
INTERTALK APPLICATIONS MONITORING SYSTEM (IAMS)

CAPABILITY GUIDE

The InterTalk Application Monitoring System (IAMS) is a robust solution designed for comprehensive IT infrastructure monitoring, including networks, servers, and virtual machines. IAMS offers a complete suite of monitoring capabilities, ensuring the InterTalk system is meticulously observed.

From tracking device/endpoint uptime to generating configurable alarms and alerts based on critical device metrics (such as CPU load exceeding a specified threshold), IAMS is designed to maintain optimal system performance. It also keeps an eye on SSL Certificate expirations and non-proprietary public software, allowing for alarms based on specific events.

The InterTalk dispatch ecosystem leverages the powerful IAMS to monitor its servers, deploying an IAMS agent on each server. This agent collects and sends vital server metrics, including CPU usage, memory, storage, and overall health, to a central IAMS server. This central server is capable of generating alarms based on configurable triggers, such as CPU load averages surpassing predefined thresholds.

Additionally, the IAMS server monitors IP connectivity for IP-connected devices and generates alarms if a connection is lost. Reporting methods are versatile, encompassing email, webhooks, SMS, and more, ensuring timely notifications and responses.

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IAMS FEATURE MATRIX

Capability	Description
Version of IAMS agent running	Displays the version of the IAMS agent currently running.
Host name of IAMS agent running	Displays the host name of the IAMS agent currently running.
IAMS agent ping	The agent always returns "1" for this item. May be used in combination with <code>nodata ()</code> for the availability check.
IAMS agent availability	Used for monitoring the availability status of the agent.
Number of CPUs	Displays number CPUs.
Load average (1m avg)	Calculated as the system CPU load divided by the number of CPU cores.
Load average (5m avg)	Calculated as the system CPU load divided by the number of CPU cores.
Load average (15m avg)	Calculated as the system CPU load divided by the number of CPU cores.
CPU utilization	CPU utilization expressed in %.
CPU idle time	Time the CPU has spent doing nothing.
CPU system time	Time the CPU has spent running the kernel and its processes.
CPU user time	Time the CPU has spent running users' processes that are not niced.
CPU nice time	Time the CPU has spent running users' processes that have been niced.
CPU iowait time	Time the CPU has been waiting for I/O to complete.

CPU steal time	The amount of "stolen" CPU from this virtual machine by the hypervisor for other tasks, such as running another virtual machine.
CPU interrupt time	Time the CPU has spent servicing hardware interrupts.
CPU softirq time	Time the CPU has been servicing software interrupts.
CPU guest time	Time spent on running a virtual CPU for a guest operating system.
CPU guest nice time	Time spent on running a niced guest (a virtual CPU for guest operating systems under the control of the Linux kernel).
Context switches per second	The combined rate at which all processors on the computer are switched from one thread to another.
Interrupts per second	Number of interrupts processed.
Get filesystems	The <code>vfs.fs.get</code> key acquires raw information set about the filesystems. Later to be extracted by preprocessing in dependent items.
Memory utilization	The percentage of used memory is calculated as <code>100-pavailable</code> .
Available memory in %	The available memory as a percentage of the total.
Total memory	Total memory expressed in bytes.
Available memory	The available memory: - in Linux = free + buffers + cache; - on other platforms calculation may vary.
Total swap space	The total space of the swap volume/file expressed in bytes.
Free swap space	The free space of the swap volume/file expressed in bytes.
Free swap space in %	The free space of the swap volume/file expressed in %.

System uptime	The system uptime expressed in the following format: "N days, hh:mm:ss".
System boot time	Displays system boot time.
System local time	The local system time of the host.
System name	The host name of the system.
System description	The information as normally returned by <code>uname -a</code> .
Number of logged in users	The number of users who are currently logged in.
Maximum number of open file descriptors	May be increased by using the <code>sysctl</code> utility or modifying the file <code>/etc/sysctl.conf</code> .
Maximum number of processes	May be increased by using the <code>sysctl</code> utility or modifying the file <code>/etc/sysctl.conf</code> .
Number of processes	Shows number of processes.
Number of running processes	Displays number of processes running.
Checksum of /etc/passwd	Displays Checksum of /ect/passwd
Operating system	Displays Operating system.
Operating system architecture	The architecture of the operating system.
Number of installed packages	Displays number of installed packages.

