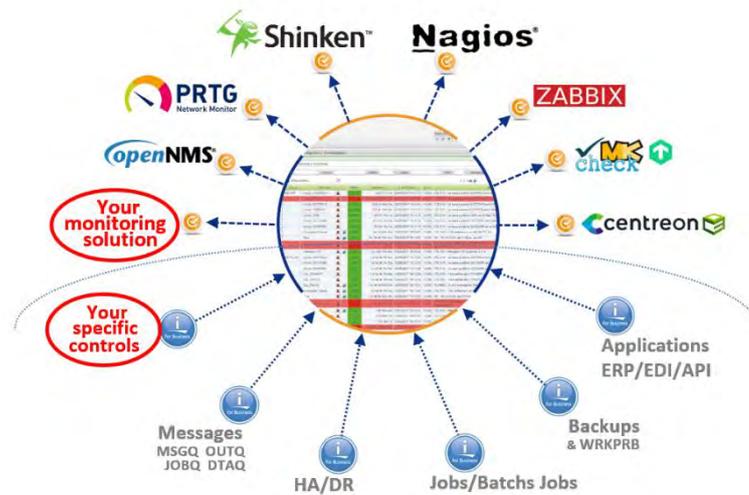


General description of the product



boosts **your** monitoring solution in place...



...for the **full** control of your IBM

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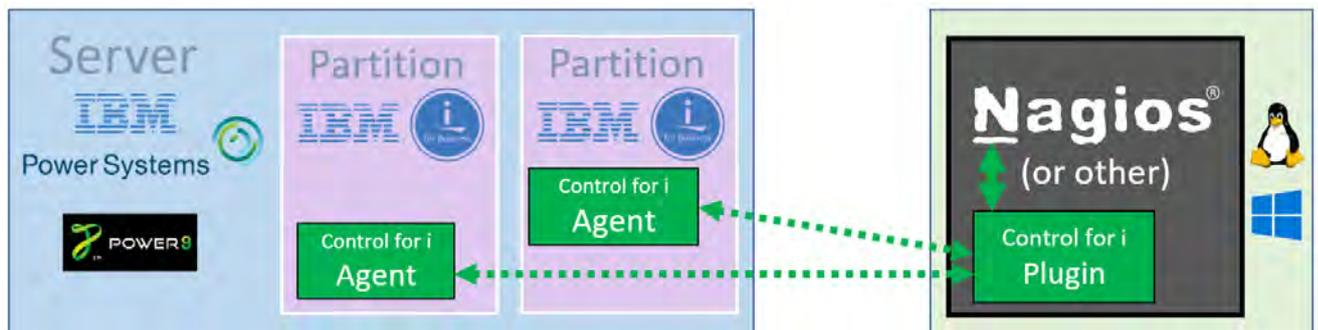
1 Product description

The aim of the “Control for i” product is to monitor everything on an IBM i partition, using a product such as Nagios or many similar solutions (Centreon, Check/MK, Shinken, Zabbix, ...) or competitors (PRTG, ServiceNav, ...)

Such Nagios-like tools have basic capacities. For example, they check some system items: PING, CPU, power used, disk space used, etc. But they cannot be used to monitor whether a subsystem has started and contains all the expected jobs, or if backups were correctly made the previous night. No need to imagine controlling the proper operating of your HA solution or the smooth running of your ERP batches or the end of your data transfers ...

The plugin supplied with Control For i enables the connection between the Nagios-like tool and the IBM i partition.

The only input parameter is an IBM i command which will be run on the partition. The message returned from this command will be the text displayed by Nagios or sent by e-mail if it concerns an error.



‘Control for i’ architecture

The product is supplied with numerous check commands which cover most of needs related to IBM i, IBM i applications and middleware operations.

The commands can also be used interactively in a 5250 session to test a check or in a CLP program written by the user.

All the commands are written to be executed extremely quickly in order to avoid timeouts during checks performed by Nagios.

The user may create its own specific commands, that will easily be used as new Nagios checks.

On the IBM i partition, an agent is running permanently. Its role is to accept orders from Nagios, and to return the answer.

The schedule and the frequency of the controls are managed by Nagios.

The Control for i product is available in English and French versions.



