

GroundWork Monitor 6.0 Community Edition Release Notes

This document describes the contents of GroundWork Monitor 6.0 Community Edition Release. Please read this document completely before proceeding with installation or upgrade.

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SECTION 1 – CHANGES FROM THE PREVIOUS RELEASE

GroundWork Monitor 6.0 includes JBoss Portal for the user interface components. By adopting JBoss Portal we have eliminated the use of the PHP/Guava framework from prior releases. The following key features have been rewritten to take advantage of the JBoss Portal architecture:

Status Viewer

Dashboard Viewer

Dashboard Builder

Administration

Dashboards and the new dashboard builder applications are included in Community Edition with this release. Other applications including Monarch, and Performance Viewer have been made accessible via the portal interface but have not seen large-scale functional improvements in this release. The following key new user interface features and improvements are noted:

New look-and-feel and navigation

Displays updated based on data-push, eliminating click to refresh

Status viewer – new service and host state bubble up in tree view

Navigate by service groups or host groups

Improved global search

Host and service list filtering based on states and time

New statistical summaries based on hosts, services, hostgroups and service groups

Point-in-time availability calculation in the status viewer

Context links to external applications for hosts and services

Links to containing groups for hosts and services

Automatic links to parent servers

Customizable complex performance graphs within Status Viewer

'My Groundwork' application - used to create private and personal views of monitoring data

Most status viewer components are now available as dashboard elements

Filter service lists by service groups, enables richer service-oriented dashboards

Troubled host/service lists filtered by host/service group

Create custom portal pages to show specific dashboards

Improved serviceability through the new GroundWork monitoring server profile and dashboard

Groundwork Developer's Portal – developer documentation for customizing and extending the Groundwork 6 platform.

SECTION 2 – INSTALLATION

System Requirements

This release requires the following minimum hardware specification for correct operation:

2 CPU, 3 GHz P4 or equivalent

4 GB RAM

160 GB disk

The minimum hardware requirements have increased from the previous release. Current GroundWork Monitor users wishing to upgrade are advised to ensure their systems meet or exceed these minimum requirements before upgrading.

Note: If GroundWork Monitor is installed on a system with less than 4GB of RAM then it will be configured for optimal performance on limited hardware. The system will have lower monitoring throughput and will support only a few concurrent users or provide slower interface response times.

Java Compatibility

GroundWork Monitor specifically requires Sun Microsystems' Java SDK version 1.5 Update 8. This software is included in the GroundWork installation bundle. Under some circumstances other Java packages can interfere with the Sun provided software. It is strongly recommended that other Java packages be removed prior to installing by following these steps:

Query for existing Java packages:

```
rpm -qa | grep -i java
```

```
rpm -qa | grep -i jdk
```

Remove the RPMs using `rpm -e`

Example Java packages:

```
java-1.4.2-gcj-compat-1.4.2.0-27jpp
```

```
gcc-java-3.4.6-3
```

Reboot the machine (to make sure the cache is cleared).

When running a 64-bit Linux distribution, use of the 32-bit installation package will result in poor JVM performance, and should not be attempted. Similarly, use of 32-bit Linux on 64-bit hardware may result in poor performance, and is not recommended.

Installing on virtualized systems

If installing in a virtualized environment, particularly VMware ESX configuration of a single CPU or employing vCPU pinning is highly recommended. Use of multiple CPUs in a virtual environment can negatively affect performance. Installation of VMware tools and configuration of host time synchronization is highly recommended in all VMware environments.

Download the 32 or 64-bit binary from

<http://www.groundworkopensource.com/community/downloads/> or on Sourceforge at <http://sourceforge.net/projects/gwmos/>

Change the permissions of the binary to executable:

```
chmod +x groundwork-6.0-brXX-gwYY-linux-32-installer.bin.
```

Installation Methods

The installer package supports 3 modes: GUI, text, and unattended. The default is GUI if an X server is running; otherwise text mode will be used.

GUI Install

Readme: 091909

From a system with X server running, simply double-click on the bin file or go to the command shell and execute the downloaded file. Alternatively simply execute the installation package:

```
./groundwork-6.0-brXX-gwYYY-linux-32-installer.bin
```

Text Based Install

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

```
./groundwork-6.0-brXX-gwYYY-linux-32-installer.bin --mode text
```

Unattended Install

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

```
./groundwork-6.0-brXX-gwYYY-linux-32-installer.bin --mode unattended
```

This will perform an unattended installation that will not prompt the user for any information.

