

NIMSOFT Monitor for SAP

Monitoring capabilities of SAP probe V4.0

Author: Ronan BARIOU

AGENTIL, Pré-de-la-fontaine 19, CH-1217 Meyrin
T : +41 22 595 04 04 - F : +41 22 595 04 05 - www.agentil.com



We develop the future



- **SAP HANA monitoring**
- **SAPConnect (SCOT/SOST):** Email/fax/paging messages
- **System log (SM21):** Pattern & filter based monitoring
- **Transports (STMS):** Detects failed transports
- **Long exclusive lock waits (DB01):** Objects awaited for too long due to exclusive lock.
- **RFC Destinations availability (RSRFCCHK) :** Check the availability of mandatory destinations
- **ABAP Dispatcher and work processes (SM50):** Work processes/queues states and utilization
- **SAP instances (RZ04, SM51):** Operation mode state, AS availability
- **ABAP System performance (ST03):** Steps rate, request/network/response times, concurrent users,...
- **Update requests (SM13, SM14):** Update system status, waiting, failed and inconsistent updates
- **Enqueue Management (SM12):** Request rate, Granule args/entries utilization, owner names utilization
- **Background jobs (SM37):** State, duration, delay, occurrence
- **SAP OS Collector (ST06):** CPU, disk, memory, collector state
- **SAP Memory (ST02):** Buffer hit ratio/swap rate/space, extended memory, work process in PRIV/HOLD
- **ABAP Dumps (ST22):** Frequency, general to specific occurrence.
- **Printing (SP01, SPAD):** Spool service status, errors, used numbers, work process utilization,...
- **TRFC/QRFC (SM58, SMQS, SMQR):** waiting/CPICERR/SYSFAIL/SYSLOAD calls, scheduler, queues
- **Database (DBACOCKPIT):** Archiving, backup, tablespace, locks, cache hit ratio, daily growth, used space, free space, read performance, buffer quality,...
- **Batch inputs (SM35):** Status by client, creator or session name.
- **IDOC (BD87, WE02):** Error/waiting state, direction, client, message, partner
- **Process chains (RSPC1, RSPCM):** State, duration, delay, occurrence

Monitoring schemes

Three different monitoring schemes

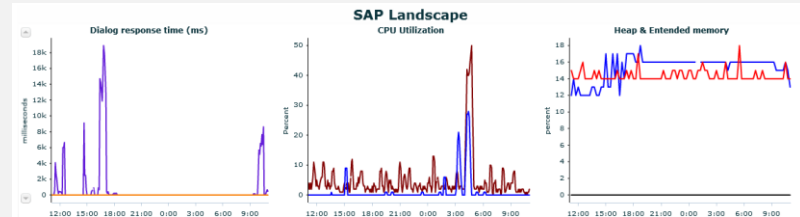
Alarms

QOS

Daily reports

Displayed on Nimsoft - UMP

Major	SSM	The calendar days since the last DB backup is 839.
Major	SSM	The calendar days since the last log backup is 839.
Critical	ID3	System is not reachable since 475 minutes. Passwa
Major	ID2	The ABAP dialog response time on AS aglgesrvds02
Major	ID2	The ABAP dialog response time on AS aglgesrvds02
Minor	ID2	The Network runtime is currently 1715 ms on instan



Generate Html reports

SAP Monitoring report : ID2

Report generated on: Wed Mar 07 15:20:14 CET 2012
Report check started from: Tue Mar 06 15:00:00 CET 2012

System information

SYSTEM
DB TYPE: DB RELIANT CORE RELEASE
MSVC: 9.00.40101

INSTANCE
Instance name: [Name] Services: [List] Host: [Host] Max EM: [Value] Startup Date: [Date] Runtime: [Time] OS / CPU: [Info] Heap kernel: [Value]
aglgesrvds02_ID2_00[Name] [List] 3000 00 [Date] [Time] [Info] [Info] [Info]

Global Change status

GLOBAL CHANGE STATUS
System can be modified

Client status

Client Logical name	Role	Client Status	Changed by
001	SAP Gateway	Changes to Repository and cross-client Controlling allowed - Controlling in this client cannot be changed	[User]
001	Controlling	Changes to Repository and cross-client Controlling allowed - Controlling in this client cannot be changed	[User]
006	Controlling	Changes to Repository and cross-client Controlling allowed - Controlling in this client cannot be changed	[User]
007	Controlling	Changes to Repository and cross-client Controlling allowed - Changes are recorded in transport request	[User]
800	Controlling	Changes to Repository and cross-client Controlling allowed - No automatic recording of changes in transport request	[User]
900	Controlling	Changes to Repository and cross-client Controlling allowed - Changes are recorded in transport request	[User]

