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Table of Contents

- 1 PURPOSE
- 2 PREREQUISITES
- 3 PREREQUISITE INSTALLATION AND CONFIGURATION
- 4 NEW INSTALLATION
- 5 MIGRATING FROM AN EXISTING NAGIOS INSTALLATION TO A NEW GROUNDWORK SERVER
- 6 VERIFYING THE OPERATION OF GROUNDWORK MONITOR SMALL BUSINESS
- 7 UPGRADING FROM PREVIOUS VERSIONS
- 8 SUPPORT

1 PURPOSE

Important Note: The distributed Readme document should be reviewed prior to the installation or upgrade of GroundWork Monitor Small Business 5.0.

The purpose of this "Installation" document is to outline system hardware requirements, pre-installation planning, and steps for a new installation or an upgrade of the GroundWork Monitor Small Business 5.0 product. Additionally, the documents "Readme" and "Release Notes" include bug fixes and known issues; and new features in this release, respectively. All documents are distributed in .txt and .pdf formats.

2 PREREQUISITES

Supported Operating Systems

GroundWork Monitor Small Business now supports both 32-bit and 64-bit machines with an extended list of supported Operating Systems. GroundWork adds supported distributions only after rigorous testing. These supported operating systems are recommended for stability and performance reasons. We highly recommend placing GroundWork Monitor Small Business on a dedicated server to ensure adequate performance, especially if there are a large number of devices to monitor via polling. The GroundWork Monitor Small Business 5.0 RPM-based installer enables all components to be installed together on standard versions of commercial Linux distribution.

Current Supported OS for 32-bit

GroundWork Monitor Small Business currently runs on Linux and supports the following Operating Systems running on 32-bit.

- Red Hat Linux Enterprise WS 4.0 32 bit
- Red Hat Linux Enterprise ES 4.0 32 bit
- SuSE Linux Enterprise Server 9.x 32 bit
- SuSE Linux Enterprise Server 10.1 32 bit

- CentOS 4.4 32 bit

Software Prerequisites

- MySQL Small Business version 5.0.18 or higher
- Java SDK version 1.5

Browser Recommendations

GroundWork recommends the following web browsers when using GroundWork Monitor Small Business:

- Firefox 1.x
- Internet Explorer 6.x

Hardware Recommendations

The minimum hardware configuration for a single GroundWork Monitor server is as listed below. Assuming that the system is configured to monitor 100 Hosts that are polled at default intervals, and that standard Service Profiles are used, the minimum configuration will suffice. In extreme cases, more powerful hardware (increased CPU speed and quantity, and RAM) can be used to extend the system.

Minimum Hardware Configuration for Networks (< 100 devices)

- One Intel Pentium 4 CPU, 1 GHz or better
- 1 GB RAM
- 40 GB hard disk
- CD ROM drive

Recommended Hardware Configuration for Networks (> 100 devices)

- One Intel Pentium 4 CPU, 2.8 GHz or better
- 2 GB RAM
- 80 GB hard disk
- CD ROM drive

Recommended Hardware Configuration for Networks (> 150 devices)

- Two Intel Pentium 4 CPU, 2.8 GHz or better
- 4 GB RAM
- 160 GB hard disk
- CD ROM drive

3 PREREQUISITE INSTALLATION AND CONFIGURATION

Step 1 - Java Installation

Java is required, careful attention must be paid to the steps needed to properly configure the environment, specifically the JAVA_HOME and PATH environment variables. The typical Java Development Kit distribution comes as a bin file from Sun Microsystems. You can download the build 06 Sun JAVA SDK 1.5.0-06 i586 for Linux from this link

http://www.groundworkopensource.com/downloads/JAVA/jdk-1_5_0_06-linux-i586-rpm.bin. **Note:** You must login to the GroundWork Support Center at

<http://www.groundworkopensource.com/support/index.html> to download from this link. If you try to download the file directly, without logging into the Support Center first, you will receive an access denied error. Or go to the Sun Microsystems site at <http://www.sun.com/> for the latest build.