Passing the '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 mysql password specified in the options file:

```
./groundwork-6.0-brXX-gwYYY-linux-32-installer.bin --mode unattended --optionfile gwinstall.ini
```

Where gwinstall.ini consists of:

```
mysql_password=your_passwd
```

Remote Install

Using SSH into a remote server and then using the text based install (see above) is the most common way to install GroundWork Monitor remotely. If you perform the remote install from a machine that runs an X server, you can use ssh with the -X option and run the install with the GUI mode. Example:

```
ssh -XC -l root target-machine
```

```
./groundwork-6.0-brXX-gwYYY-linux-32-installer.bin
```

GroundWork Monitor includes all prerequisites and components within a single installation package. The package is available in 32 and 64-bit variants. The software components of GroundWork Monitor are installed under /usr/local/groundwork with the exception of the start/stop named /etc/init.d/groundwork. It is used as follows:

```
/etc/init.d/groundwork {start|stop}
```

This script can also be used to restart individual services. For example:

```
/etc/init.d/groundwork restart nagios
```

Login Access to Portal

For the GW Monitor 6.0 release, there are three users and roles that are provided with a clean installation. These users are: admin, operator and user. To login, use the same login name for the password. For example, to login as the user, operator, the password is operator. Changing the default passwords upon installation is recommended.

The roles have changed for these users from previous releases. The admin user, with the administrator role will have access to all of the portlets. The other two users will have access to subset of the available portlets.

Administrator Role

Dashboards, My GroundWork, Status, Reports, Configuration, Auto Discovery, Administration, Nagios and Resources

Operator Role

Dashboards (read only), My GroundWork, Status, Nagios and Resources

User Role

Dashboards (read only), My GroundWork, Status (no actions), Reports and Resources

SECTION 3 – UPGRADING

Before attempting to upgrade please read this complete section for important details of changes applied during the upgrade process. Due to the significant software changes made in this release some aspects of your current 5.x configuration will not be preserved upon upgrade to Release 6.

Upgrading to GroundWork Monitor 6.0 is supported from GroundWork Monitor Community Edition 5.3.0

Important: Complete a full system and database backup prior to upgrading your installation as described in the backup section below. After performing an upgrade, GroundWork recommends that you perform a Configuration -> Commit to sync up the data between Nagios and the Foundation database.

To start the upgrade process follow the installation steps listed in section 2. If an existing installation is detected you will be prompted to perform an upgrade by the installer.

Following a successfully upgrade please flush the system configuration by performing a commit:

1. Login to GroundWork 6.0 portal as admin
2. Select the Configuration portlet page
3. Select the Control subportlet page
4. Select the Commit link

Additional details and limitations of the upgrade process

During the upgrade process key configuration items are backed up and put into a backup-YYYY-MM-DD folder under /usr/local/groundwork including: Nagios: archive logs and plugins, saved views and rrd images, GroundWork guava packages, automation files and monarch backups.

The upgrade process does not automatically migrate the following items:

Due to the change in authentication handling in release 6 every user account password will be reset after upgrade. The default password for all accounts including 'admin' after upgrade is "changeme". Users will be prompted to change their password on first login to release 6. Alternatively, passwords can be changed by the administrator using the Administration -> User Management application.

Users and role memberships are preserved during upgrade however application permissions associated with custom roles are not migrated and must be manually configured using the Administration application after upgrade.

Guava "Wrappit" applications are not preserved upon upgrade. The release 6 portal provides similar functionality by creating a custom page that contain the web page portlet however this must be manually configured after upgrade.

The guava PHP framework is no longer included in GroundWork Monitor any custom guava applications will not function after upgrading to release 6.

Plugins not provided by GroundWork are backed up during the upgrade process. Following upgrade the custom plugins must be manually moved from the backup directory back to the libexec directory. It is recommended that only custom plugins be restored as the bundled plugins have additional bug fixes in this release.

Profiles: Any custom or modified profiles need to be transferred from the backup directory back to the original location after installation is complete. These will be in the form of XML files. Profiles in the database will be migrated. Profiles included by GroundWork that were modified by the customer will be overwritten during an upgrade, and so will need to be manually restored from the backup also, if desired.

