DIFFUSIONE INFORMATICA

HealthMonitor® White Paper

by

Diffusione Informatica

VIRTUAL VALLEY

ASSOLOMBARDA

Assinform

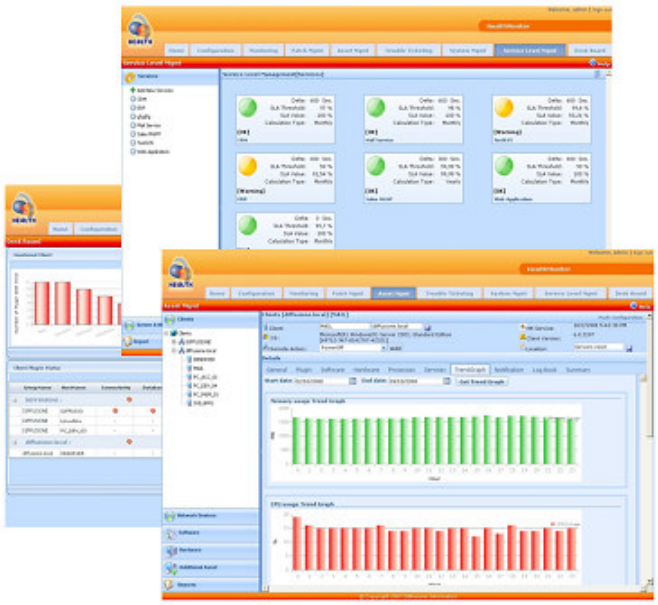
Microsoft CERTIFIED Partner

HealthMonitor® 6.5

HealthMonitor® is one of the most advanced system management tools available, and the only one made in Italy. It is a solid product, with a 5 years life, currently in version 6.5 and always in development.

Modern architecture

- *AJAX-based web interface*
- *Agent with plugin-based architecture*
- *Communication by web services*
- *High scalability*
- *Can be used in multi-platform environments*



Despite the number and variety of features and checks, its impact on system and network performance is small.

HealthMonitor® constantly keeps an eye on your system, prevents operation problems and measures service availability levels (SLA). Its customizable central console and its reporting capabilities help your business to better integrate IT and management.

HealthMonitor® allows you to cut on power consumption up to 30%, and helps you to protect the environment while saving money.

HealthMonitor®'s cost is low if compared to most of its competitors, but it provides a comprehensive and advanced set of features and so is able to afford a better return on investment.

HealthMonitor® can be integrated in existing IT systems quickly and easily, and can be wholly customized at a low cost.

The **HealthMonitor®** suite includes:

- *Service Level Management*
  - service level measurement
  - customizable display showing system status
- *System & Network Monitoring*
  - 62 different check plugins (3 of them can be customized)
- *IT Asset Management*
  - hardware, software, processes, services, shares and more
- *Software Distribution*
- *Patch Management*
- *Service Desk*

VIRTUAL VALLEY

ASSOLOMBARDA

Assinform

Microsoft CERTIFIED Partner

DIFFUSIONE INFORMATICA

Scenario

The current economic situation is marked by a negative trend worldwide, as shown by the decline of the main business and financial indexes. Businesses have to cope with that by keeping costs under tight control and by investing in ways that will quickly result in good returns.

Information technologies are influenced by this difficult situation, and they must be focused on supporting each business' activities. The IT infrastructure must be always kept in efficiency, by reducing downtime and problems as much as possible. That can be achieved by making systems safer and more stable, improving their performance and complying with the target service levels.

In sum: better ROI, safer, stabler and better managed systems.

- On average, 80% of the IT budget is assigned to maintenance; only 20% is for investment. Keeping maintenance costs down means more resources available for investment.
- Recent studies show that 80% of maintenance requests are unnecessary, and that when solving a problem, just one third of the time is used for actually fixing it, while the rest is used for making a diagnosis. Optimizing the maintenance processes will lead to significant savings.
- Energy costs amount to an ever increasing share of the IT budget. There is ample room for cutting waste, for example the one caused by machines left running when nobody is using them. According to Gartner, a business with 2500 workstations can achieve savings as high as € 30.000/year by cutting energy waste.

