

Built for the Enterprise

INTRODUCTION

GroundWork Monitor changes the economics of IT operations management. Built on an innovative open source architecture, GroundWork Monitor delivers enterprise-class IT monitoring more quickly and cost-effectively than expensive, inflexible, traditional solutions that too often end up gathering dust.

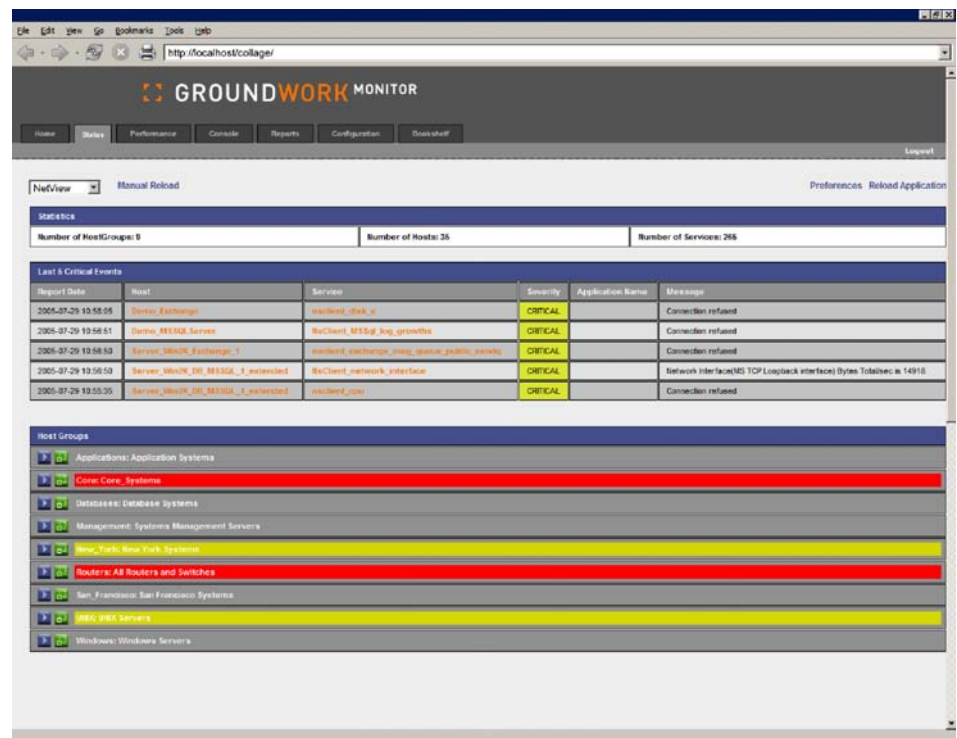
GroundWork provides centralized visibility and control over your entire IT infrastructure. It monitors systems, applications, databases, and network equipment. Employing a wide array of agent-based and agent-less monitoring techniques, GroundWork Monitor meets customer requirements for efficiency, speed, overhead and maintenance. It features an attractive, intuitive user interface, and a flexible architecture that supports custom configurations, custom reporting, and the integration of multiple IT data sources.

The system provides real time status views, detailed component views and robust reporting of availability and performance trends, alert history, and event logs. If any indicator dips below acceptable levels, GroundWork Monitor alerts IT staff contacts via email, pager or phone call. GroundWork Monitor is completely scalable, so it continues to provide coverage as your needs and infrastructure grow. The system integrates seamlessly with third-party monitoring systems and other IT management applications, providing a single view of your entire IT infrastructure.

“Bottom line, we are no longer getting stopped in the halls about systems that aren’t working. We are the first to know when anything fails, and we are up and running before the first call comes in.”

