

Feature Map



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Network monitoring features

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Traffic monitoring	Through sFlow, NetFlow or JFlow method.
Supports IPv4 and IPv6	Supports IP versions IPv4 and IPv6.
Discovered equipment features	Brand, model and firmware are automatically specified.
Equipment usage	CPU, memory, disk and communication equipment buffer usage.
Self-increase of test retries in case of failure	Increases checking attempts intervals in case of failure.
Scheduled monitoring	Schedules check-ups on specific dates and times.
Use of physical and logical ports	Open and in-use physical and logical ports are shown for routers and switches.
Distribution of intermediate probes for information collection	Allows the use of intermediate probes to be able to monitor the network in a distributed way.
SSH Remote Queries	Queries Linux and Unix computers remotely, using remote commands on SSH.
Application server performance	Verifies OAS, JBoss, Tomcat, WebSphere, GlassFish services and equivalents.
Packet loss	Monitors network interface packet loss.
Possibility of high frequency polling	Rates network monitoring times at intervals of minimum frequency up to five seconds.
Remote connection to network equipment	Allows remote connection to communications equipment centrally in the solution itself, through SSH or Telnet.
Communication link performance	Monitoring network interfaces, bandwidth, consumption, maximum occupancy, availability, errors, discards, packet losses, real speed, etc.
Map and network diagram creation	Presentations in active network diagrams. These network diagrams will be updated automatically with the new network nodes, identifying new elements.
Compatibility with SNMP	Compatibility with the SNMP and ICMP standard for obtaining information from devices, for versions 1, 2, 2c and 3.
WMI remote queries	Checks Windows computers remotely, using a WMI interface to add your own WML statements.

**Log and event collection**

Log collection parallel to monitoring. No megabyte limit.
Log collection via syslog (remote) and local agents (Linux and Windows).

Custom remote queries

Allows the tool administrator to define their own complex (multi-step) remote checks based on dialogue / response over a TCP port.

Relationship between network devices at network and link level

If the information is available, Pandora FMS is able to show the relationships at network level and the link level between the different ports of the routers / switches and the connected equipment.

Detection of active devices to monitor

Scans and generates monitoring information of physical and virtual equipment, servers, workstations, routers, switches, firewalls, band- width administrators, load balancers, access point and printers.

Traffic information detail

The information shows a history with a minimum granularity of one minute and a history of several years. The graphics zoom in and keep the highest level of detail.

Detección de equipos activos para monitorizar

Escanea y genera información de monitorización de equipos físicos y virtuales, servidores, puestos de trabajo, routers, switches, firewalls, administradores de ancho de banda, balanceadores de carga, access point e impresoras.

Real-time geographic maps (GIS)

Show the exact position of each device (GPS) and, if it is updated, that movement is shown on the map. You can save a movement history of each element and see it on the map.

SNMP trap receiving

Collects traps and alert assignments to these values.
Collects numerical and / or alphanumeric values to enrich the alerts with data obtained from traps: critical system temperature, name of the down interface, filesystem alert, critical-state memory / CPU, etc.



Permissions and profiles system

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Profiling system according to groups and accesses

Different users of the same group can perform different functions.

Multitenant

With the same solution you can give service to different clients or groups without seeing each other.



Internal audit	It reflects what operations each user has performed and when, including failed access attempts.
Password Recovery System	A solution is provided so that the user can recover a forgotten password.
Authentication	It has its own system of users, profiles and roles, and supports Active Directory, LDAP and SAML.
Password Policy	Allows forcing a policy of password change, with passwords of minimum length, special characters and history of old passwords.
Dual authentication system	Via Google Auth or equivalent, uses a mobile or external hardware device to perform a double authentication to enter the system.



Server and Equipment Monitoring

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Network card	Availability and charging by network card.
Local corrective actions	They run on agents, based on a given condition
Operation Information	Fans and internal temperature.
Operating System and general configuration	Describes operating systems and equipment configuration.
Screen monitoring	Allows taking “screenshots” of the output of certain commands
Storage	Availability, available space per partition and mounting points.
Remote Agent Configuration	Individually or collectively for configuration bulk changes.
New storage system hot detection	Monitoring new mounting points automatically.
Execution of agents with users without privileges	So that they cannot access inside information.
Use of intermediate proxies to send information	If agents cannot contact the central server.
Service and Process Watchdog	Allows restart in case of failure, and monitors it automatically (Windows).
Conditional monitoring	Allows monitoring based on whether certain criteria are met, evaluating it in each execution.



