

# Installation Options

## Overview

This document reviews various installation options for GroundWork Monitor 7.2.0.

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## Remote Database Installation

GroundWork Monitor can optionally be installed on two servers, with the database on a separate server for performance and manageability reasons. If you choose this option, you will have to install the database server first (using a copy of the GroundWork binary installer). For full instructions for installing the remote database server see [Remote Database Installation Instructions](#).

## Disk Layout

The following recommendations apply to GroundWork servers, both the all-in-one installations and split systems with front-end and remote database servers.

First, decide which disk the GroundWork Monitor install will reside on. It will be placed in the `/usr/local/groundwork/` directory, which by default will usually reside on the system disk. If you wish to relocate the installation to a different drive, that is most easily done by setting up the disk before running the installer. Your choices are:

1. Create the `/usr/local/groundwork/` directory and mount some disk partition on that directory (recommended). After the mount, check the ownership and permissions of the mount point:

```
drwxr-xr-x 2 root root 4096 Feb  5 19:45 /usr/local/groundwork
```

The installer will adjust the ownership of the root of the mounted partition as needed during the installation process.

2. Use a bind mount. For example, if you have a large partition on `/opt`, you can make `/usr/local/groundwork` point there with these commands:

```
$ mkdir /opt/ulg
$ mkdir /usr/local/groundwork
$ mount -o bind /opt/ulg /usr/local/groundwork
```

You will now see this reflected when running the `mount` command:

```
$ mount | grep groundwork
/opt/ulg on /usr/local/groundwork type none (rw,bind)
```

Now do the normal GroundWork installation. The files will be in the `/opt` space, but directly accessible at `/usr/local/groundwork`. You need not create the `nagios` user or group beforehand; the installer will do so as needed, and change the ownership of the target directory accordingly.

You will want this to persist across reboots. Edit `/etc/fstab`, making the indicated change:

```
# vi /etc/fstab
```

Add the line:

```
/opt/ulg          /usr/local/groundwork          none    bind    0 0
```

3. Don't create the `/usr/local/groundwork/` directory. The GroundWork installer will create it and set its ownership and permissions as needed, on whatever disk/partition the `/usr/local/` directory resides on.

Note that creating the `usr/local/groundwork` directory as a symlink to some other location is known to have issues. This installation technique is not supported and should not be done. At this time, the installer does not detect this and an install will appear to successfully complete, but there are several features of the product that will not operate properly (such as use of Nagios profiles) as well as certain security features being bypassed.

## Grafana, RRD or Both

GroundWork Monitor can collect performance data from many sources, and it can store and graph this data, either using RRD, or in InfluxDB and Grafana. You can choose which to use on install, either RRD or Grafana or both.

RRD (which is the method used in GroundWork versions prior to 7.2.0) has certain manageability advantages, in that it automatically rolls data off, and tends to grow in storage requirements in a more predictable manner. Being an older technology, there is a lot of community support for RRD, and graphs are highly portable, scriptable, and customizable.

Grafana (combined with InfluxDB in GroundWork GrafBridge) is a newer, high capacity system which does not summarize, and allows ad-hoc graph and dashboard creation. Data grows as it is collected, and rolled off only after a defined period (default is 13 months). It is recommended that you use Grafana, as it gives you the most flexibility in creating dashboards.

## Single or Dual JVM

In some cases, you will want to separate the front-end processing from the back-end in GroundWork for performance reasons. If you have more than a few concurrent users for example, and there is sufficient RAM and CPU resources available, you should choose to install dual JVM when running the installer. You can also change to dual JVM from single at a later time.

## Installation Methods

The installer package supports 3 modes: GUI, text, and unattended. All three require **root access** to the system where you install the GroundWork software.

The default method is GUI if an X server is running; otherwise, text mode will be used. GroundWork does not recommend running the X server in a production deployment, due to the unnecessary overhead.

- **GUI install**

On a system with X server running, simply double-click on the run file. Alternatively, go to the command shell and execute the downloaded file:

```
./groundworkenterprise-7.1.1-br415-gw3089-linux-64-installer.run
```

- **Text Based Install**

From a command shell, execute the binary with the text-mode installation selected:

```
./groundworkenterprise-7.1.1-br415-gw3089-linux-64-installer.run --mode text
```

- **Unattended install**

From a command shell, execute the binary with the unattended-mode installation selected:

```
./groundworkenterprise-7.1.1-br415-gw3089-linux-64-installer.run --mode unattended
```

This will perform an unattended installation that will not prompt the user for any information. This method is not recommended for upgrades.



### Unattended Mode Constraints

If you run the installer using the command above, the installation will fail because it tries to install the PostgreSQL database without a password for the `postgres` user. An installation like that is inherently insecure, and is not supported. For an unattended install, you must use the `--postgres_password password` option, either on the command line or in an option file as described below.

Also, an unattended install will reference a local database only.

Passing the `--optionfile optionfile` command line option lets you specify installation options in a separate file. The option file should contain *one line per option* using the format `key=value`. You can use any of the options accepted by the installer. For information on valid options, execute the binary with the `--help` switch. For example, to use a PostgreSQL password specified in the options, you could use:

```
./groundworkenterprise-7.1.1-br415-gw3089-linux-64-installer.run --mode unattended --optionfile gwinstall.ini
```

where the `gwinstall.ini` file contains:

```
postgresql_password=your_passwd
```