1. Copy the file into a temporary folder on your hard disk. Change directory to that folder.
2. Make the file executable with the command: **chmod+x <filename>**
3. Make sure you are **root**.
4. Execute the binary file which will extract and install the rpm file by running the following command:

```
./jdk-1_5_0_06-linux-i586-rpm.bin
```

5. You will be prompted to accept the license.
6. The installer puts all files into: **/usr/java**
7. Set the environment variable: **JAVA_HOME**

You will need to add the following two environment variables to: **/etc/profile**

```
export JAVA_HOME=/usr/java/jdk1.5.0_06
```

```
export PATH=$PATH:$JAVA_HOME/bin
```

Update the session environment variables by running the following command:

```
source /etc/profile
```

8. In most Linux systems **/usr/bin/java** is a link to **/etc/alternatives/java** which is another link to the java executable. If this is the case you will need to update **/etc/alternatives/java** so that it points to your installation of the Java SDK command. Execute the following commands:

```
ln -sf $JAVA_HOME/bin/java /etc/alternatives/java
```

```
ln -sf /etc/alternatives/java /usr/bin/java
```

Step 2 - SE Linux Configuration

The SE Linux package interferes with MySQL installation and must be disabled. It can be re-enabled after installing MySQL.

1. Edit the **/etc/selinux/config** file so that it looks like:

```
# This file controls the state of SELinux on the system.
# SELINUX= can take one of these three values:
# enforcing - SELinux security policy is enforced.
# permissive - SELinux prints warnings instead of enforcing.
# disabled - SELinux is fully disabled.
```

```
SELINUX=disabled
```

```
# SELINUXTYPE= type of policy in use. Possible values are:
# targeted - Only targeted network daemons are protected.
# strict - Full SELinux protection.
#SELINUXTYPE=targeted
```

2. If you change these settings you may need to reboot your system before installing MySQL.

Step 3 - Perl-DBI Installation

GroundWork Monitor Small Business requires **Perl-DBI-1.40-5.i386.rpm** to be installed on Red Hat and CentOS servers prior to MySQL. To download Perl DBI 1.40-5 i386 for Linux select this link <http://www.groundworkopensource.com/downloads/files/mysql/perl-DBI-1.40-5.i386.rpm>.

Note: You must login to the GroundWork Support Center at

<http://www.groundworkopensource.com/support/index.html> to download from this link. If you try to download the file directly, without logging into the Support Center first, you will receive an access denied error.

Step 4 - MySQL Configuration

MySQL 5 is distributed with GroundWork Monitor Small Business, and is licensed as a commercial package. GroundWork Monitor Small Business does not install unless the commercial MySQL release is installed. Installing GroundWork Monitor Small Business will not delete any existing databases, and uninstalling will leave all databases alone, even the GroundWork databases. GroundWork Monitor Small Business requires the following packages (version 5.0.18 or higher) to be installed on the system. You must upgrade MySQL to the MySQL PRO version. If you are not sure if the correct version of the packages is installed, query the RPM database for each package using **rpm -qa |grep MySQL**.

Note: Upgrading an existing MySQL 4.x installation can cause the MySQL engine to fail to start. Configuration settings for MySQL 4.x might be incompatible with MySQL 5.0. If MySQL doesn't start (server error) check if an old **my.cnf** file exists in **/etc** directory. Simply remove or rename the file and MySQL will start (**/etc/init.d/mysql restart**).

Downloading MySQL Pro (version 5.0.18 or higher)

1. Login to the **Support Portal** at <http://www.groundworkopensource.com/support/>.
2. Select the link **Downloads>>**.
3. Under **GroundWork Monitor Releases**, select the link for the GroundWork Monitor product you are using (e.g. Small Business 5.0, Small Business 5.0).
4. Next, under the displayed platforms (e.g. RHEL4, SES9) select **32** or **64** bit.
5. Under the **Solutions** section select the link for **MySQL Pro**.
6. The links to the required RPMs will be listed. Select to **download**.

Installing MySQL Pro

1. You can install these packages by copying the appropriate MySQL rpm files for your operating system and issuing the command **rpm -Uvh MySQL***. This will install the MySQL packages in the correct order.

Database Access

The installer needs root access for creating new databases and setting the permissions. If your root password for MySQL is empty (not recommended, but is the default after installing MySQL) no further MySQL configuration is needed and you can proceed with the installation step. If a root password has been specified you can pass it to the installer by setting an environment variable.