**Sam Lamonica, IT Director,
Rudolph and Sletten**

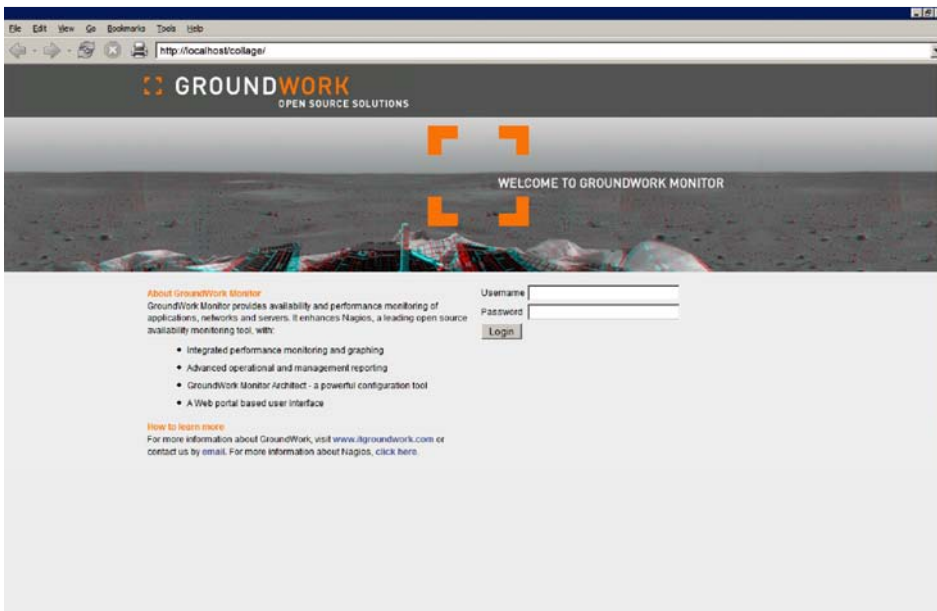
Figure 1. GroundWork Monitor Status Screen



BUILT ON OPEN SOURCE

GroundWork Monitor is built on a modern architecture that combines the best of open source with innovative software developed by GroundWork's IT management experts. Starting with core open source components such as Nagios (an availability monitoring tool), Jetspeed (a Web portal framework) and MySQL (the leading open source database), GroundWork has added performance monitoring, a portal-based user interface, management level reporting and powerful configuration tools. The result is a complete, integrated system.

Figure 2. Configurable Web Portal User Interface



GroundWork Monitor's foundation of open source software supports a solution that is affordable, highly flexible and configurable to accommodate customers' varied and rapidly changing environments. Unlike many leading IT monitoring solutions, GroundWork takes an accommodative, agnostic view towards point solutions that handle specific tasks well. GroundWork Monitor integrates easily with these tools and can serve as a "manager of managers" for customers seeking unified visibility and dashboard views of their IT infrastructure.

GroundWork's open source architecture features GroundWork's own free, open source tools designed to support key functions in GroundWork Monitor. These tools also work independently as add-ons for Nagios, a leading open source systems monitoring tool.

GROUNDWORK MONITOR

- Identifies problems in the IT infrastructure so IT staff can fix them before they affect end-users and customers
- Provides diagnostic and trouble-shooting tools to speed problem resolution
- Captures detailed availability and performance data needed for system analysis and tuning, and for conforming to SLAs and OLAs
- Provides system utilization data required for efficient capacity planning
- Provides an open architecture and developer toolkit for custom development, system extension, and integration with legacy systems
- Is supported by experienced, practical IT management experts