Virtual environments	VMware, HypeErV, HPVM, RHEL VM, Nutanix, OpenNebula, IBM, HMC, LPAR, KVM and XenServer monitoring.
Cluster monitoring	Valid for any manufacturer and any cluster model, A / P or A / A, and also for application or network clusters.
Remote agent installation	Allows distributing and installing agents unattended from the administration console; Windows and Linux systems.
Agents	It has the local and remote agent feature, so that the equipment can be monitored in both ways, as appropriate.
Server hardware operation	CPU, RAM, physical memory, virtual memory, ca- che and paging are monitored. Open processes, zombies, swap, access to the environment, etc.
Automatic agent provision	Agents are configured when contacting for the first time the central server, and a configuration determined by a set of rules is applied.
Support to different platforms	In 32-bit and 64-bit architectures, information is obtained from Windows, Linux and Unix operating systems (Solaris, HP-UX, AIX), Mac OS X and BSD systems.
Local data collection in case of disconnection	The information will be stored locally if the network falls down, so that, when it can con- nect again with the central server, it sends the information for that period.



IP addressing management

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Automatic discovery	The tool has IP detection in a subnet, checking the response of each IP, resolving hostname and operating system.
IP Administration (IPAM)	The tool can configure, enable and disable each IP manually, add events in the IP, comments for each IP, reserve IPs and monitor dynamically the use of network IPs by network, subnet and supernet.
Customizing IP views	The tool can filter and view different IP groups.
Integrated IP with Microsoft DHCP Server management	The IPAM system can be integrated with the Microsoft server through local real-time data collection to refresh and update the status of IPs, including your reservation, lease and each IP lease time.

**Subnet calculator compatible with IPv4 and IPV6**

It allows the following data: network (address and bit mask), network mask, network wildcard, network address, broadcast address, first valid IP, last valid IP and network IP number.



Remote Control

[Download Free Trial](#)**Computer Remote Desktop**

Integrated into the software, without calling a third tool. Integrated in the interface. Compatible with Windows, Linux and Mac systems.

Remote shell

Integrated in the tool Interactive access by shell to Linux and Windows computers.

Copy of bidirectional files

Integrated in the main console of the tool, it allows the user to access the remote filesystem to download, delete and upload files from the PC.

Process and service control

Allows starting, stopping and restarting remote processes and services of the managed machine.



Environment Monitoring

[Download Free Trial](#)**UPS**

Compatibility with the main manufacturers.

Air conditioning

History of use and air conditioning sensors, generation of reports and alarms.

Access control

Historical of access control to the computer center, generation of reports and alarms.

IoT / Sensors

Possibility of integration with different IoT systems through direct connection (SNMP) or Rest API.



Integrated reports

[Download Free Trial](#)**BAM monitoring**

Monitors business processes in real time in a single console (dashboard).



Reports

Report scheduling allows filtering information in time periods, reporting equipment failures (falls), warnings, displaying descriptive problem statistics and simple or combined graphs (multiseries).

SLA Reports

Daily, weekly and monthly SLA reports, in addition to global reports (by time periods).

Availability reports

Indicate, in a given period, the total number of tests performed, the success and failure percentages in that time for each test performed.

Top-N type custom reports

The operator can define a set of data that the application shows according to applied filters.

Planned stops and exclusion

Excludes from all types of reports the periods defined as maintenance windows.

Report templates

End users can easily create reports from templates defined by the administrator.

Sending scheduled reports

The administrator can define report scheduled sending by email (in PDF).

Graphic views

They allow the operator to create their own graphic panels where to include monitoring data: graphics, status icons and real-time values. These screens can relate to each other.

Real-time data

Graphs and reports show real-time data at all times, not pre-calculated data.

Information availability

Pandora FMS is managed in real time from a web application for modern standard browsers (Edge, Firefox, Safari, Chrome).

Information display

Information is presented centrally in a single interface, using graphics, screens, dashboards and information lists in different views.



Alert System

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Alarm generation and sending

Alarm generation and sending are available as on-screen alerts and allow immediate sending by text message to mobile phones or email.

**Alarm filtering and scaling**

Filters the alarm sending by maximum number of repetitions, minimum number of repetitions and consecutive failure concurrency.

Event auto-validation

Recovered events will allow auto-validation when the problem that triggered them is solved.

Manual corrective actions

Allows performing manual actions on the events using the information available to launch diagnostic tools, open incidents, add notes or leave the event in work mode.

Alarm correlation

Establishes sets of logical rules (AND, OR, NOT) that allow to refine alarms based on the events collected in the monitored systems.

Programmable alarm sending format

Alarm sending is user definable, so that it can be integrated with new platforms, such as Telegram, via API Rest.

Sound warning console

Allows audible messages to be received by an operator, based on filters by origin and severity. This system is complementary to the others.

Mobile application for receiving messages

Enables notice reception and their real-time checking for Android and iOS.



Issues management

[Download Free Trial](#)**Manual ticket creation from an event or alert**

On an active problem, create an incident associated with an event to perform an exhaustive follow-up of the problem.

Automatic ticket creation/update

Allows you to create tickets as an automatic response to a problem detected by monitoring.

Custom workflow

Allows defining a life cycle for each ticket according to the creator, dates, criticality, work group, etc. This life cycle incorporates notification of changes in the flow by email, automatic escalation and validation of the incident closure by external users.