Important Note: If you use a **root** password for MySQL it needs to be provided to the RPMs that perform the installation. Prior to launching any RPM commands you need to set the value of the MySQL **root** password as following:

1. Create an environment variable **MYSQL_ROOT** (all UPPERCASE) with the password value (e.g. **export MYSQL_ROOT=password**).
2. Set the root password as described in the below example:
from command prompt# export MYSQL_ROOT=test

Step 5 - Network Configuration

MySQL uses the localhost file on **/etc/hosts**. Make sure that the localhost entry looks like the example below. Also, make sure that localhost is first after the IP address followed by **localhost.localdomain**. Replace **192.168.2.100** with the **IP address** of the system, and **groundworkserver** with the real Host name.

127.0.0.1 localhost localhost.localdomain

192.168.2.100 groundworkserver groundworkserver.mycompany.com

Example: **groundworkserver.mycompany.com** is the full qualified domain name where the GroundWork Monitor server is installed. Also, make sure TCP port 3306 is not blocked by your firewall rules. This port is for communication to MySQL server.

4 NEW INSTALLATION

New Installation of GroundWork Monitor Small Business means installing the software in a new, clean environment where there isn't any pre-existing GroundWork Monitor data. This install package implements all GroundWork Monitor Small Business components in 3 RPM files:

1. **Foundation RPM:** groundwork-foundation-pro-1.5.y-yy.noarch.rpm

2. **Core RPM:** groundwork-monitor-core-5.0.y-yy.zzzz.zzzz.rpm

Important Note: Throughout the installation instructions the actual file names structure may vary depending on the particular product edition, version, build, and platform as describe here in our example:

Example Files:

- Foundation RPM: **groundwork-foundation-pro-1.5.1-59.noarch.rpm**
- Core RPM: **groundwork-monitor-core-5.0.1-41.rhel4.i386.rpm**

Example Structure: g r o u n d w o r k - r p m - w w - x . x . y - y y . z z z z . z z z z

- **groundwork** is the common prefix.
- **rpm** is the RPM type; **foundation** (Foundation), **monitor** (Core), **monitor** (PRO)
- **ww** is the GroundWork Monitor Edition; Open Source (**os**), Small Business (**sb**), or Small Business (**pro**) **Note:** The Core RPM uses **core** as its GroundWork Monitor Edition.
- **x.x** is the version number; Foundation **1.5**, GroundWork **5.0**.
- **y-yy** represents the build number; Foundation RPM **1-59**, Core RPM **1-41**, PRO RPM **1-70**.
- **zzzz.zzzz** is the platform; Red Hat **rhel4.i386** or SuSE **sles9**.

Downloading the RPMs

If you are a GroundWork customer and have licensed [GroundWork Monitor Small Business](#), full product downloads, including over 40 monitoring profiles, are available via our [customer support section](#).

1. Login to the **Support Portal** at <http://www.groundworkopensource.com/support/>.
2. Select the link **Downloads>>**.
3. Under **GroundWork Monitor Releases**, select the link for the GroundWork Monitor product you are downloading (e.g. Small Business 5.0).
4. Next, under the displayed platforms (e.g. RHEL4, SES9) select **32 bit**.
5. Under the **Solutions** section select the link for the GroundWork Monitor product you want to download (e.g. GroundWork Monitor Small Business v5.0 i386 for Red Hat).
6. Select the link to download the RPMs (e.g. <http://www.groundworkopensource.com/downloads/Monitor/Pro5.0/login.php>).
7. Enter the indicated **Username** and **Password**.
8. After the download, untar using the command appropriate for your product edition:

GWMPRO: **tar -xvzf GroundWorkMonitorPro_5.0.tar.gz** which extracts the 3 RPMs and current Installation, Readme, and Release Notes files.

or

GWMSB: **tar -xzf GroundWorkMonitorSB_5.0.tar.gz** which extracts the 2 RPMs and current Installation, Readme, and Release Notes files.

Installing the Package

1. To perform the installation you need to be **root** on the system.
2. This installation places all files in the directory **/usr/local/groundwork**.
3. A GroundWork supplied version of Apache is installed with this package. If you are running Apache on your system, it will be stopped during the installation process, but not removed. Any content served will be served by the GroundWork version of Apache, but you should be aware that patches applied using the usual patch distribution systems will not be applied to the running version of Apache.
4. The GroundWork Monitor Small Business package should be installed on a standalone system to avoid this scenario.
5. Install the RPMs by following these steps in sequence and verifying that there are no errors after each one is complete:
 1. **Foundation RPM**. This will install the GroundWork Foundation components.
rpm -Uvh groundwork-foundation-pro-1.5.y-yy.noarch.rpm
 2. **Core RPM**. This will install GroundWork Monitor components.
rpm -Uvh groundwork-monitor-core-5.0.y-yy.zzzz.zzzz.rpm