Two different stacks

ABAP :

SAP JCO API

Executes Remote function calls
Use a dedicated SAP user

JAVA :

SAP Management Console

Calls SapControl web services

Databases :

NEW

Hana

Oracle

MSSQL

DB2

MaxDB

ABAP stack monitoring

CCMS

Potentially all CCMS metrics

- ABAP System performance (ST03)
- SAP instances (RZ04, SM51)
- ABAP Dispatcher (SM50)
- Update requests (SM13, SM14)
- Enqueue Management (SM12)
- Background jobs (SM37)
- SAP OS Collector (ST06)
- SAP Memory (ST02)
- ABAP Dumps (ST22)
- Printing (SP01, SPAD)
- RFC Destinations (SM58, SMQS, SMQR)
- Oracle/MSSQL/DB2/MaxDB (DBACOCKPIT)
- Etc...

Other RFCs

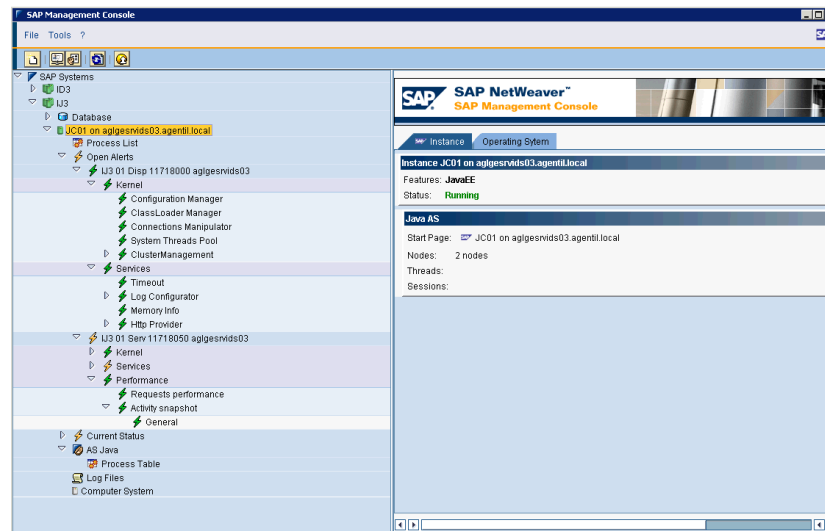
- SAP jobs
- IDOC exchanges
- Short dumps
- System status
- Databases/backups
- Sys log
- Batch inputs
- Etc...

Java stack monitoring

SapControl
Web service



- Server, Dispatcher, SDM status
- Used memory
- Application threads count
- Response time
- Components calls
- Commit duration
- Current HTTP/HTTPS sessions
- Processes availability
- Requests rate
- Unsuccessfull logon rate
- ...



Access to most data available in
the SAP Management console

SAP jobs/Process chains monitoring

Four kinds of surveillance

Abort status

Sends alarm if a given job has been aborted more than a threshold

Job duration

Sends alarm if the duration of a job is too long

Execution delay

Sends alarm if the execution delay is too long

Job occurrence

Sends alarm if the job is not executed as scheduled

SAP job/Process chains monitoring...

Tune the surveillance for each job

Surveillance can be customized for each job or group of jobs



Alarm severities

Surveillance period depth

Duration/Delay



Match SAP calendar

Schedule

Prefix for alarm filtering

Monitor short dumps

Short dumps
threshold

Sends alarm if the number of short dumps
is over a threshold

Customization of
the surveillance
based on filters

Filter by: - Instance
- Client
- Error Id
- Report

Create as much surveillance rules as necessary

Customizable analyze period depth

Customizable severities and alarm prefixes

Monitor IDOC exchanges

Monitors
Error and waiting state

Sends alarm if the number of IDOC exchanges in the corresponding state is over a threshold

Customization of
the surveillance
based on filters

Filter by: - Client
- Message type
- Partner
- Direction

Create as much surveillance rules as necessary

Customizable analyze period depth

Customizable severities and alarm prefixes

Monitor SAP updates

Detects error,
not completed and
inconsistent states

Sends alarm if the number of updates in the
corresponding state is over a threshold