The following files and directories are backed up to /usr/local/groundwork/backup-YYYY-DD-MM directory during the upgrade process. After an upgrade to 6.0 any site-specific customizations to these files must be manually merged or discarded.

/usr/local/groundwork/mysql/my.cnf.bak

/usr/local/groundwork/backup-YYYY-DD-MM/apache2

/usr/local/groundwork/backup-YYYY-DD-MM/performance

```
/usr/local/groundwork/backup-YYYY-DD-MM/guava/includes
/usr/local/groundwork/backup-YYYY-DD-MM/monarch/automation
/usr/local/groundwork/backup-YYYY-DD-MM/monarch/backup
/usr/local/groundwork/backup-YYYY-DD-MM/nagios/libexec
/usr/local/groundwork/backup-YYYY-DD-MM/nagios/var
/usr/local/groundwork/backup-YYYY-DD-MM/nagios/etc
/usr/local/groundwork/backup-YYYY-DD-MM/nagios/eventhandlers
/usr/local/groundwork/backup-YYYY-DD-MM/performance/performance_views
/usr/local/groundwork/backup-YYYY-DD-MM/performance/htdocs/performance
/usr/local/groundwork/backup-YYYY-DD-MM/profiles
/usr/local/groundwork/backup-YYYY-DD-MM/var
/usr/local/groundwork/backup-YYYY-DD-MM/start-foundation.sh-backup
/usr/local/groundwork/backup-YYYY-DD-MM/etc/logrotate.d/groundwork.bak
/usr/local/groundwork/backup-YYYY-DD-MM/crontab-nagios-YYYY-DD-MM
/usr/local/groundwork/backup-YYYY-DD-MM/common/etc/nsca.cfg
/usr/local/groundwork/backup-YYYY-DD-MM/common/etc/send-nsca.cfg
/usr/local/groundwork/backup-YYYY-DD-MM/common/etc/snmp
/usr/local/groundwork/backup-YYYY-DD-MM/config/db.properties
/usr/local/groundwork/backup-YYYY-DD-MM/config/foundation.properties
/usr/local/groundwork/backup-YYYY-DD-MM/config/bronx.cfg
/usr/local/groundwork/backup-YYYY-DD-MM/gwreports
```

Log in

After upgrading to 6.0 using the same browser session as the 5.x software, you may encounter the message, “Not Found Error 404 - the requested URL /monitor/index.php was not found on this server.” You must clear your browser's cache and log in again.

Nagios user home directory

The location of the nagios home directory and associated files has changed in the 6.0 release. To summarize:

1. For upgrades from 5.3 to 6.0 the nagios directory will remain in /home/nagios
2. For new installations the home directory for nagios will be located in /usr/local/groundwork/users/nagios/

New localhost profile

The localhost profile has been updated to improve the depth of monitoring performed on the GroundWork Monitor system. The new local-groundwork-server profile includes 26 system checks to monitor the GroundWork server after a clean installation. Upgrading customers are recommended to apply this profile to 'localhost' by following these instructions:

1. Login to GW 6.0 portal as admin
2. Select the Configuration portlet page
3. Select the Profiles subportlet page.
4. Select the Profile importer link
5. Check service-profile-local-groundwork-server.xml from the Import Profiles list.
6. Press the orange Import button.
7. Refresh the Service profiles, to verify the profile has been added
8. Apply the profile to the localhost host, by selecting the Assign Hosts sub tab, assigning Localhost, and then choosing to apply it in the Apply subtab.

SECTION 4 – FIXED ISSUES SINCE RELEASE 5.3

This section summarizes the main issues fixed since release 5.3.