Gartner has recently advised:

- to consolidate separate services by forming function-based teams providing assistance to the whole business ('shared services');
- to accurately define the availability level for all machines, systems and activities. It is a waste to define high service levels for non-critical processes.

HealthMonitor® 6.5

HealthMonitor® is constantly improving, and it is an advanced tool allowing better integration of the IT system in the business. **New check plugins, service level monitoring, advanced trouble ticketing, client for Unix/Linux, network devices monitoring, customizable deskboard, report scheduling:** all those features make HealthMonitor a comprehensive tool for system management, and will enable you to improve stability, security and performance, cutting dramatically your maintenance costs.

DIFFUSIONE INFORMATICA

Three versions for every need

HealthMonitor comes in three versions, making it adaptable to every business' needs.

HealthMonitor® Enterprise: the most complete version, with monitoring, asset and patch management, software distribution, service level management, customizable deskboard, HealthMonitor® Master. Everything a business could wish for managing medium- and large-size systems.

HealthMonitor® Professional: includes monitoring, asset and patch management, software distribution. For business wishing to have the main functions for system management, besides monitoring.

HealthMonitor® Basic: this version includes all the basic monitoring features, for business wishing a lean and handy system tool.

The optional **Service Desk** module can be used in all three versions.

HealthMonitor®'s architecture

HealthMonitor® includes three components: master, web interface, client.

■ **HealthMonitor® Master** new! (Enterprise version only) has to be installed on a web server and allows centralized management of several HealthMonitor® instances, even in different locations.

■ **HealthMonitor® Web** has to be installed on a web server, it shows all information about system status, and includes tools to directly take actions on the clients. An internal protocol allows real-time communication with the clients.

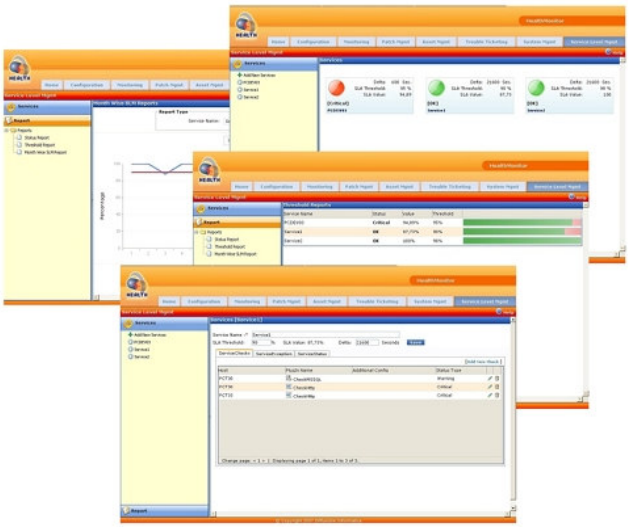
■ **The client** has to be installed on each machine in the system and performs the actual monitoring according to settings chosen by the administrators. The client writes results in a database, and they can be viewed in HealthMonitor® Web. The client is available in versions for Windows and for Unix/Linux new!, making HealthMonitor® useful in multi-platform environments.

VIRTUAL VALLEY ASSOLOMBARDA Assinform Microsoft CERTIFIED Partner

DIFFUSIONE INFORMATICA

Service Level Management new!

HealthMonitor® is able to monitor the services' running over time and track servers and network devices availability.