BENEFITS

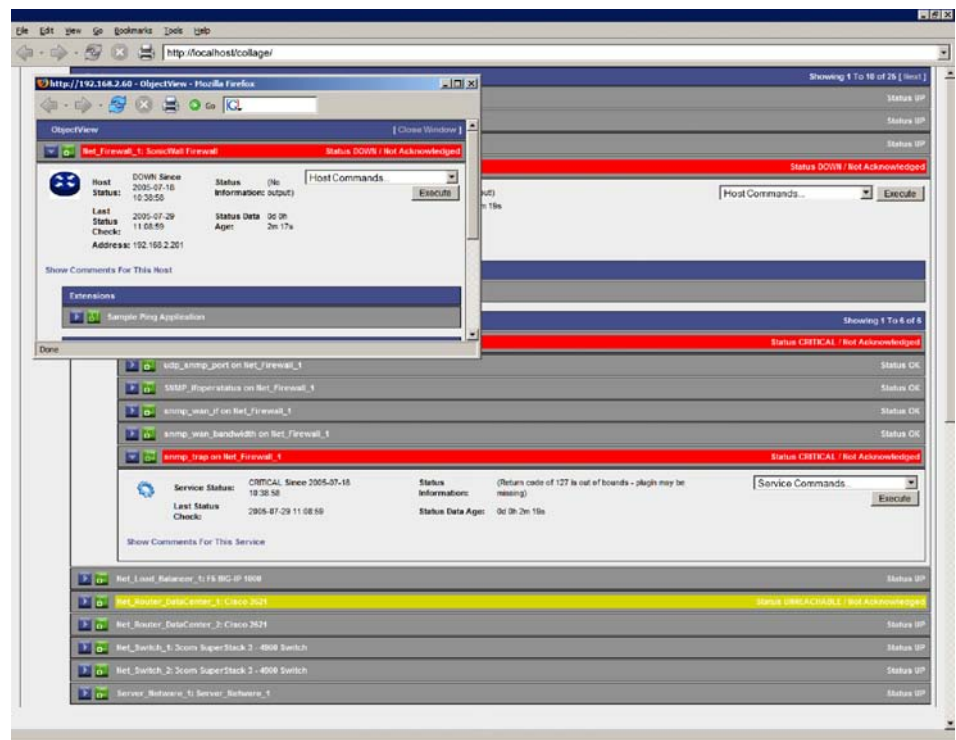
- Improved IT availability and performance
- More satisfied end-users and customers
- Fast problem resolution
- More productive IT staff with less firefighting
- Improved capacity planning

SUBSCRIPTION PACKAGING

GroundWork Monitor is more than just a product – it's a complete solution provided as an annual subscription that includes installation and configuration assistance, regular product updates and expert technical support. Our support professionals have years of experience installing, configuring and maintaining enterprise IT operations management systems, and they're ready to support GroundWork Monitor in just about any IT environment.

A subscription to GroundWork Monitor includes regular product updates that add new features, integrate the latest open source tools, and expand our library of configuration profiles and report formats. Because GroundWork Monitor features both the best of open source and the best from our own developers, the result is a product that delivers continuous value.

Figure 3. GroundWork Monitor Status Screen with Pop-up



“GroundWork delivered on its promise of comprehensive functionality at a low cost. And unlike commercial tools, the solution was designed, delivered, implemented, calibrated and documented within days.”

Jorge Borbolla, CIO,
AutoTradeCenter

Starting with your first installation of GroundWork Monitor, our support team is ready to help via telephone, email or VPN access to your system. We'll help you configure your system the right way the first time – from helping you select the most appropriate monitoring techniques, to assisting with system calibration, to setting up your alarm and notification scheme. And because we know your environment will grow and change, we're always there to help you configure GroundWork Monitor to handle additions, changes and deletions as they occur.

GROUNDWORK MONITOR VS. TRADITIONAL IT MONITORING SYSTEMS

- Dramatically lower cost of ownership
- Faster deployment and time-to-value
- Lower maintenance overhead
- No vendor lock-in

KEY FEATURES

Fast, flexible monitoring status views

GroundWork Monitor's interface provides a scalable, flexible view of monitoring status. A hierarchical list of monitored hosts expands and contracts to display detailed host status quickly. Pop-up windows allow a multitasking user to launch a window with detailed status information about a server or network device and anchor it on the desktop.

Data-rich event monitoring console

GroundWork Monitor Console view provides more detailed at-a-glance event and status data than the monitoring status screens. The Console is ideal for operators in Network Operating Centers (NOCs), because it provides highly detailed (and configurable) monitoring data in near real time.

Configurable web portal framework

GroundWork Monitor's Web portal-based interface enables companies to configure the monitoring system for different IT staff roles. The portal is an integration point for consolidating and presenting IT information and analysis with single sign on and role based authorization providing added security and administration control. The portal, based on Jetspeed, a Java-based open source framework, allows GroundWork to provide a common look and feel for any application, whether it is an open source package, customer application or third-party vendor's application.