Reference	Component	Summary
GWMON-6288	Status Viewer	Status Viewer tabs appearing in random order
GWMON-6335	Bookshelf	Document database configuration locations
GWMON-6336	Portal	Remove need to have DNS configured for some applications
GWMON-6369	Status Viewer	Keep navigation tree open when moving between pages
GWMON-6371	Configuration	Include configuration API (PERL)
GWMON-6428	Dashboards	Allow configuration of service list length (paging)
GWMON-6429	Dashboards	Filter service lists by status
GWMON-6430	Status Viewer	Performance graphs not displayed under some circumstances
GWMON-6432	Dashboards	Allow custom portlet titles
GWMON-6477	Status Viewer	Horizontally align status history and performance portlets
GWMON-6480	Status Viewer	Global feature switch state not correctly reflected in status viewer
GWMON-6516	Dashboards	Problem configuring user with single dashboard access
GWMON-6651	Status Viewer	Show acknowledgement status in host and service detail screens
GWMON-6702	Dashboards	Monitoring status displaying zero values
GWMON-6749	Seurat View	Sort order reverting after refresh
GWMON-6754	Status Viewer	Show message when no service groups defined
GWMON-6793	Dashboard	Allow viewing of a specific performance metric, not just host level
GWMON-6841	Status Viewer	Cannot expand service groups in tree view
GWMON-6861	Status Viewer	Tree view bubble-up warning states
GWMON-6931	Status Viewer	Colors and grid lines for performance graphs in status viewer
GWMON-6983	Administration	Administration application not accessible
GWMON-7024	Dashboard	Intermittent proxy error viewing a dashboard
GWMON-7193	Portal	Cannot relogin upon session timeout in some cases

GWMON-7200	Dashboard	Creating a dashboard with more than one performance graph fails
GWMON-7201	Status Viewer	Changing the time period of a graph fails in some cases
GWMON-7263	Performance	Some custom graphs do not appear to accept start and end times.
GWMON-7308	Portal	Logging in as operator fails in some cases
GWMON-7335	Status Viewer	Stack traces when clicking around the status viewer
GWMON-7363	Reports	Update default date range
GWMON-7388	My GroundWork	Auto-complete does not work in the Host Summary portlet
GWMON-7480	Status Viewer	Performance graphing problem after upgrade
GWMON-7485	Status Viewer	Acknowledge Popup sends multiple commands
GWMON-7514	Status Viewer	Cancel icon misplaced in Groups for this service/host pop-up
GWMON-7553	Nagios	Broken link in Nagios application
GWMON-7611	Dashboards	Problem accessing dashboards after system restart
GWMON-7629	Status Viewer	Services in performance measurement portlet are not organized in the same order as the services in the host portlet
GWMON-7634	Status Viewer	Alias for hostgroup is not displayed in groups for this host link
GWMON-7636	Portal	Support multiple tabs/windows per session and browser
GWMON-7637	Portal	Remove dependency on code.jquery.com
GWMON-7641	BitRock	ctlsript.sh: intermittent problems killing nagios
GWMON-7646	Bookshelf	Support for CIDR blocks address is added in Auto discovery. Bookshelf should be updated for the same
GWMON-7652	Console	Wrong acknowledgment event gets generated in some cases
GWMON-7662	Status Viewer	Sorting link missing in pop-up for Service Health portlet
GWMON-7668	Status Viewer	Tooltip displays wrong count of troubled hosts
GWMON-7685	Nagios	Status Feeder should only send fields that have changed to foundation
GWMON-7694	Foundation	Foundation lock wait timeout exceeded - exceptions in framework.log file.
GWMON-7698	Status Viewer	Service Health portlet shows time in critical state not time since last state change
GWMON-7700	Status Viewer	Configuration changes not propagated to tree in some cases

GWMON-7701	Status Viewer	Status viewer stops refreshing if left for a few hours
GWMON-7710	Dashboards	Provide default dashboard configurations
GWMON-7739	Performance	Removed obsolete performance-data handling scripts
GWMON-7744	Foundation	Time-based filters not functional in Status Viewer
GWMON-7749	My GroundWork	Edit configuration of portlet takes too long to appear in some cases
GWMON-7759	Status Viewer	Applying a new time range sometimes only affects state history
GWMON-7770	Status Viewer	Error on page trying to access a host in the navigation tree (IE7 only)
GWMON-7777	Status Viewer	Please Wait dialog message does not appear on IE7 when deleting status subpages
GWMON-7778	Configuration	Cannot access configuration files in Tools-Export
GWMON-7779	Dashboards	Dashboards -> Home fails to appear
GWMON-7784	Documentation	Document steps to add user to custom role
GWMON-7785	BitRock	Restarting gwservices reports [FAILED] even though it has started -SUSE servers
GWMON-7794	Dashboards	"Show Install Info" under Dashboard Summary
GWMON-7803	Report	Hostgroup status report returning incorrect values
GWMON-7808	Portal	Accessing Portal "My Preferences" results in a 403 error
GWMON-7809	Foundation	LogMessage for Out of sync has wrong count for foundation services
GWMON-7818	Status Viewer	Slow performance when viewing some performance graphs