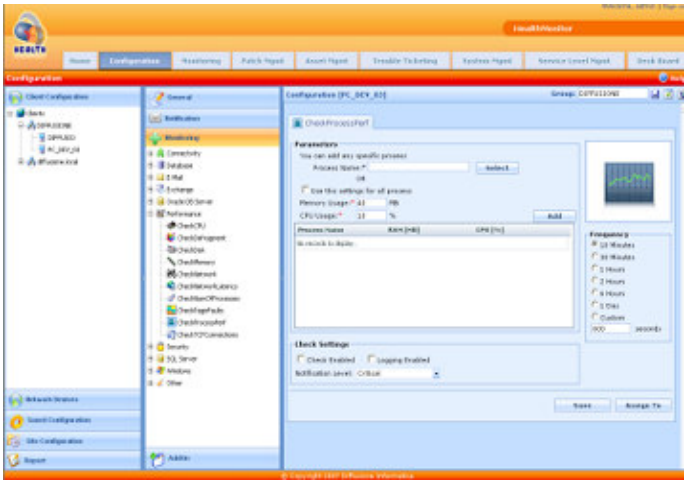
Services monitoring
You can define what services are to be checked and how often; HealthMonitor will show any downtimes and is able to generate reports about services status in selected periods; it also calculates downtimes and so allows easy checking of SLA compliance. You can also disable checking in selected times (for example in case of planned maintenance), so that downtime calculation is correct.

Devices availability
This feature allows you to periodically check the availability of servers and network devices. Downtimes are tracked and shown in a report.

Customized deskboard
HealthMonitor® includes a customizable interface with dynamic update, showing the most current situation of services and machines. This allows the management to easily check the system's status at every time.

System and network monitoring

More than sixty check plugins allow HealthMonitor® to constantly keep an eye on all your system's components and to generate alerts whenever problems and errors occur.



This information allow the administrators to quickly pinpoint troubles and to get a complete picture of the system's status and performance.

Notifications display
HealthMonitor®'s web interface highlights the clients and check plugins in error status, and allows you to view errors for single clients, clients groups, check plugins or error level. You can also perform searches on errors and save searches you need frequently.

VIRTUAL VALLEY
ASSOLOMBARDA
Assinform
Microsoft CERTIFIED Partner

Customizable notification levels
You can create as many notification levels as you want, and for each one you can set different notification modes (email, Netsend, SMS, ticket generation, script running). For each check plugin you can set which notification level will be triggered in case of error, so you can customize the monitoring configuration according to your needs.

Notification filtering
You can suspend the sending of notifications at certain times without actually disabling a check plugin.

Email Notification
Notifications can be sent by email to one or more addresses, according to intervals and events set for each check plugin.

SMS Notification
Notifications can be sent by SMS to one or more cell phone number, according to intervals and events set for each check plugin.

Net send Notification
Notifications can be sent by Netsend, according to intervals and events set for each check plugin.

Ticket notification
Trouble tickets can be automatically generated, according to intervals and events set for each check plugin.

Check plugins

Connectivity checks
CheckPing
Checks of one or more hosts can be pinged at preset intervals. The alert is sent if pinging is unsuccessful.
CheckHTTP
Checks at preset time intervals if one or more website can be reached. The alert is sent if at least one site cannot be reached.
CheckFTP
Checks at preset time intervals if one or more FTP site can be reached. The alert is sent if at least one site cannot be reached.
CheckFTPFile
Checks at preset time intervals if one or more files exist on an FTP server. An alert is sent if a file is not found.
CheckTCPPort
Checks connection to a specified TCP port on a host, by sending a command and checking the answer. An alert is sent if the port is unreachable, or if the answer string is different from the expected one.
CheckTerminalServer
Checks the number of active Terminal Server sessions. An alert is sent if the number exceeds the preset threshold..
CheckNetworkLatency new!
Checks the ping response time on one or more IP addresses.
CheckTCPConnections new!
Checks the number of open TCP connections on the client.

Database checks
CheckMSSQL/CheckMYSQL/CheckOracle
Checks connection to a database (SqlServer-Mysql-Oracle). At preset time intervals, a connection to a database is opened. An alert is generated if the database is unreachable, or access credentials are wrong, or in case of timeout.

CheckODBC
Checks connection to a database via ODBC. An alert is generated if the database is unreachable, or access credentials are wrong, or in case of timeout.