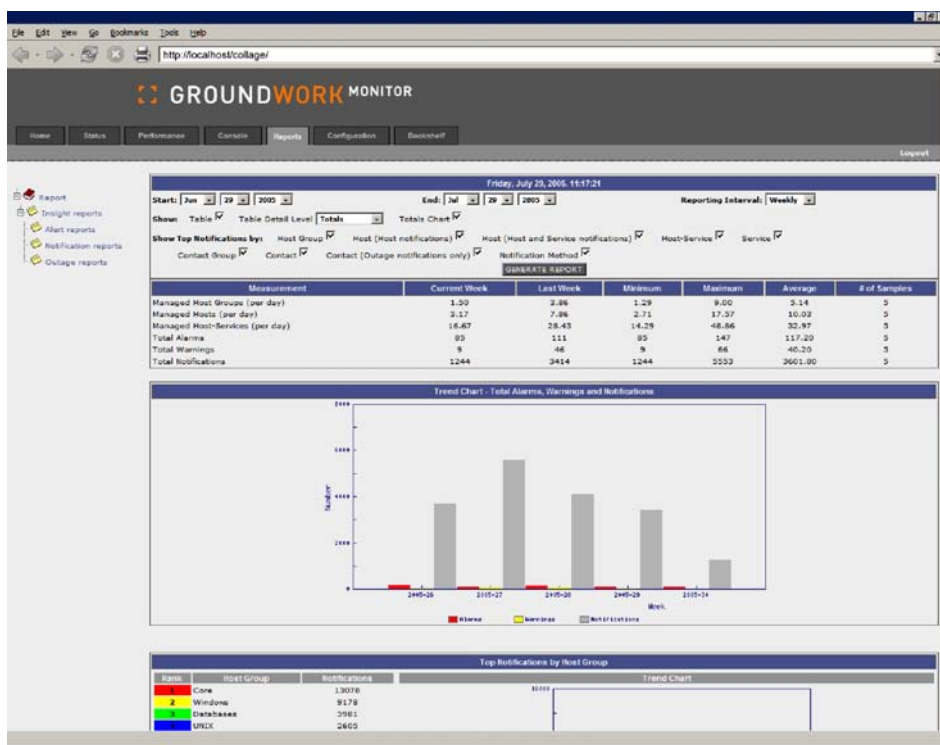
Robust operational and management reporting

The role-based layouts allow us to better serve people with different needs. GroundWork Monitor provides in-depth Insight Reports on alarms, notifications, and outages as well as performance graphs on measured metrics, CPU utilization, memory, etc. These reports feature drop-down menus for easy configuration by time period, host, alarm type and other key variables.

Sophisticated alarm processing

GroundWork Monitor alerts IT staff to problems in the infrastructure via email, pager, SMS or IM. The system's escalation feature ensures that someone is always notified. GroundWork Monitor can be configured with sophisticated alarm filters and event correlation to minimize false alarms.

Figure 4. GroundWork Monitor Alarm Report



WEB-BASED CONFIGURATION TOOL WITH DEVICE PROFILES

GroundWork Monitor Architect ("Monarch"), an integral part of the solution, eases and speeds up the configuration of the monitoring system from a simple Web-based interface. Post-installation, Monarch simplifies maintenance of the monitoring system when additions, changes and deletions are made to the IT infrastructure. Monarch uses device-specific profiles that contain both pre-defined and user-definable monitoring parameter settings. Using profiles, administrators can quickly configure GroundWork Monitor to monitor groups of similar devices the same way and benefit from GroundWork's deep expertise in monitoring design best practices.