SECTION 5 – KNOWN ISSUES AND LIMITATIONS

Testing has shown that user interface responsiveness varies with the web browser used to access the application. We recommend using Firefox 3.x or Internet Explorer 8 for best results. Internet Explorer 7 is supported but may provide a lower than acceptable response time in some cases. We continue to work on improving the response time with Internet Explorer 7. Other browsers may be used but have not been tested.

The following applications have been removed from the GroundWork 6.0:

- Log File Reporting interface – this has been removed since it was no longer used.
- Profile Tools - This functionality is provided by the Auto Discovery and Automation applications
- MIB Validator – this functionality is provided by many on-line tools including <http://www.simpleweb.org/ietf/mibs/validate/>

Customers having GroundWork supported NMS modules can upgrade directly to GroundWork Monitor 6.0 with NMS 2.1 by contacting GroundWork Support to obtain the download of the NMS upgrade pack.

Upon startup Apache may emit the following message “Could not reliably determine the server's fully qualified domain name.” One possible work-around for this issue is to edit the /usr/local/groundwork/apache2/conf/httpd.conf file to explicitly specify the hostname value - GWMON-2149

The root password for MySQL should consist of alphanumeric characters only - GWMON-5486

If an existing /etc/my.cnf file is found during installation, it is left in place and the new MySQL configuration is created called /etc/my.cnf.groundwork. It is highly recommended that these changes are manually merged with the /usr/local/groundwork/mysql/my.cnf file.

In order to have wave audio files enabled with the GroundWork installation, the nagios/share/media directory was exposed in the apache httpd.conf in order to allow audio wav files to be played when they are configured in the nagios/etc/cgi.cfg file. The following should be added to /usr/local/groundwork/apache2/conf/httpd.conf:

```
ScriptAlias /nagios/cgi-bin "/usr/local/groundwork/nagios/sbin"
<Directory "/usr/local/groundwork/nagios/sbin">
```

```
Alias /nagios/media "/usr/local/groundwork/nagios/share/media"
<Directory "/usr/local/groundwork/nagios/share/media">
```

```
# Uncomment for Guava Single Sign On
```

```
    AuthType Basic
    require valid-user
```

```
# The following line should be change to specify the default page for invalid access attempts to this directory
```

```
    TKTAuthLoginURL http://localhost:80/monitor/index.php
```

```
    TKTAuthCookieName    nagios_auth_tkt
```

```
    TKTAuthTimeout 0
```

The Network Service notification portlet is not enabled by default in this release. It can be manually added but should be added only the administrator dashboard. This feature will be delivered in a future release.

Creating a new user without assigning a role to this user will generate exceptions with JBoss Portal 2.7.1.

When a password of less than 6 characters is entered in the Administration>User Management application a confusing error message is displayed. This is a known issue with known issue with JBoss Portal 2.7.1:

<https://jira.jboss.org/jira/browse/JBPORTAL-2345>

The monitoring performance portlet may occasionally display zero values when first opened. After a short delay the correct information will be shown. – GWMON-7819

Under rare circumstances dials and graphs may be swapped in the interface. This is known issue with the ICEfaces and will

be addressed in a future release.

Rarely the "Error occurred when processing action command" is seen when using the status viewer actions. If you encounter this problem, use the retry button to resubmit the request. – GWMON-7518

Automatic update does not occur in event console in response to "acknowledge" actions.

Closing a confirmation message or pop-up list may occasionally pause when the user interface is redrawing. The desired action will be completed after a short pause. – GWMON-7752

Selecting the option "_ALL" in the host group Status Report returns invalid data. Choose a specific hostgroup when running this report. GWMON-7803

When a user is given access to the native Nagios web pages their identity will be recorded as "nagiosadmin" This is a known limitation of the Single Sign-on mechanism used to wrap the Nagios pages - GWMON-5646

"Re-schedule the next check of this service" does not work with Nagios 3.0.6. – GWMON-6319

When using the IE8 browser in the configuration application some controls on the left-side panel may not display. This issue can be worked around by adding the GroundWork Monitor server to the Local Intranet Zone within IE8.