Accessing GroundWork Monitor Small Business 5.0

1. Go to the URL **http://<hostaddress>/**.
2. The default Administrator User ID and Password is **admin/admin**. Use this ID to define Users, Groups, Roles, and Packages.
3. The Administrator role also provides access to the **Configuration** option, which allows you to configure the Nagios monitoring system.
4. An **Operator** role is pre-defined for you (Operator User ID and password is **joe/joe**) with access to GroundWork Monitor Small Business applications such as Status, Reports, and Bookshelf. Nagios files are installed in the following directories:
 - Binaries: **/usr/local/groundwork/nagios/bin**
 - Configuration: **/usr/local/groundwork/nagios/etc**
 - Eventhandlers: **/usr/local/groundwork/nagios/eventhandlers**
 - Plugins: **/usr/local/groundwork/nagios/libexec**
 - Share: **/usr/local/groundwork/nagios/share**
 - Logs: **/usr/local/groundwork/nagios/var**
 - Command: **/usr/local/groundwork/nagios/var/spool**
 - CGIs: **/usr/local/groundwork/apache2/cgi-bin**

Uninstalling the Package

Important Note: **rpm -e** removes all traces of GroundWork Monitor, including any config files. You should back up all the RRDs, config files, and log files at a minimum if you want to keep these around. It is good practice to do this whenever performing a software install.

1. To check which version you have installed, enter the command:

rpm -qa | grep groundwork.

2. Once you know your current installed version, enter the following command for the appropriate package:

```
rpm -e groundwork-monitor- w w-x.x.y-yy.zzzz.zzzz
```

5 MIGRATING FROM AN EXISTING NAGIOS INSTALLATION TO A NEW GROUNDWORK SERVER

Basic Method

The steps below will show you how to set up a GroundWork Server and import an existing Nagios configuration.

1. Copy the existing Nagios configuration files to **/usr/local/groundwork/nagios/etc**.
2. Adjust the paths in **nagios.cfg** and **nagios.cgi** to **/usr/local/groundwork/nagios/etc**.
3. For example, if your Nagios **cfgs** files are in **/usr/local/nagios/etc**, you just need the files referenced in your **nagios.cfg** and the **cfgi.cfg**. Nothing else. Put them in **/usr/local/groundwork/nagios/etc**. Adjust the path in the **nagios.cfg** and the **cfgi.cfg**. Be sure they are owned by Nagios (**chown nagios.nagios *.cfg**) so that the loader can read them.
4. Log into GroundWork Monitor Small Business as an **Administrator (admin/admin)**.
5. Click the **Application Launcher** and select the **Configuration** option.
6. Confirm your configuration by loading the Nagios configuration, select **Control>Load**.
7. Next, select **Pre Flight Test**, and then **Commit**.

6 VERIFYING THE OPERATION OF GROUNDWORK MONITOR SMALL BUSINESS

Checking the User Interface Framework

1. Point your browser to http://YOUR_SERVER/.
2. Log into GroundWork Monitor Small Business as an **Operator (joe/joe)**.
3. Click the **Application Launcher** and select the **Status** option.
4. Review the **Overview** status page.
5. Select the **NetView** menu option.
6. Open the **Host** and **Service** information. Check that the status information is correct.
7. Click the **Application Launcher** and select the **Console** option.
8. Check to see if Console messages are appearing.
- 9.

Checking the connection between Nagios and GroundWork Foundation

1. If the Status Viewer status and Nagios Service detail do not match, check the following:
 - Check to see if the **nagios2collage_status.pl** is executing with the following command:
ps -ef | grep nagios2collage.
 - If this process is not running, restart **gwservices** with the following command:
/etc/init.d/gwservices restart.
2. If the Console events do not appear, check the following:
 - Check to see if the **nagios2collage_event.pl** is executing with the following command:

ps -ef | grep nagios2collage.

- If this process is not running, restart **gwservices** with the following command:
/etc/init.d/gwservices restart.

