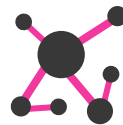
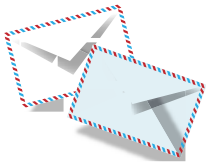


# TECHNOLOGIES MONITORED

BY PANDORA FMS

# INDEX





## APPLICATION SERVER



### APACHE

\* Service: httpd \* Bytes per request \* Bytes per second \* Web server CPU load \* Requests per second \* Active requests \* Idle processes \* Uptime \* Total number of hits \* Traffic volume.



### JBOSS

\* Status (per instance) \* Listener status \* Available heap \* Threads in use \* Transactions \* Requests \* Traffic volume \* Average CPU usage \* Active HTTP threads \* Connections established \* Number of connections \* CONN \* WAIT \* ACK \* WAIT \* WAIT2.



### TUXEDO

\* HTTP timeout \* advanced log parser for errors \* Volume occupation \* Dbspace occupation \* Custom metrics using onstat \* Custom metrics using tadmin \* Client connections \* Queue checks.

### ISS



\* AppPool status \* Site status \* URL status \* Error detection 404 \* 500 \* 503 \* 504 and \* 505 \* Anonymous requests per second \* Traffic volume \* CGI requests per second \* Asynchronous requests blocked \* SSL connections \* Total connections \* POST requests per second.

### SUN ONE WEB SERVER



\* Web server status \* Bytes per request \* Bytes per second \* Web server CPU load \* Requests per second \* Active requests \* Idle processes \* Uptime \* Total number of hits \* Traffic volume.

### TOMCAT



\* Web server status \* CPU load \* Memory \* Number of threads \* Number of custom threads \* Custom Tomcat metrics using SNMP or JMX.



## WEBSHERE

\* WAS server status  
\* WAS server

performance: \* CPU \* RAM \* Traffic volume  
\* JVM custom metrics \* Activity of the pools of threads per instance \* Transactions metrics per instance \* Filesystems.

## NGINX



\* Connections per second \* Requests per second \* Keep-alive connections.

## MAIL

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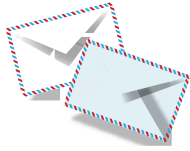
## EXCHANGE

\* Process and subprocesses monitorization \* Temporal files monitorization \* Queued messages \* Requests per second \* Total number of agent's invocation \* CPU usage \* OWA access \* ActiveSync connection \* Internal Outlook \* Outlook Webapp \* Services: \* Web server \* IMAP4 \* POP3 \* Database replication status \* Average OWA time response \* Average wait time \* Queued requests \* Latency \* Remaining synchronizations \* Requests per second \* RCP/HTTP \* Unique users connected \* Navigation latency \* Average CPU usage \* Memory used \* Read/write rate in disk \* Transport queue size \* Delivered messages per second \* Elements in the trash \* Number of mails erased per second \* Total elements per queue \* Edge and Transport service metrics.



## LOTUS NOTES

\* Active Directory monitoring \* Services: \* Lotus Domino Server \* PGPServ \* Slapd-ssq \* Slapd-duct \* TSMSched \* Tasks: \* HTTP \* ROUTER \* SMTP \* LDAP \* DIIOP \* Ports 45103 \* SMTP.



## SMTP, IMAP AND POP3

\*Verify proper operation of your mail system through consultations with standard protocols \*SMTP \*IMAP y \*POP3.

## HIGH AVAILABILITY

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## MICROSOFT CLUSTER

\* Services: \*FileScreen \*QuotaAdv \*SecurePathAgent \*Samss \*SpntSvc \*LSMTP \*Group checks \*Resources checks\*Network checks \* Number of files opened \* Internal application events.



## DRBD

\* Filesystem usage (%) associated to a resource \* Resource status inside drbd \* Resource's role inside drbd \* Filesystem status associated to a resource \* KBytes sent to the partner through the network \* KBytes received from partner \* KBytes written for the resource in the local computer \* KBytes read from the resources in the local computer \* Number of log changes \* Changes in the bitmap \* Number of requests sent to the partner, but not yet been responded \* Number of requests opened to the I/O subsystem from DRBD \* Number of requests received from partner through the network, but have not been responded yet \* Number of I/O blocks sent to DRBD not responded yet \* Amount of storage out of synchronization (kikibytes) \* Heartbeat status \* Number of processes running from the heartbeat.



## HSRP, VRRP Y LVS

\* Compatibility with standard and proprietary protocols to check the status of distributed architectures.