Following a commit operation it may take 60-90 seconds for the configuration change to propagate through to the other application components including the status viewer applications.

Additional minor known issues are listed below:

Reference	Component	Summary
GWMON-2996	Configuration	Host group downtime can not be deleted
GWMON-4977	Installer	Installer shouldn't assume it can write to current working directory
GWMON-5265	Plugins	Check_cpu sar output incorrect on RedHat
GWMON-6182	Portal	Non-US language versions of groundwork cause INVALID DATE STRING exceptions when special chars in date string
GWMON-6485	Configuration	Can't use the Multiple Instances feature of a service check where the check command has no arguments
GWMON-7069	Portal	Dragging portlets in dashboard that contains Monitoring Performance portlet results in 500 - Internal Server Error
GWMON-7086	Console	Renaming a host does not update hostnames of new events
GWMON-7220	Portal	Repeated "Network Connection Interrupted" error
GWMON-7455	Configuration	Uploading Group resource macros fails and removes existing configuration
GWMON-7635	Status Viewer	Bubble-up of status in tree doesn't reflect single service in unknown state
GWMON-7755	Configuration	Monarch groups do not honor contact group assignments (host/host templates)

SECTION 6 – ADDITIONAL INFORMATION

ABOUT THE NETWORK SERVICE

This version of GroundWork Monitor includes the Network Service component. This component provides the following capabilities:

Provides GroundWork Monitor administrators with software update notifications in their home screen.

Provides environment statistics to GroundWork about the GroundWork Monitor installation.

Enabling the Network Service is optional for Community Edition users. Disabling it does not reduce the level of functionality or impair the usage of GroundWork Monitor other than update notifications are not received. The Network Service sends installation information back to GroundWork. The complete set of information gathered is:

The type of GroundWork Monitor product installed (e.g. Community Edition and Enterprise Edition) and version.

The Operating System vendor and version and basic hardware information (RAM, CPU)

The size of the monitored environment: number of configured hosts, host groups, service checks, users and service checks being used.

We hope GroundWork Monitor users will choose to share this information with us so that we can make product improvements and develop new features based on this type of aggregated, anonymous usage data..

If for some reason you decide to enable the network-service binary at a later time after installation. Then you will need to execute the following binary as the root user:

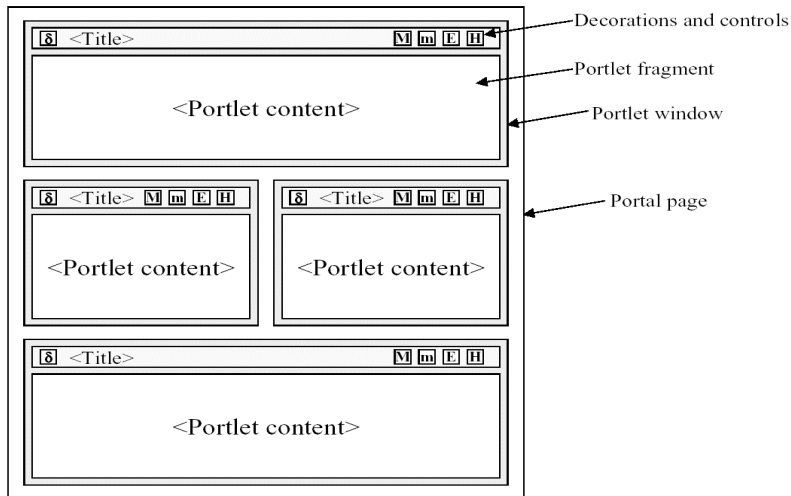
```
/usr/local/groundwork/network-service/bin/network-service-manager.bin
```

Proxy Server Configuration

The Network Service will not be able to receive updates if a non-transparent proxy is used. To configure the proxy settings complete the following:

1. First install the product and enable the Network Service during installation.
2. Login using a secure shell on the GroundWork server; `cd /usr/local/groundwork/network-service/scripts/` or from the command line: `./network-service-ctl.sh stop`
3. Next; `cd /usr/local/groundwork/network-service/bin/`
edit `agent.conf` file and add the following:
`proxy_host=xxx.yyy.zzz.www`
`proxy_port=pppp`
4. Save your changes.
5. Now restart the network service: `./network-service-ctl.sh start`

Definition of Key Terms



Portal: A web based application that aggregates content from different sources. A portal provides application features, administration, configuration and customization capabilities.