Security checks

CheckFolderChanges
Checks if certain folders or files are changed and generates an alert if that happens.
CheckSQLSec
Checks if too many unsuccessful attempts to access a SQL Server have been made at predefined time intervals and will notify the administrator about the source IP.
CheckAdminGroup
Check if new users have been added to or removed from the Administration Group, and if the Administration Group has been changed.
CheckMalwareProcess
Checks if certain processes are active. If any are found, an alert is generated.
CheckRegKey
Checks if certain registry keys exist, have a certain value or are changed.

Perfomance checks

CheckDisk
Checks used and free space in each partition. If free space falls below the preset threshold, an alert is generated.
CheckCPU
Checks CPU usage at preset time intervals, and sends an alert if the preset threshold is exceeded.
CheckMemory
Checks Memory usage at preset time intervals, and sends an alert if the preset threshold is exceeded.
CheckNetwork
Checks Network usage at preset time intervals, and sends an alert if the preset threshold is exceeded.
CheckPageFaults
Checks if the page faults number exceeds the preset threshold, allowing to find if the memory workload is too high for the system resources.
CheckNumOfProcesses
Checks the number of active processes at preset time intervals, and sends an alert if the preset threshold is exceeded.
CheckProcessPerf
Checks CPU and RAM usage by selected processes, and sends an alert if the preset thresholds are exceeded. You can set different thresholds for different processes.
CheckDefragment
Checks the defragmentation level of a disk or partition. If it exceeds the fragmentation percentage threshold, an alert is generated.

E-mail checks

CheckSMTP
This plugin simulates the sending of an email to a pre-defined addressee by means of the mail server you want to run a check on. If the sending is not successful HealthMonitor will send an alert.
CheckPOP3
This plugin simulates the opening of a mailbox with a specific server. If the connection is not successful an alert will be sent.
CheckIMAP4
This plugin simulates the opening of a mailbox with a specific server. If the connection is not successful an alert will be generated.
CheckMAPI
This plugins attempts to connect to a mail server by using the MAPI protocol, and will generate a warning if connection fails.

Windows checks

CheckEvent
This plugin detects all system events and generates a warning for those matching the pre-set check parameters.

CheckServices
This plugin checks the Windows services' status, and it will warn you when selected services are not active or when automatic startup services are stopped.
CheckSchedTasks
This plugin is able to detect if one or more tasks have been completed with positive results and giving out warning messages if there are anomalies.
CheckNTBackup
Checks if backup operations are completed correctly, by parsing the backup log for certain keywords; it also warns if the backup log is empty.

Exchange checks

CheckExchangeMailbox
This plugin check the size of one or more Exchange mailboxes. If any mailbox size exceeds the pre-set thresholds, a notification will be generated.
CheckExchangeQueue
This plugin checks the number of queued messages in an Exchange server.
CheckExchangeSpam
This plugin queries the Exchange's Intelligent Message Filter (IMF) module and generates a notification in case of high levels of spam messages or connections rejected by block list providers.
CheckExInfoStore
This plugin checks the size of the information store database in an Exchange server.

SQL Server checks

CheckSQLJob
This plugin checks if SQL Server Agent jobs are executed correctly. If any job fails, a warning will be generated.
CheckStoredProcedure
This plugins runs one or more stored procedures in a SQL Server; if the running fails, a warning will be generated.
CheckSQLFiles
This plugins checks the size of an SQL database files.
CheckSQLConnection
This plugins checks the number of active connection to a SQL Server databases.
CheckSQLLock
This plugin checks a SQL server for database locks.

Oracle checks

CheckOracleStored new!
This plugins runs one or more stored procedures in an Oracle server; if the running fails, a warning will be generated.
CheckOracleConnection new!
This plugins checks the number of active connection to an Oracle Server databases. If the number of connections exceeds the pre-set thresholds, a notification will be generated.
CheckOracleLock new!
This plugin checks an Oracle server for database locks. You can set a minimum locks number, and if that value is exceeded, a warning will be generated.
CheckOracleTableSpaces new!
This plugin checks the size of an Oracle database tablespaces.