Web Transactional Monitoring

[Download Free Trial](#)**Application and web server software**

Scan and generate information on Java application (OAS-Oracle, JBoss-Redhat, WebLogic), IIS web servers and Apache monitoring.

Transactional monitoring and user experience

Verifies the proper operation of each step of an application from the user's point of view, being able to replicate each one, measuring success and total time.

Access via authentication

Checks application availability through user login and password.

Application traceability

Checks the availability of a request in the application following a navigation flow (trace); each independent request is monitored individually, in addition to the entire transaction.

Application availability

Scans application services to evaluate operation by URL and IP.

Transaction time breakdown

Breaks down in time periods each of the key transaction steps (server connection time, first iteration response time, application downloading time, etc).

Navigation with distributed probes

Remote web application monitoring is possible from different geographically distributed points, synchronized by a central manager.

Screenshots

Makes screenshots to use them as informs in case of failure and thus to analyze the problem as it looks like for a real user.



Database monitoring

[Download Free Trial](#)**Commercial relational database engines supported**

Supports Oracle, Sybase, Informix, DB2, Microsoft SQL Server, MySQL and PostgreSQL.

Commercial NoSQL database engines supported

Supports MongoDB, RavenDB, HBase and Cassandra engines.

Storage system monitoring

Hard disk physical storage, disk groups, tablespace -datafiles-.



Availability	Reports availability by opening and closing a connection and services at operating system level.
Transactions	Reports database locks, number of open sessions, number of open cursors.
Log relation of events and warning	Logs errors, warnings, user and session status, checks replication processes; updates data outside applications; generates and verifies backups.
CPU usage	Identify the database usage percentage on the server that contains it.
Cache usage	Shows cache usage by the database.
Total number of connections and their status	Shows connection real-time movement.
Job failures	Reports any errors in job execution.
Fragmentation	Identifies fragmentation level in data stores.
Backup errors	Generates manual and programmed alarms for failures in backup.
Custom SQL queries	Monitors the result of custom SQL (or equivalent) queries. Inventory is obtained both by remote network probes or agents.



Inventory

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Obtaining the inventory	The inventory is obtained by remote network probes or by agents, indistinctly.
Inventory systems	Network equipment (routers, switches), as well as Linux or Windows servers.
Network equipment remote configuration	Periodically collects remote configurations of network equipment and stores their different versions over time.
Detection of inventory changes	Allows the operator to be notified in case of detecting changes from one inventory review to another.
Display of equipment configuration differences	Visually displays configuration changes on remote computers from which your configuration is collected as part of the inventory.
CPU	Collects information about CPUs.



Vídeo	Collects information about PC-installed video cards.
Hard drives	Collects information about computer-installed hard drives.
Partitions	Collects information about each of the partitions on each computer.
NIC	Collects information about installed network cards and drivers.
Patches	Collects information about computer-installed patches.
Software	Collects information about computer-installed software.
Processes	Collects information computer-running processes.
RAM	Collects information about computer-installed memory modules.
Users	Collects the number of administrator users or guests on each computer.



Training and support

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Official training	Training in a standard way technicians on minimum indicated bases. Said training includes all usage levels and tool implementation.
Official certifications	Accreditation, by means of an official certification, certifying the knowledge of the technicians.
Online training platform	To make training easier, it has an online eLearning platform to learn about the tool and certifications.



Architecture

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Problem scaling system and root cause analysis	Allows analyzing the information based on the service as a whole, by grouping information. This makes the analysis of the problem root cause easier.
Automatic provisioning system	Distributes the load in case of new node registrations on the corresponding servers, or by load or custom rules.



Long-term data storage	It is able to keep all data history at full resolution for at least three years.
Communication via standard ports	Communication between the different components of the architecture is done through official ports, listed by the IANA.
Isolated environment monitoring	A system is provided by which an isolated network can be monitored through a component that does not have direct connectivity to the central monitoring infrastructure.
Backup	Includes an integrated backup system
Policies	Creates monitoring, correlation and inventory policies. These policies can be applied by specific groups or users, so that similar machine sets can be managed easily, quickly and evenly.
Single console	A single console is available, regardless of the final scaling of the implementation. The same user will work for all the tool features (network, applications, logs, reports) without logging in to different screens.
Horizontal scalability	There is an unlimited chance of growth by adding new servers.
High availability	HA is integrated in the solution. All system components support high availability without requiring external elements.
Distributed elements	Allows each element of the architecture to be in physical locations (different servers).
API/CLI	Provides REST API and command line tools to manage the solution.
Open SQL Database	The data model of the entire platform is open and documented, in order to use external queries to retrieve data.
Rebranding	Allows total product rebranding, hiding the name of the manufacturer, the name of the product and changing colors and icons by the administrator.
Licensing	It is licensed based on the total number of devices, regardless of the total number of metrics collected on each device.

Got any questions, suggestions or comments?

Get in touch!



PANDORA FMS

E N T E R P R I S E

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