IAMS TRIGGER MATRIX

Capability	Description
IAMS agent is not available	For passive agents only, host availability is used with <code>{\$AGENT.TIMEOUT}</code> as a time threshold.
Load average is too high	The load average per CPU is too high. The system may be slow to respond.
High CPU utilization	CPU utilization is too high. The system might be slow to respond.
High memory utilization	The system is running out of free memory.
Lack of available memory	The system is running out of memory.
High swap space usage	If there is no swap configured, this trigger is ignored.
<code>{HOST.NAME}</code> has been restarted	The host uptime is less than 10 minutes.
System time is out of sync	The host's system time is different from IAMS server time.
System name has changed	The name of the system has changed. Acknowledge to close the problem manually.
Configured max number of open filedescriptors is too low	Configured max number of open filedescriptors is too low trigger.
Configured max number of processes is too low	Configured max number of processes is too low trigger.

Getting closer to process limit	Getting closer to process limit trigger.
/etc/passwd has been changed	/etc/passwd has been changed trigger.
Operating system description has changed	The description of the operating system has changed. Possible reasons are that the system has been updated or replaced. Acknowledge to close the problem manually.
Number of installed packages has been changed	Number of installed packages has been changed trigger.

DOCKER FEATURE MATRIX

Capability	Description
Ping	Display ping.
Get info	Get info.
Get containers	Get containers.
Get images	Get images.
Get data_usage	Get data_usage.
Containers total	Total number of containers on this host.
Containers running	Total number of containers running on this host.
Containers stopped	Total number of containers stopped on this host.
Containers paused	Total number of containers paused on this host.
Images total	Number of images with intermediate image layers.

Storage driver	Docker storage driver.
Memory limit enabled	Memory limit enabled.
Swap limit enabled	Swap limit enabled.
Kernel memory enabled	Kernel memory enabled.
Kernel memory TCP enabled	Kernel memory TCP enabled.
CPU CFS Period enabled	https://docs.docker.com/config/containers/resource_constraints/#configure-the-default-cfs-scheduler
CPU CFS Quota enabled	https://docs.docker.com/config/containers/resource_constraints/#configure-the-default-cfs-scheduler
CPU Shares enabled	https://docs.docker.com/config/containers/resource_constraints/#configure-the-default-cfs-scheduler
CPU Set enabled	https://docs.docker.com/config/containers/resource_constraints/#configure-the-default-cfs-scheduler
Pids limit enabled	Pids limit enabled.
IPv4 Forwarding enabled	IPv4 Forwarding enabled.
Debug enabled	Debug enabled.
Nfd	Number of used File Descriptors.
OomKill disabled	OomKill disabled.
Goroutines	Number of goroutines.
Logging driver	Logging driver.
Cgroup driver	Cgroup driver.

NEvents listener	NEvents listener.
Kernel version	Kernel version.
Operating system	Operating system.
OS type	Operating system type.
Architecture	Architecture.
NCPU	NCPU.
Memory total	memory total.
Docker root dir	Docker root dir.
Name	Name.
Server version	Server version.
Default runtime	Default runtime.
Live restore enabled	Live restore enabled.
Layers size	Layers size.
Images size	Images size.
Containers size	Containers size.
Volumes size	Volumes size.
Images available	Number of top-level images.

DOCKER TRIGGER MATRIX

Capability	Description
Service is down	Service is down trigger.
Failed to fetch info data	IAMS has not received data for items for the last 30 minutes.
Version has changed	Docker version has changed. Acknowledge to close the problem manually.

ADDITIONAL FEATURE MATRIX

Capability	Description
IAMS SSL Certificate Monitoring	Monitoring the SSL certificate for the IAMS Server
IAMS Daily Backup Monitoring	Monitoring the Daily Backup of the IAMS DB

IMPORTANT NOTES

- RHEL 6 doesn't support IAMS agent 2, which can be a limitation if some metrics are only supported by IAMS agent 2.
- RHEL 6 also does not support Docker, which is the current automated architecture InterTalk has for the IAMS Server. Therefore, it's best to deploy an IAMS Server on =>RHEL 7/Ubuntu.
- Any additional monitoring metrics will require additional development unless supported by IAMS out of the box.

HOW TO BUY

Are you ready to integrate the InterTalk Applications Monitoring System with your InterTalk Dispatch Console System deployment? To start the process, contact us at sales@intertalksystems.com or call 1-833-55-ITALK (48255).



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