Checking SNMPTRAP operation

The GroundWork Monitor Small Business server is by default enabled as a SNMP trap receiver. The SNMP trap (**snmptrapd**) and the SNMP trap translator or daemons must be running. To check these, issue the command **ps -ef | grep snmp**. You should see the following processes:

- **/usr/local/groundwork/sbin/snmptrapd -On -C -c
/usr/local/groundwork/etc/snmp/snmptrapd.conf -Lf
/usr/local/groundwork/var/log/snmp/snmptrapd.log**
- **/usr/local/groundwork/bin/perl /usr/local/groundwork/sbin/snmpptt --daemon --ini
/usr/local/groundwork/etc/snmp/snmpptt.ini**

In order for GroundWork Monitor Small Business to process traps, the MIBs from the originating devices must be defined to the SNMP trap translator. To import MIBs, follow the instructions in section SNMP Trap Processing, Importing Device MIBs in Bookshelf. SNMP trap events received by GroundWork Monitor Small Business will show in the Console application.

To test this, you can send a test trap to the console with the following command. This will send a generic cold start trap.

- **snmptrap -v 1 -c public localhost "" "" 0 0 ""**

If you are not receiving traps, check the following:

- The SNMP trap receiver port 162 must be open. Ensure the firewall rules on the GroundWork Monitor Small Business server open this port. To see the **iptables** settings to allow this, reference the file **/usr/local/groundwork/etc/iptables**.
- The MIB configuration may not allow this trap to be processed. To see all traps received, whether they are defined or not, check the **snmptrapd** log file name.

You can trace the progress of trap processing by looking at the following log files:

- **/usr/local/groundwork/var/log/snmp/snmptrapd.log**
All SNMP traps received by the snmptrapd daemon.
- **/usr/local/groundwork/var/log/snmp/snmppttunknown.log**
All traps not recognized by snmpptt. If your trap is recorded in this log, the MIB may not be imported into snmpptt.
- **/usr/local/groundwork/var/log/snmp/snmpptt.debug**
Traps received and translated by snmpptt daemon, and commands executed.
- **/usr/local/groundwork/var/log/snmp/gwprocesstrap.log**
Traps processed and inserted into the GroundWork Foundation database.

7 UPGRADING FROM PREVIOUS VERSIONS

Upgrade Steps

This section covers the upgrade steps for the following product versions. Any specific version upgrade differences are indicated in the Notes section of each step. **Note:** GroundWork Monitor Small Business is an extension to the GroundWork Monitor Small Business installation. Follow the Steps 1, 2 and 5 below to upgrade your existing GroundWork Monitor Small Business 5.0 installation to GroundWork Monitor Small Business 5.0. If you are upgrading from other GroundWork Monitor products please contact support.

- GWMON Small Business 5.0 to GWMON Small Business 5.0 (Follow steps 1, 2 and 4)

Step 1 - Root Password

If you use a root password for MySQL it needs to be provided to the RPMs that perform the installation. Prior to launching any RPM commands you need to set the value of the MySQL root password as follows:

- Create an environment variable **MYSQL_ROOT** (all UPPERCASE) with the password value:

Example: **export MYSQL_ROOT=password**

- Set the root password:

Example: **from command prompt# export MYSQL_ROOT=test**

Step 2 - Downloading the RPMs

Download the GroundWork Monitor Small Business RPMs to a local folder on the machine you have a previous version of GroundWork Monitor installed. The packages are:

- **Foundation RPM:** groundwork-foundation-pro-1.5.y-yy.noarch.rpm
- **Core RPM:** groundwork-monitor-core-5.0.y-yy.zzzz.zzzz.rpm

If you are a GroundWork customer and have licensed [GroundWork Monitor Small Business](#), full product downloads, including over 40 monitoring profiles, are available via our [customer support portal](#).

1. Login to the **Support Portal** at <http://www.groundworkopensource.com/support/>.
2. Select the link **Downloads>>**.
3. Under **GroundWork Monitor Releases**, select the link for the GroundWork Monitor product you are downloading (e.g. Small Business 5.0).
4. Next, under the displayed platforms (e.g. RHEL4, SES9) select **32 bit**.
5. Under the **Solutions** section select the link for the GroundWork Monitor product you want to download (e.g. GroundWork Monitor Small Business v5.0 i386 for Red Hat).
6. Select the link to download the RPMs (e.g. <http://www.groundworkopensource.com/downloads/Monitor/Pro5.0/login.php>).
7. Enter the indicated **Username** and **Password**.
8. After the download, untar using the command appropriate for your product edition and platform which will extract a number of RPMs and current Installation, Readme, and Release Notes files. For example:

GWMSB: **tar -xvzf GroundWorkMonitorSB_5.0.x_Suse-9-32.tar.gz**, extracts 2 RPMs.