Other checks

CheckInstalledSW
Every time a software is being installed or removed, Health Monitor is able to detect the action and generate a warning message giving details of the changes.
CheckScript
Checks the running of user-made scripts for performing checks and operations not provided by HealthMonitor.
CheckPrinterSpooler
This plugin checks the state of the printers spoolers, and will generate a warning if it detects any error in a print job, or if a printer is offline.
CheckDiskQuota
This plugin checks if any user has exceeded his quota limit against a specific disk or partition.

CheckFileFolderSize
This plugin checks at pre-defined time intervals the size of one or more files or folders.
CheckFileSearch
This plugin checks if one or more specified files exist in certain directories or in a specified drive. If any files are found matching the checking parameters you set, a warning will be generated.

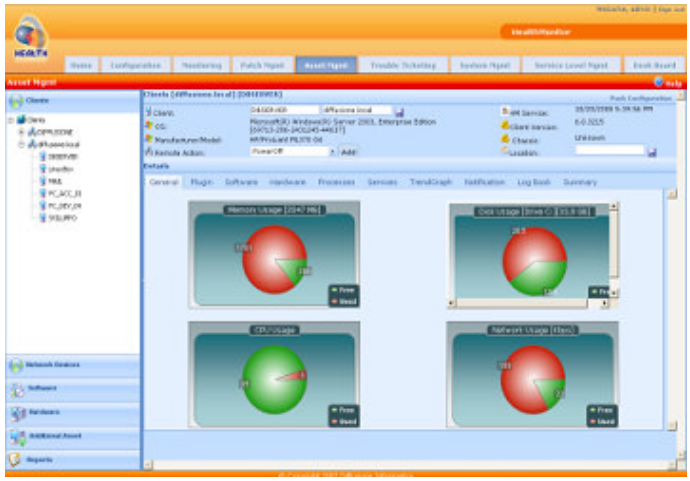
Network devices plugins

Eight checks designed for monitoring the network devices status and quickly detect any network problems.

CheckBandwidth new!
This plugin checks the bandwidth usage on a single port for the selected device and sends a warning when it exceeds the pre-set threshold
CheckKeepDeviceAlive new!
This plugin will ping a device at pre-set time intervals, and will report an error if it is not responding.
CheckNDCPU e CheckNDMemory new!
This plugin checks the CPU workload and memory usage on the selected device.
CheckNetworkInterfaces
This plugin checks the state of one or more network interfaces on a device.
CheckNetworkPackets
This plugin checks the traffic on one or more network interfaces on a network device. If the number or received or transmitted packets exceeds the pre-set thresholds, a warning will be generated.
CheckSNMP new!
This plugin allows you to perform a generic check on a network device by using an OID code of your choice.
CheckSwitchInterfaces
This plugin checks the status of one or more switch ports, and will generate a warning if the number of "down" ports falls below the pre-set threshold.

IT asset management

HealthMonitor® is able to provide a comprehensive and up-to-date description of the hardware and software installed in your system. This hardware and software inventory can be viewed in the web interface, and several reports can be generated from it.



Hardware inventory

HealthMonitor® detects and shows information about all hardware installed on the clients. This allows you to obtain a comprehensive picture of all hardware present in your system or on single clients.

Software inventory

HealthMonitor® detects and shows information about all software installed on the clients. This allows you to obtain a comprehensive picture of all software present in your system or on single clients.

DIFFUSIONE INFORMATICA

Licenses management
HealthMonitor® allows you to keep track of software licenses you purchased and to check how many of then are used. So you can quickly spot unused licenses, or installations that exceed the number of licenses you purchased.