MONITORING COVERAGE

Networks

- Switches
- Routers
- Firewalls
- Load balancers
- Network traffic

Servers

- Windows servers
- Unix/Linux servers
- Connectivity servers
- Web servers
- Mail servers
- Application servers

Applications

- Microsoft Exchange
- Enterprise applications using synthetic transactions

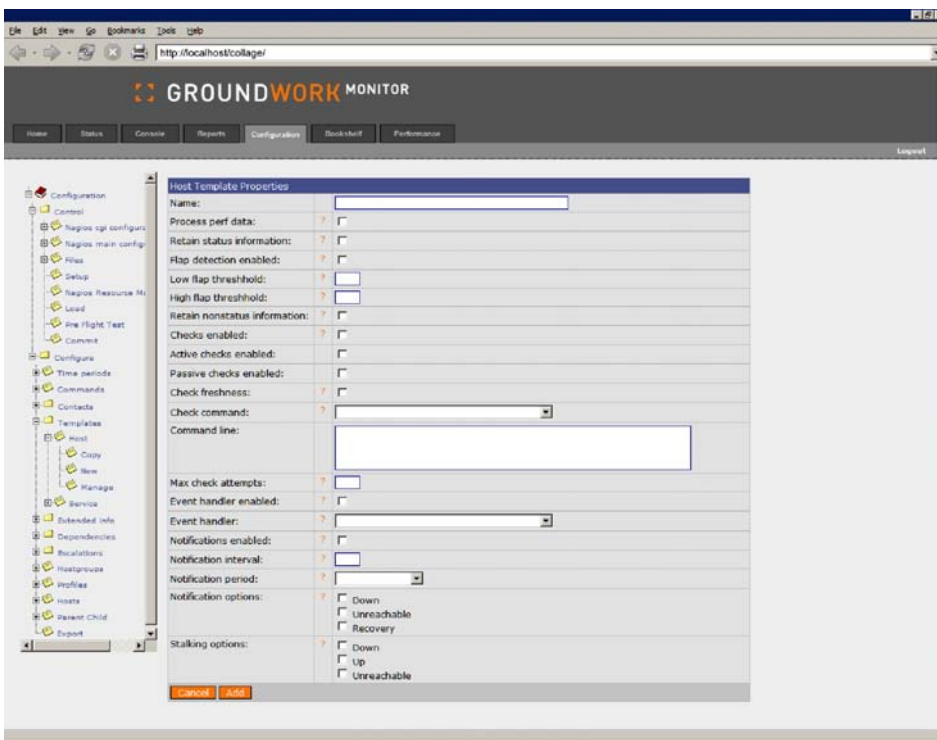
Databases

- Standard RDBMS
- Unix/Linux SQL
- MS SQL Server

Other

- Web services
- Printers
- UPS

Figure 5. GroundWork Monitor Architect



INTEGRATED OPEN SOURCE COMPONENTS

- Nagios 1.2
- Nagios Plugins 1.4
- NSCA 2.4
- RRDtool 1.2.1
- Nmap 2.09
- Syslog-NG 1.6.7
- Net-SNMP 5.2.1
- Tomcat 5.0.28
- Jetspeed-2-M3
- Apache Server 2.0.54
- Hibernate 2.1.6
- Spring 1.1.5
- Perl 5.8.6
- GD 2.0.33
- PHP 5.0.4
- daemontools 0.76

INTEGRATED OPEN SOURCE ARCHITECTURE

GroundWork's Integrated Open Source Architecture includes three layers of functionality – a tools layer, a service tier, and a presentation layer, shown in Figure 6 below. This architecture is completely open and extensible for developers seeking to incorporate additional data sources or build presentation layer applications, views and reports.