Step 3 - Backing Up

1. Backup custom changes you may have made to your GroundWork Monitor system:
 - Plugins: **/usr/local/groundwork/nagios/libexec**
 - CGI Graphs: **/usr/local/groundwork/apache2/cgi-bin/**
 - Eventhandlers: **/usr/local/groundwork/nagios/eventhandlers**
2. Backup existing RRD files and your current Nagios configuration. This will create three TAR files in the current repository.
 - **tar cfz GWMON-xxx-rrd.tar.gz /usr/local/groundwork/rrd**
 - **tar cfz GWMON-xxx-nagios.tar.gz /usr/local/groundwork/nagios/etc**
 - **tar cfz GWMON-xxx-users.tar.gz /usr/local/groundwork/users**

3.Database Backup

Groundwork recommends that all MySQL databases be backed up before upgrading. The example below shows how to back-up the monarch database. Please follow the same steps to backup the other Groundwork databases.

- Backup your configuration database. Enter the following command to create the backup file monarch_backup.sql:

```
mysqldump monarch > monarch_backup.sql
```

- Monarch Backup

Backup the following files and folders before removing GroundWork Monitor and restore after the 5.0 installation.

```
tar cfz GWMON-xxx-monarchbackup.tar.gz /usr/local/groundwork/monarch/backup
```

```
tar cfz GWMON-xxx-performance.tar.gz  
/usr/local/groundwork/performance/performance_views
```

If you have done custom work to these files backup the following:

Note: Does not apply to GroundWork Monitor 4.0 to GroundWork Monitor Small Business 5.0 upgrade.

```
tar cfz GWMON-xxx-monarchcallout.tar.gz  
/usr/local/groundwork/monarch/lib/MonarchCallOut.pm
```

```
tar cfz GWMON-xxx-monarchexternals.tar.gz  
/usr/local/groundwork/monarch/lib/MonarchExternals.pm
```

Step 4 - Upgrade to GroundWork Monitor Small Business 5.0

1. Install the RPMs by following these steps in sequence and verifying that there are no errors after each one is complete:

- 1.**Foundation RPM** - This will install the GroundWork Foundation components.

```
rpm -Uvh groundwork-foundation-pro-1.5.y-yy.noarch.rpm
```

- 2.**Core RPM** - This will install GroundWork Monitor components.

```
rpm -Uvh groundwork-monitor-core-5.0.y-yy.zzzz.zzzz.rpm
```

Step 5 – Copy your custom files

1. Copy your custom plugins and eventhandlers to the new system's directory:

```
/usr/local/groundwork/nagios/libexec
```

2. Copy your custom CGI files to the new system's directory:

```
/usr/local/groundwork/apache2/cgi-bin/graph/.
```

3. Use the Configuration tool in GroundWork Monitor Small Business to change the references in the Host and Service extended info to URL **/graphs/cgi-bin/<cgi_program>**.

Step 6 - Restore the RRD created by the previous version of GroundWork Monitor

- **tar xzf GWMON-xxx-rrd.tar.gz -C/**
- change the ownership for the rrd files: **chown -R nagios.nagios /usr/local/groundwork/rrd**
- **tar xzf GWMON-xxx-monarchbackup.tar.gz -C/**
- **tar xzf GWMON-xxx-performance.tar.gz -C/**

- tar xzf GWMON-xxx-monarchcallout.tar.gz -C/
- tar xzf GWMON-xxx-monarchexternals.tar.gz -C/
- tar xzf GWMON-xxx-nagios.tar.gz -C/
- tar xzf GWMON-xxx-users.tar.gz -C/

8 SUPPORT/FEEDBACK/PROBLEM REPORTS/DISCUSSION

GroundWork Monitor Small Business Support

Product support is available through a GroundWork subscription agreement. GroundWork Subscription Customers have full access to a range of support offerings, including our enterprise knowledgebase, download area and trouble-ticket center. For a complete overview of our support offerings and severity level descriptions, please go to GroundWork Support at <http://www.groundworkopensource.com/support/options.html> or email us at support@groundworkopensource.com.

Existing subscription customers can access support online by logging into the GroundWork Support Center at <http://www.groundworkopensource.com/support/>. Usernames and passwords are provided to you by your GroundWork representative. Please see the GroundWork Community Page at <http://www.groundworkopensource.com/community/>.