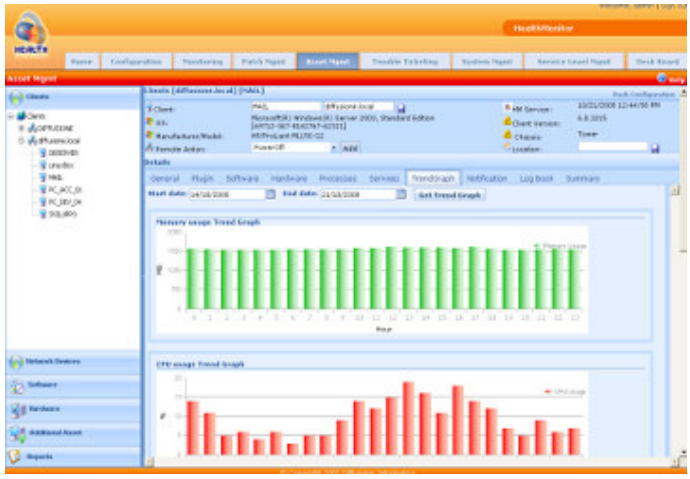
Processes
HealthMonitor® periodically detects all processes running on each client, and their CPU and RAM utilization and page faults. Processes having problems can be stopped directly from the web interface.

Services
HealthMonitor® detects the list of services on each client and their status (running/stopped), and allows you to start and stop them directly from the web interface.

Additional assets
HealthMonitor® allows you to log information about hardware on which it cannot be installed, like printers, scanners, cell phones, and so on.

Trend Graph new!

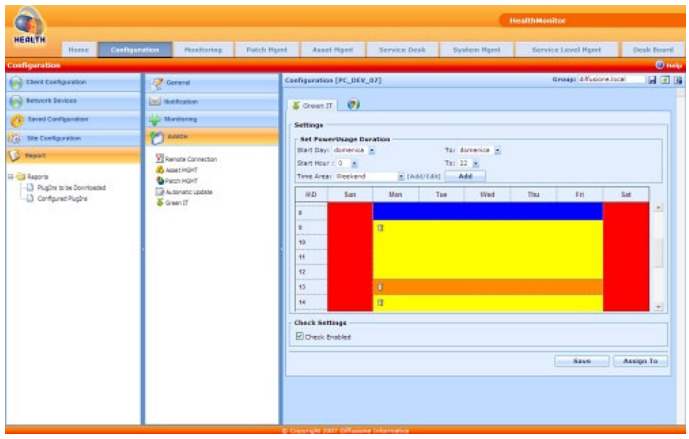
For each client and network device, HealthMonitor® is able to calculate the average hourly utilization of CPU, RAM, network, and daily disk utilization, and will show the results in a chart for periods of your choice.



Log Book
The system administrator can log notes, for example for keeping track of actions taken and problems solved.

Information on your system's machines
For each client or network device, HealthMonitor® allows you to log in the web interface details like description, owner, physical and logical location, install date, support contract.

Green IT new!
For every machine in your system you can define the energy saving configuration, by setting the times for standby/shutdown for different hours and days in a week; detect when a machine is actually shutdown by HealthMonitor, and make an estimate of savings in energy, money and CO_2. Four different reports will show your savings.

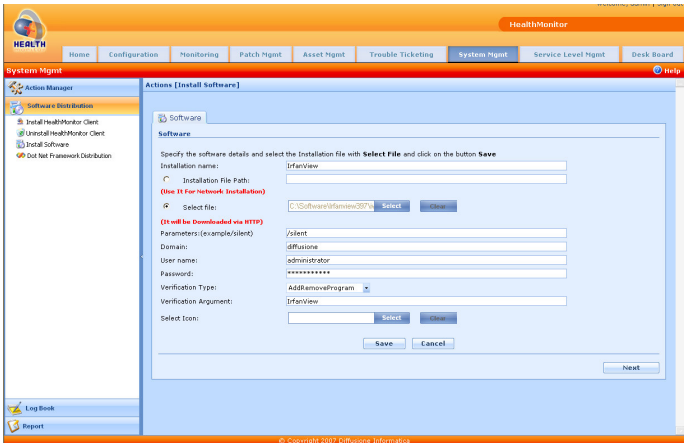


VIRTUAL VALLEY
ASSOLOMBARDA
Assinform
Microsoft CERTIFIED Partner

DIFFUSIONE INFORMATICA

Software distribution

From HealthMonitor®'s central console you can run the installation of the HealthMonitor® agent and its updates, or of any other software, on some or all the machines in your system.

