan for your Android installation:



6. Paste it into the bee\_installation\_manager wizard or the Windows installer registration wizard.

Once copied to the clipboard, go back to *Windows: Install File Daemon (Client)* or *Linux: Install File Daemon (Client)* in order to paste it in one of these executables.

## 5.2 FD Registration - Client to Be Created in BWeb

### Steps

1. Click on the + button in BWeb (bottom right corner) and choose “Add Client”.
2. Set a name, and optionally a description for this new Client.



**Configure a new Client resource 1/4**

This assistant will guide you in the creation of a new Client resource.

Please, choose a name for your Client resource. This name will be used in all Job definitions, so it should be meaningful. We recommend using the hostname of your FD plus a '-fd' at the end, as in 'localhost-fd'.

Client Name:  \*

Description:

 Cancel  Next

3. Click “Next”.
4. On the next screen, keep the default communication type: “Standard encrypted communication”.

**Configure new Client resource bp-lin2023-mssql-client 2/4**

Please select communication type which you want to use to communicate with Client/FileDaemon component.

You can choose between standard communication with encryption, encrypted communication with TLS with using private keys and certificates or standard communication without encryption.

Select Client Communication Type:

Standard encrypted communication

Advanced encrypted communication with private keys and certificates

Standard not encrypted communication

 Cancel  Next

5. Click “Next”.
6. Choose the OS Type (Linux or Windows) according to the operating system of the new client target. The Password can be left as proposed. Fill in the Address with the FQDN, the hostname or the IP address of the new client. The Port should be left as it is.



**Configure new Client resource bp-lin2023-mssql-client 3/4**

Please, specify where the Director should connect to use the Client resource. The Password field is automatically generated with a random password.

OS Type:  \*

Password:  \*

Director can connect to the Client (Normal)

Address:  \*

Port:  \*

Client must connect to the Director (Client behind NAT)

Create Restricted Console Access

Cancel Next

8. Click “Next”.

9. On the next screen, click on **deploy** in order to access the unique identifier to register the File Daemon.

**Configure new Client resource bp-lin2023-mssql-client 4/4**

Now you can create a backup Job for this Client. (Note that as the Client is new, the workset is not committed and the Director is not reloaded, so when editing the FileSet, it will not be possible to browse files for this Client)

Or **deploy** this newly created FileDaemon Resource.

Or view the bacula-fd.conf for this newly created FileDaemon Resource.

Or edit the Client Director Resource.

Add a Next Client Resource OK

10. If Autocommit is disabled, commit your changes created by the new Client wizard if - click Next on the screen.

**Push Configuration to bp-lin2023-mssql-client**

The component that you are trying to push is not committed to your production configuration.

Date	Author	Component	Resource	Action
2023-04-13 02:29	FileDaemon	bp-lin2023-mssql-client	Director aga-Dir-BWeb-BIM-tst-dir	Create
2023-04-13 02:29	FileDaemon	bp-lin2023-mssql-client	Director bp-lin2023-mssql-client-mon	Create
2023-04-13 02:29	FileDaemon	bp-lin2023-mssql-client	Messages Standard	Create
2023-04-13 02:29	FileDaemon	bp-lin2023-mssql-client	FileDaemon bp-lin2023-mssql-client	Create

If you want to commit and push the configuration, click on Next

Please note, that the Director configuration will be reloaded automatically.

Cancel Next

11. Select QR Code/Registration Wizard, keep the Token validity period to 10 min.

**Push Configuration to bp-lin2023-mssql-client**

This assistant can automatically configure the component configuration file located on your remote component host using SSH or SMB.

Push Method:

Token validity period:  \*

12. Click “Next”.

13. On the next screen, click “Copy to clipboard”.

**Push Configuration to bp-win2016-mssql-client**

URL to copy to the Installation Manager script:

QR Code to scan for your Android installation:



Once copied to the clipboard, go back to *Windows: Install File Daemon (Client)* or *Linux: Install File Daemon (Client)* in order to paste it in one of these executables.

Go back to *the main Installation page*.

An alternative method of installation:

- *Bacula Ansible Collection with Ansible Galaxy*

**See also:**

Go to: *Bacula Enterprise Setup Test*.