Dashboard: A personal portal page that allows users to customize their view of the portal. Users are able to copy other portal pages and individual portlets into their dashboard, drag-and-drop portlets on the dashboard to change the visual layout, and save their dashboard for later recall.

Portal Page: A web page within a portal that displays a collection of portlets. A Dashboard is a type of portal page that has been created by the user.

Portlet: A web component that processes requests and generates dynamic content. Each portlet used by a portal page to display content and monitoring information. Each portlet has a title and frame, similar to a window or screen but is part of the portal page. Portlets used in dashboards may be configured using the multi-colored button in the top right corner.

Portlet Instance: An active representation of a portlet. A single portlet may have one or more instances, each with a different configuration or state. Example: there may be multiple instances of an HTML Editor Portlet within a portal, each of which shows a different HTML page.

Obtaining Source Code

GroundWork Monitor includes Open Source software. The source for these packages is available for download from the following location: <ftp://archive.groundworkopensource.com/pub/groundwork-core/>

Modifications to these software projects in source form, are available for download from the following location:

<http://archive.groundworkopensource.com/groundwork-opensource/>

SECTION 7 – SYSTEM BACKUP INSTRUCTIONS

The purpose of this appendix is to outline the recommended back up procedures to be completed before upgrading to GroundWork Monitor 5.3.0.

Custom Changes

It is recommended that a complete backup of /usr/local/groundwork be taken before upgrading. If this is not possible the following should be considered the bare minimum set of files to be preserved.

Plugins: /usr/local/groundwork/nagios/libexec
CGI graphs: /usr/local/groundwork/apache2/cgi-bin/graphs
Eventhandlers: /usr/local/groundwork/nagios/eventhandlers
Logrotate: logrotate.conf, any changes under /etc/logrotate.d
Foundation configuration: foundation.properties
NSCA configuration: nsca.cfg
Distributed deployment configuration: MonarchDeploy.pm
The contents of the 'nagios' user home directory
The contents of the 'nobody' user home directory
The last configuration file: /usr/local/groundwork/nagios/etc/config-last.log
All modified apache configuration files
The contents of /usr/local/groundwork/etc
The contents of /usr/local/groundwork/backup

RRD Files and Current Nagios Configuration

Back up existing RRD files and your current Nagios configuration. This will create three TAR files in the current directory.

```
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
```

MySQL Databases

GroundWork recommends that all MySQL databases be backed up before upgrading. Here are the upgrade procedures to migrate the databases to the latest version of GroundWork Monitor. Create a back up directory (e.g. /usr/local/backup-gwmon/) and enter the following commands to create the back ups:

```
Monarch (Configuration)
mysqldump -uroot monarch > /usr/local/backup-gwmon/monarch-YYYYMMDD-HHMMSS.sql
Guava (Framework)
mysqldump -uroot guava > /usr/local/backup-gwmon/guava-YYYYMMDD-HHMMSS.sql
Dashboards (Guava Dashboard Config)
mysqldump -uroot dashboard > /usr/local/backup-gwmon/dashboard-YYYYMMDD-HHMMSS.sql
Foundation (Monitor Data)
mysqldump -uroot GWCollageDB > /usr/local/backup-gwmon/GWCollageDB-YYYYMMDD-HHMMSS.sql
```

GroundWork Configuration Files

Monarch

Back up the following files and folders before removing GroundWork Monitor and restore after the 5.3 installation.

```
tar cfz GWMON-xxx-monarchbackup.tar.gz /usr/local/groundwork/core/monarch/backup
tar cfz GWMON-xxx-performance_views.tar.gz /usr/local/groundwork/core/performance/performance_views
If you have done custom work to these files back up the following:
```

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

If you have configured Apache for secure SSL authentication any HTTPS certificates need to be preserved (the directory of the HTTPS certificates may differ from the example below):

```
tar cfz ssl-keys.tar.gz /usr/local/groundwork/apache2/conf/ssl.key
```