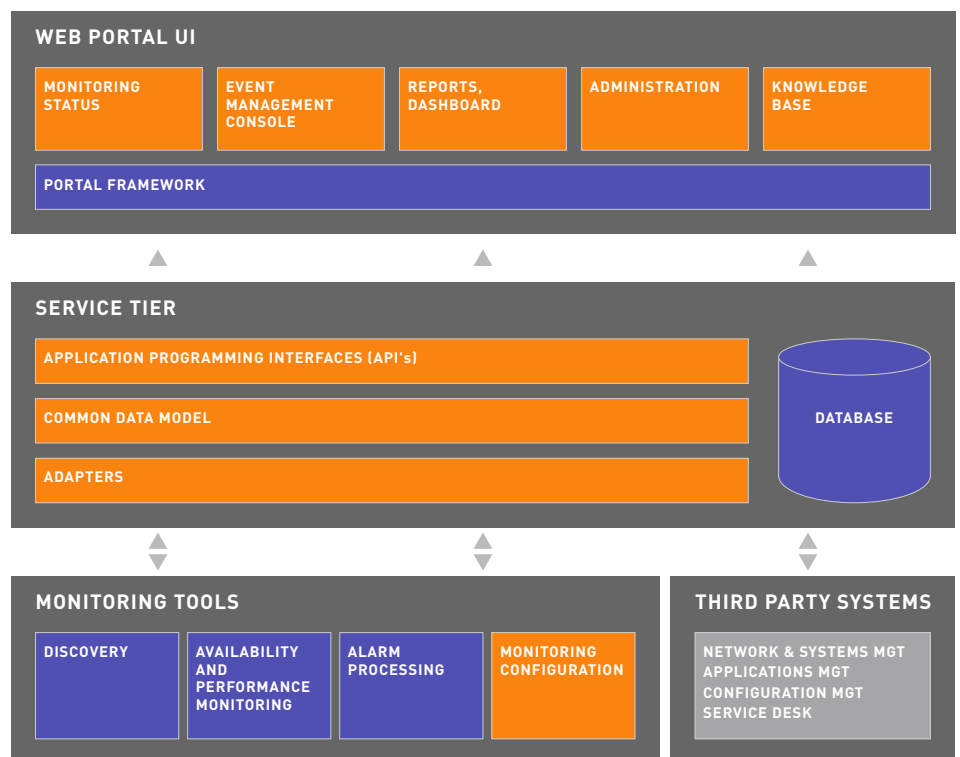
- The tools layer extracts data from IT monitoring and management tools such as Nagios, Syslog-NG, SNMP-TT and third-party commercial monitoring systems.
- The service tier normalizes and stores IT monitoring and management data in a database. This layer includes application programming interfaces (APIs) for writing presentation layer applications and views.

- The presentation layer features GroundWork's Web Portal User interface, which displays data needed by operators and managers to monitor and manage their IT infrastructure. Data is presented via status screens, performance graphs, an event console, reports and dashboards.

DEVELOPER TOOLKIT

GroundWork Monitor includes a Developer Toolkit that enables programmers to extend and customize the GroundWork Monitor system. The Developer Toolkit includes PHP, Perl, Java and third-party tools allowing programmers to:

- Build custom displays of real time monitoring information
- Build custom reports from historical monitoring information
- Integrate monitoring data from additional devices or systems
- Consolidate monitoring data from disparate systems into a single view



“The key thing for us is that GroundWork provided what we wanted – nothing more, nothing less.”

**Ganesh Narasimhan, Director,
Operations Engineering,
Yodlee, Inc.**

GROUNDWORK DEPLOYMENT SERVICES

GroundWork Deployment Services provide a perfect complement to the GroundWork Monitor product. Our team of experts installs and configures your system. You get a tailored, turnkey solution that is up and running fast – and configured properly the first time around.

We work with you to implement a fully functional GroundWork Monitor solution customized for your service levels and fine-tuned to the unique characteristics of your IT infrastructure environment. For more information about GroundWork Deployment Services, please contact GroundWork Sales.

SYSTEM REQUIREMENTS

GroundWork Monitor supports the following operating systems:

- SUSE LINUX Enterprise Server 9 (recommended)
- Red Hat Linux Enterprise Workstation Version 4 (recommended)
- Red Hat Linux Enterprise Workstation Version 3 Update 4
- Centos 4.x

A single GroundWork Monitor server can monitor up to approximately 500 devices. The system can be configured for high availability (HA), and for parent-child scenarios in which monitoring servers need to be geographically dispersed.

Recommended minimum system requirements for GroundWork Monitor:

- 1GB RAM
- 1 CPU, 2GHz P4 or better
- 80 GB disk

For networks over 151+ managed devices, GroundWork recommends:

- 2GB RAM
- 2 CPU, 2GHz P4 or better
- 160 GB disk

ABOUT GROUNDWORK

GroundWork provides open source software and solutions for network and systems monitoring and management. With GroundWork solutions, enterprises leverage the flexibility and value of open source to achieve enterprise-level availability, performance and operational efficiency at a fraction of the cost of traditional software.

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