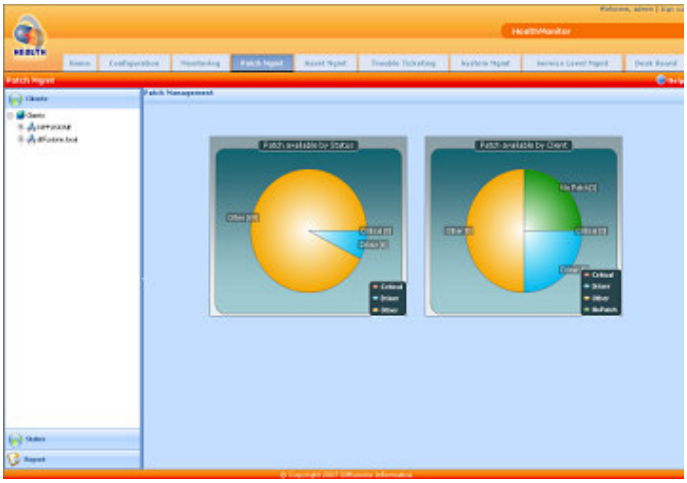


Real-time action

From the web interface you can run a check plugin or a script: it will be executed at once and its result will be shown immediately. Also, you can stop and restart services and processes or shutdown or restart each machine altogether.

Patch management

HealthMonitor® is able to check for Microsoft patches availability. This check can be scheduled or performed manually, and it shows available patches for each client and their kind (critical, driver, other). You can start patch installation directly from the web interface, and generate a report showing patch status.



Service Desk

HealthMonitor® allows users to send messages to the help desk to report problems they meet. HealthMonitor® includes tools for managing tickets efficiently and for analyzing the help desk performance and for calculating its cost. The service desk complies with ITIL specifications.

Web ticketing new!

HealthMonitor® includes a dedicated web application allowing users to create tickets, to view their tickets' status, add comments and attachments, and view the support operators comments. That helps make ticket management more flexible, and allows easier communication between users and help desk.

VIRTUAL VALLEY

ASSOLOMBARDA

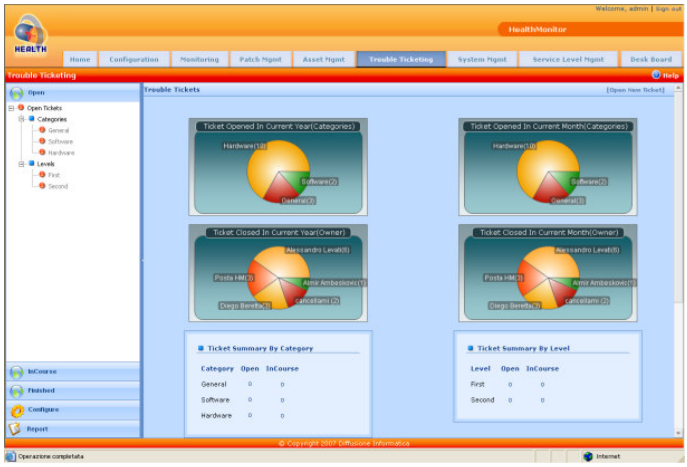
Assinform

Microsoft CERTIFIED Partner

DIFFUSIONE INFORMATICA

Ticket management new!

Each ticket is classified according to problem type and priority; the help desk operators automatically receive warnings by email when a new ticket is opened, and they can take a ticket from the web interface or from the warning email. For each ticket HealthMonitor® tracks origin, opening mode and category (ITIL-compliant), all actions taken, dates and times of creation, deadline, estimated and actual solution. Comments and attachments can be added to each ticket. The ticket workflow is organized with several customizable statuses and two levels, and tickets can be assigned to external support too. Users are sent updates by email about the tickets they sent, and they also can view their tickets' status in the web ticketing application.



Reports

Several reports allow the administrators to view the tickets status at all time and to analyze the help desk performance, by showing information like average ticket taking time, average resolution time, deadline compliance and cost.