IBM and Nagios* ... a couple in perfect harmony

* or other Open-Source compatibles tools (forks, distrib, ...) but also some Proprietary tools and SaaS offers



2 The checks achieved with Control for i

2.1 System check commands

CTCHKBCH

- Check if a job (defined by its name) has run in a specified time period
- Check the number of batch jobs with the same name that have run in a time period
- Check if a job has started at a specified hour
- Check that a job has ended at a specified hour, with a specified end code

CTCHKBRM

- Check that 1 to x BRMS control group(s) completed successfully in a specified time period
- Check that 1 to x BRMS control group(s) completed successfully in a specified time period and job name

CTCHKBRMEX

- Check the number of expired medias of a media class
- Check the number of expired medias of a media class in a location

CTCHKBRMFC

- Check if FlashCopy status of BRMS is *STRPRC
- Check if FlashCopy status of BRMS is *ENDPRC

CTCHKCPU

- Check CPU used for the entire system
- Check CPU used by jobs in a list of subsystems
- Check CPU used by jobs in a list of job names

CTCHKDSK

- Check disk space used in system ASP
- Check disk space used in user ASP or iASP (coming soon)

CTCHKDTAA

- Compare Data area content with a text in parameter
- Check a specific function by using a Data Area

CTCHKDTAQ

- Check the number of entries in a Data Queue (DTAQ)

CTCHKEDH

- Check if a Quick EDD-HA environment is started
- Check if a Quick EDD-HA environment is stopped
- Check if a Quick EDD-HA environment has replication delay
- Check if a Quick EDD-HA environment has objects synchronization errors

CTCHKIFSUF

- Check the number of files (full name or generic name) in an IFS directory.

CTCHKJOB

- Check that a job is Active (by name, with or without user profile)
- Check that a job is Inactive (by name, with or without user profile)
- Check that a job is active AND not in a specified status (MSGW, LCKW, ...)

CTCHKJOBDU

- Check that a job is not Active for a too long time (by name, with or without user profile)
- Check that no job in a subsystem is Active for a too long time

CTCHKJOBQ

- Check existence and status (*RLS, *HLD) of a JOBQ
- Check the number of jobs waiting in a JOBQ

CTCHKLCKW

- Check existence of jobs in LCKW status
- Check existence of jobs in LCKW status running in a specified list of subsystems
- Check existence of jobs in LCKW status running in any subsystem except a specified list of subsystem
 - o Possible to omit a list of specified job names.

CTCHKLIBEV

- Check evolution of library size
- Check evolution of number of objects in a library

CTCHKLIBSZ

- Check library size
- Check number of objects in a library

CTCHKLOG

- Check if there are errors in Control for i product

CTCHKMMXAG

- MIMIX Application Group, Check if Manager is active
- MIMIX Application Group, Check if Data replication is active
- MIMIX Application Group, Check procedures status

CTCHKMMXAU

- Check MIMIX Audits status

CTCHKMMXDG

- MIMIX Data Group, Check if data group is Enabled
- MIMIX Data Group, Check Communication status
- MIMIX Data Group, Check Data area process
- MIMIX Data Group, Check DB send process
- MIMIX Data Group, Check Remote journal link
- MIMIX Data Group, Check DB reader process
- MIMIX Data Group, Check number of DB apply process
- MIMIX Data Group, Check objects send process
- MIMIX Data Group, Check number of objects retrieve process
- MIMIX Data Group, Check number of objects apply process
- MIMIX Data Group, Check number of containers send process

CTCHKMMXDS

- MIMIX Data Group status, Check number of objects in error
- MIMIX Data Group status, Check non active objects
- MIMIX Data Group status, Check Non Journalized Objects on Source
- MIMIX Data Group status, Check Non Journalized Objects on Target
- MIMIX Data Group status, Check Files in error
- MIMIX Data Group status, Check non active files
- MIMIX Data Group status, Check IFS files in error
- MIMIX Data Group status, Check non active IFS files
- MIMIX Data Group status, Check IFS files not journaled on Source
- MIMIX Data Group status, Check IFS files not journaled on Target

CTCHKMSGQ

- Check a specific MSGID or MSGID list in QSYSOPR
- Check a specific MSGID or MSGID list in a Message Queue
- Check a specific MSGID or MSGID list in the system log (QHST)
- Check a specific MSGID or MSGID list in an active job joblog
- All those checks may include:
 - o Generic MSGID
 - o Special values for MSGID like *ANY, *INQ, *NONE, *REPLY
 - o Specify Severity
 - o Specify Job name
 - o Specify User name
- Run a specific action when a MSGID occurs
 - o Send an answer
 - o Call a command
 - o Call a program

CTCHKMSGW

- Check existence of jobs in MSGW status (jobs in error and jobs reading MSGQ)
- Check existence of jobs in MSGW status (Only jobs in error)
- Check existence of jobs in MSGW status running in a specified list of subsystems
- Check existence of jobs in MSGW status running in any subsystem except a specified list of subsystem
 - o Possible to omit a list of specified job names.