Customization of the
surveillance based on
filters

Filter by: - Client
- User
- Tcode
- Report

Create as much surveillance rules as necessary

Customizable analyze period depth

Customizable severities and alarm prefixes

Monitor Batch inputs

Monitors
Error states

Sends alarm if the number of batch inputs in error state is over a threshold

Customization of the surveillance based on filters

Filter by: - Client
- Creator
- Session name

Create as much surveillance rules as necessary

Customizable analyze period depth

Customizable severities and alarm prefixes

SAP transaction times

Monitor SAP transaction times

Monitors

Average time per step

Sends alarm if the average time per step is over a threshold

Customization of the surveillance based on filters

Filter by: - Transaction name
- Task (Dialog, Update, etc...)

Create as much surveillance rules as necessary

Customizable analyze period depth

Customizable severities and alarm prefixes

Monitor RFC destinations

RFC destinations availability

Sends alarm if the destination cannot be reached

Customization of the surveillance based on filters

Discovers the list of available transactions, you can choose the subset to monitor

Customizable severities and alarm prefixes per destination

Monitor dispatcher queues

Monitors
the number of requests
written in each queue

Sends alarm if the occupation or fill rate is too high

Customization of the
surveillance based on
filters

Filter by:
- Queue type (Dialog, Update, etc...)

Create as much surveillance rules as necessary

Customizable severities and alarm prefixes

Monitor work processes

Monitors
the state of work processes

Sends alarm if the current task of a work process runs for too long, or if it is in a particular state

Customization of
the surveillance
based on filters

Filter by:

- Process type (Dialog, Update, etc...)
- State (Busy, On hold, Private, Stopped, ...)

Create as much surveillance rules as necessary

Customizable severities and alarm prefixes

Monitor system logs

Monitors

The content of system logs

Sends alarm if a specific pattern is found in a line of log occurred in a given period.

Customization of the surveillance based on filters

Filter by:

- Area
- SubId
- Program
- String pattern

Create as much surveillance rules as necessary

Customizable analyze period depth

Customizable severities and alarm prefixes

Long exclusive lock waits

Long exclusive lock waits

Wait time on DB objects

Sends alarm if the time waited to get an exclusive lock on a DB object is too long

Customization of the surveillance based on filters

Filter by:
- Object name

Create as much surveillance rules as necessary

Customizable severities and alarm prefixes

SAP transports

States of the SAP transports

Sends alarm if a failed transport is detected

Customization of the surveillance based on filters

Filter by: - Transport name
- Client
- User

Create as much surveillance rules as necessary

Customizable severities and alarm prefixes



SAPConnect

Status of the messages

Sends alarm if messages with failed send status is detected

Customization of the surveillance based on filters

Filter by:

- Message type
- Error/waiting states
- Client/User/Node/Receiver/Subject

Create as much surveillance rules as necessary

Customizable severities and alarm prefixes

Receive reports by email on following components

System/instance info

Batch inputs

Database and logs

Aborted jobs

Updates

TRFC/QRFC

Short dumps

Sys Logs

Dialog response time

Enqueues

Range number

RFC destinations

Additional features

CCMS/SAPContol auto discovery

Powerful template based configuration system

Import/Export configuration feature

Probe self checks for more robustness

Probe editor : Extend the monitoring to new KPIs

SAP systems auto discover via SLD

Library update manager

Auto generated dashboards

System overview



Alarms overview

	IDS	TM	ID2	BID	ID9
All	■	■	✗	■	■
PERFS	■	■	□	■	■
INSTANCES	■	■	■	■	■
DISPATCHER	■	■	■	■	■
REQUESTS	■	■	■	■	■
ENQUEUE			■	■	■
JOBS			■	■	■
OS	■	■	■	■	■
MEMORY	■	■	■	■	■
DUMPS			■	■	■
PRINT			⚠	■	■
RFC_DEST			■	■	■
ORACLE					■
MSSQL			■	■	
DB2					
MaxDB		■			
SAP JOBS	■	■	■	■	■
IDOCs	■	■	■	■	■
SAPCTL_JAVA					
PROCESS CHAINS	■	■	■	■	■
SAP TRANSACTIONS	■	■	■	■	■
SAP UPDATES	■	■	■	■	■
BATCH INPUTS	■	■	■	■	■

Anything missing ?

Contact us at support.products@agentil.com

This product as been built by listening customer expectations

Thank you !