Other features

Central console

The main web interface allows to view and analyze all information about the system and its status, to set monitoring configurations for the clients, to perform real-time checks, and to take several actions on the client, all from one location and without having to go there in person.

Your system at a glance

The web interface home page provides a summary view of the system status in several auto-updating panels.

Each panel can be moved and resized; information can be showed as a grid or a graph, and directly from the panels you can open a new page with detailed information on the selected client.

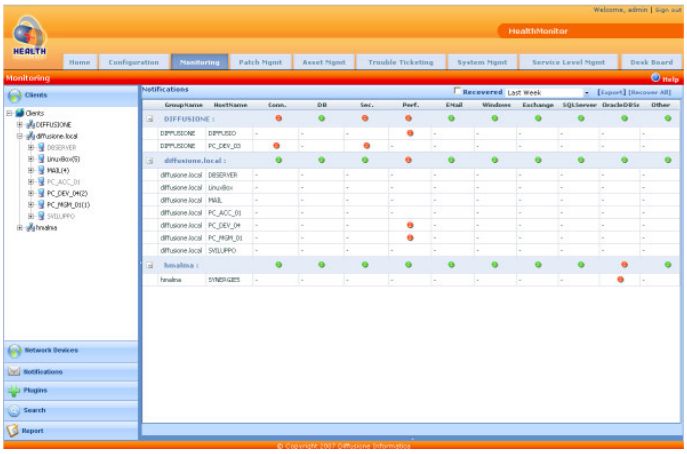
In the Enterprise version the home page can be customized with user-made templates.

Remote configuration

In the web interface you can set the monitoring configuration for each client, and also make saved configurations and assign them to one or more client.

Details about each client

For each client you can view the disks status (total and available space), RAM utilization (current, total and average), CPU utilization (average value), network traffic and OS version.



You can also view the latest status for the check plugins enabled for each client, and to change the checking configuration; view the installed hardware and software, the running processes and the services' status.

Remote desktop via VNC

HealthMonitor® includes a remote desktop utility, so the help desk will be able to reach and view the user's desktop in case of need.

First aid

The web interface features allow the support operators to check each client's status, to remotely perform real-time checks, run scripts, reach the user's desktop and act on the user workstation without having to be there in person.

Reports

HealthMonitor® is able to generate many kinds of reports about the system's status and all machines and devices in it. All reports can be exported to several formats, including PDF, TIFF, XLS, RTF.

Report scheduling NEW!

In the Enterprise version reports can be generated automatically one time or at recurring intervals. When the pre-set times are reached, HealthMonitor® will automatically generate the configured reports and send them to the recipients concerned.

HealthMonitor®'s benefits

- Optimize maintenance costs
- Define and measure ‘service level agreements’ (SLAs)
- Increase your operations' efficiency: focus on performances
- Monitor your system in an interface you can share with the management
- Improve security (minimize risk) and system uninterrupted service (system stability)
- Obtain a greater awareness on your system's status, on anomalies, on operating costs
- Monitor each machine in your system (servers, workstation, pc)
- Monitor your network
- Get an up-to-date technology without complications and without disrupting your system
- Trouble ticket management and automatic ticket generation when problems occur
- Act quickly when pressing problems arise even on many workstations at the same time

Conclusion

HealthMonitor®'s aim is to improve your business' operation by providing a good support to the IT. It will allow you to optimize operating costs and to maintain the required service levels. It includes all tools for making your system more secure, efficient and stable, improving its overall performance.

HealthMonitor® on the web

HealthMonitor®'s site:

http://www.health-monitor.com

The support forum:

http://www.health-monitor.com/MessageForum/UserAccount/ForumIndex.aspx

The online manual:

http://www.health-monitor.com/Manual.aspx

Contacts

HealthMonitor® is a product of **Diffusione Informatica**

16, Via Parmigianino - 20148 Milano (Italy)

tel. 02/48519485

fax 02/48026119

information: info@health-monitor.com

sales: sales@health-monitor.com

support: support@health-monitor.com