CTCHKOUTQ

- Check that there is a minimum number of spools in an OUTQ
- Check that there is a maximum number of spools in an OUTQ
 - o Possible to select or omit spools according to their status (RDY, SAV, HLD, ...)

CTCHKPING

- Check if an other system answers to a PING (done from the IBM i partition itself)

CTCHKPRB

- Check number of Hardware problems detected (WRKPRB)
- Check number of problems for internal disks (WRKPRB)

CTCHKSAV

- Check that SAVLIB command completed successfully in a specified time period
- Check that SAVLIB command completed successfully in a specified time period and job name
- Check that SAVDLO command completed successfully in a specified time period
- Check that SAVDLO command completed successfully in a specified time period and job name
- Check that SAV command completed successfully in a specified time period
- Check that SAV command completed successfully in a specified time period and job name
- Check that SAVSECDTA command completed successfully in a specified time period
- Check that SAVSECDTA command completed successfully in a specified time period and job name
- Check that SAVCFG command completed successfully in a specified time period
- Check that SAVCFG command completed successfully in a specified time period and job name

CTCHKSBS

- Check that a subsystem is Active
- Check that a subsystem is Inactive
- Check that a subsystem is active AND has a minimum number of jobs active
- Check that a subsystem is active AND that specific jobs (by job name) are currently active

CTCHKUSR

- Check that a specified user profile is *ENABLED
- Check in a list of user profiles that there are less than a specified number of them that are *DISABLED

2.2 M3 ERP check commands

The controls below are used to monitor specifically the operation of one of the ERP on the market : M3 (INFOR editor).

They are based on the data provided by the Grid and the Server View.

Other probes of the same king will come or will be developed depending the needs of our customers or prospects...

2.2.1 Checks based on M3 GRID

CTM3APPERR

- Check errors for all M3 applications
- Check errors for a list of specified M3 applications

CTM3APPSTS

- Check that all M3 applications have status OK, not OK, or not running
- Check that a list of specified M3 applications have status OK, not OK, or not running

CTM3APPWRN

- Check warnings for all M3 applications
- Check warnings for a list of specified M3 applications

CTM3G_NOD

- Check CPU used by M3 nodes
 - o For all nodes
 - o For a list of specified nodes
- Check memory used by M3 nodes
 - o For all nodes
 - o For a list of specified nodes

CTM3G_SVC

- Check that port is active or down for M3 services
 - o For all services
 - o For a list of specified services
- Check that thread is active or down for M3 services
 - o For all services
 - o For a list of specified services

CTM3HSTSTS

- Check memory used by M3 hosts
 - o For all hosts
 - o For a list of specified hosts

2.2.2 Checks based on Server View

CTM3G_NBAJ

- Checks that number of Autojobs is within limits

CTM3G_JOB

- Check CPU used by M3 jobs
 - o For all jobs
 - o For a list of specified jobs
- Check activity of M3 jobs
 - o For all jobs
 - o For a list of specified jobs

2.2.3 Checks based on internal M3 tables

CTM3CHKBCH

- Check if a M3 job (defined by its name) has run in a specified time period
- Check the number of M3 batch jobs with the same name that have run in a time period

CTM3JOBQ

- Check the number of jobs waiting in a M3 JOBQ

CTM3JOBSTS

- Check if M3 jobs are in error
- Check if M3 jobs are in status 15 or 25

3 Management commands

For information, the following commands are used for internal purpose in the product Control for i.

CTADDKEY	CTPARAM
CTADDLOG	CTRSTPRD
CTAGENT	CTSTRSBS
CTCLEAR	CTWRKKEY
CTDSPINF	CTDSPALR
CTDSPLOG	CTDSPLIB
CTDSPSLOG	CTCHGMSGST
CTENDSBS	CTWRKLIB
CTMENU	CTWRKMSG

4 Example of Nagios architecture