## DATABASES

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### MYSQL

\* Database service and connection status

\* CPU usage \* Memory \* Active connections \* Open tables \* Requests per second \* Active threads \* Blocked tables on hold \* InnoDB metrics \* Traffic volume \* Number of SELECT \* UPDATE \* DELETE \* INSERT performed \* Uptime \* Database filesystem monitorization.

### ORACLE

\* Database service and listener status



\* Cache metrics: \* Hits \* Failures \* Dictionary size \* Internal performance metrics: \* Read/write latency \* buffer monitorization \* Queues \* Locks \* CPU usage \* Memory \* Table performance \* Rows \* Queries \* Database filesystem monitorization \* Custom queries performed by the user \* ORA alerts per instance.

### MONGODB

\* Database status



\* Performance metrics: \* Number of insert \* Update \* Delete per second \* Queries per second \* Flushes \* Pagefaults \* Btree index failures \* Traffic volume \* Opened connections per instance \* Number of clients reading/writing.

### MICROSOFT SQL SERVER



\* Database service and instance status \* CPU usage \* Idle time \* Volume of I/O packages \* Read/write errors on disk \* Total read/write performed \* Internal metrics from the database: \* Allocated pages \* Scans per second \* Cache performance \* Buffers \* Mirroring status \* Transactions per second \* Tables performance \* Internal statistics.

# LIST OF MODULES OF PANDORA FMS



## POSTGRE SQL



\* Database and listener status \* CPU \* Memory \* Active locks \* Number of commits / rollbacks \* Active processes on the server \* Number of searches performed.

## INFORMIX



\* Application status \* CPU metrics and memory usage per instance \* Advanced log parser for error detection \* Volumes occupation \* Dbspaces \* Custom metrics using onstat.

## DB2



\* Availability data gathering from a DB2 server \* Availability checks of databases in an instance \* Availability checks of applications in an instance \* Filesystem or logical volume free space \* DB2 Total Connected Application Count \* DB2 Total Disconnected Application Count \* DB2 Active Application Count.



## NETWORKS AND SERVICES



### NETWORK DEVICES

\*Availability (ICMP)

\* Latency (ICMP) \*Open ports \*Application checks using TCP protocol conversation through a port \*SNMP traps \*v1 \*v2 \*v3 \*Through SNMP v1/v2/v2c/v3 polling we can get NIC's status \*Input/output traffic per interface \*Error rate \*MTU \* Custom values.

### SNMP NETWORK DEVICES



\*Complete support (Polling and traps) of SNMP v1,v2 and v3 \*Every manufacturer: \*Cisco \*HP \*Dell \*D-Link \*IBM \*Linksys \*Huawei \*Nec \*Nokia \*3Com \*Nortel, etc.



### SAMBA

\*SMB sessions \*SMB read errors \*Number of SMB connections \*File existence checks \*Última modificación de un fichero \*Last modification of a file.

### USER EXPERIENCE



#### WEB MONITORING

\*Website status checks \*Website content checks \*Latency and time response of a defined web transaction \*Information gathering from a website or a web transaction \*Change detection in a website.

### DNS

\*DNS server time response \*IP/Domain tuple checking.





## VIRTUALIZATION

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### RHEV

\*Datacenter status  
\*Virtual network status

\*Spanning Tree Protocol checks \*VM and Stateless/HA checks \*Auto-discovery of the virtual infrastructure.



### HYPERV

\*Per Host: \*CPU  
\*Memory \*Dynamic

balancer memory \*Traffic volume \*Read/write disk rate. \*Per VM: \*CPU \*Memory \*Traffic volume \*Read/write disk rate \*Volumen de tráfico. \*Per Host: \*VM's in critical state \*Free disk (%). \*Per VM: \*Snapshots' uptime control \*Host status \*VM status.

### VMWARE/ VSPHERE



\*Power status

\*Activity \*Host's SSL fingerprint \*CPU usage \*Disks \*Physical memory \*Uptime \*Read/write latency \*Traffic volumen \*NIC status \*Network and VM status \*CPU \*Disks \*Physical memory \*Guest's OS operational mode \*Read/write disk rate \*Network connectivity \*VMWare alerts \*Datastore status \*Max capacity \*Free space \*Over allocation of the disk \*Auto-discovery of the virtual infrastructure.

### XEN



\*It scans all available domains \*Extracts its status \*CPU \*MEM

\*DISK and Net usage \*Status of virtual machines (stopped, alive, etc).



## AMAZON EC2

\*For **AWS/EC2 Namespace:** \*CPUUtilization \*DiskReadBytes \*DiskReadOps \*DiskWriteBytes \*DiskWriteOps \*NetworkIn \*NetworkOut. \*For **AWS/EBS Namespace:** \*VolumeIdleTime \*VolumeQueueLength \*VolumeReadBytes \*VolumeReadOps \*VolumeTotalReadTime \*VolumeTotalWriteTime \*VolumeWriteBytes \*VolumeWriteOps.

## OTHERS

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### JMX

\*Information and statistics about the application server \*Information about the application server host OS \*Status information of every Servlet deployed in the application server \*Memory used by the server \*Information of every Mbean of the application server \*Thousands of monitors for \*Tomcat \*Weblogic \*WebSphere \*Jboss \*GlashFish, etc.

### OPERATING SYSTEMS



\*Full support for the following OS:  
\*Windows NT4 \*Windows 2000 \*Windows 2003 \*Window XP \*Windows 7 \*Windows 2008 \*Windows 8 \*Solaris (since version 6) \*AIX (since version 4) \*Linux (any version) \*HPUX (since version 10.x) \*FreeBSD \*NetBSD \*OpenBSD (every version) \*Novell Netware (using SNMP) \*z/OS (using Unix Services).



### CITRIX

\* Services: \*HCA \*CTXCpuusync \*CtxcpuSched \*IMAService \*CtxHttp \*MFCCom \*Citrix SMA Service \*Cpsvc \*Citrix Virtual Memory Optimization \*SpntSvc. \*Terminal server errors \*Security policies \*Licence server connection checks \*Licences expiration checks \*Citrix internal monitorization \*Metaframe errors.

# LIST OF MODULES OF PANDORA FMS



## SAP/R3

- \*System up
- \*Workprocess control (SM50)
- \*DIA workprocess with errors
- \*BGD workprocess with errors
- \*UPD workprocess with errors
- \*UP2 workprocess with errors
- \*SPO workprocess with errors
- \*ENQ workprocess with errors
- \*Workprocesses without active restart
- \*Workprocess stopped
- \*System lock entries (SM12)
- \*System list of lock entries (SM12)
- \*Erroneous batch input in the system since yesterday (SM35)
- \*Cancelled jobs (and another 50 monitors).



## ASTERISK

- \*Registered peers
- \*Number of active calls
- \*Clock deviation
- \*Service status.

## FOREFRONT IDENTITY MANAGER



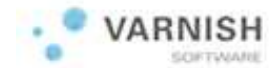
- \* Services
- \* FIM Synchronization Service
- \* Task Scheduler
- \* MSSQL Server
- \* MSSQL Server\_VSS\_Writer
- \* Windows Time
- \* Average length of logical disk
- \* Database synchronization log file size
- \* Log percentage used
- \* Database transactions per second
- \* FIM specific events.

## ACTIVE DIRECTORY



- \* Services: \* NTDS
- \* Kerberos key Distribution Center
- \* File Replication Server and DNS Server
- \* LDAP performance metrics: \* Cache search per second
- \* Domain controller read time
- \* Domain controller search time
- \* Domain processes read time
- \* Domain processes search time
- \* Domain controller long running
- \* Replication errors
- \* Synchronization and application integrity.

## VARNISH



- \* Cache metrics: \* Hits
- \* Failures
- \* Dictionary size
- \* Internal performance metrics: \* Connections per second
- \* Requests per second
- \* Advanced metrics per worker.



## BACULA

- \* Number of clients
- \* Tapes
- \* Generic storage devices
- \* Jobs
- \* Jobs stored in tapes
- \* Size occupied on tapes
- \* Jobs without errors since today/yesterday/last month/any month
- \* Jobs with errors since today/yesterday/last month/any month.



## FLASH STREAMING

\* Streaming monitorization for rtmp and http streaming types based on FLV.



## OPEN LDAP

\*Verify that your LDAP server authentication works correctly for a particular user \*Run a custom query.



## EPOLICY ORCHESTRATOR

\*Verify that your LDAP server authentication works correctly for a particular user \*Run a custom query.

## PANDORA GATEWAY PERFORMANCE



\*Checks of the status of the tool by SNMP polling and manufacturer's MIB \*Synchronization and completeness of the application.

## RSA/ACE SERVER



\*Check the status of your server SecureID authentication and VPN's.



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