Control for i

~

Evolutions tracking

Date	6 September 2023
Reference Documentation	V3.22
CTL4I Library Version	V03, Build 2023/09/06

1 Use evolutions

Following is the list of new features since V02 of product Control for i.

1.1 How to know the version currently used

Use the command CTDSPINF to know the current version of the product.
The resulting message gives the version of the product, and the generation date using format yy/mm/dd. Use this generation date to look in the following list, and find what are the evolutions that concern you.

1.2 Restore the new version of Control for i on IBM i partitions

Upgrade the product version.
Use documentation at section "2.1 Changing the Control for i version"

1.3 Use the new features

You now can fully use the new features of the product.

2   New features 06/09/2023

Version for Reference Documentation = 3.22

2.1   End of upgrades for V7R1 and V7R2

For V7R1 and V7R2 systems, the Control for i product will no longer evolve. Release V3.22 dated 6th September 2023 is the last release to be supported for V7R1 and V7R2 systems.
These versions will continue to be supported for fixes, but there will be no further evolutions.
Control for i evolutions will continue with product version 4 from IBM i version V7R3.

2.2   CTCHKDTAQ, ASPDEV parameter for iASP DTAQs

The CTCHKDTAQ command is used to monitor the DTAQs contained in an iASP, by specifying the iASP name in this new parameter.

2.3   CTCHKSYSST, Temporary memory percentage control added.

2 new parameters PCTTMPMUSE and PCTTMPMMAX monitor temporary memory used as a percentage of system ASP, instead of the MB values used by the TMPMEMUSE and TMPMEMMAX parameters.

2.4   Plugin for PRTG, "Status" channel added systematically.

When using a Control for i command that returns graphical data, a channel is created for each piece of data. In all cases, the "status" channel is created to indicate whether or not an alert should be generated. In some error cases, only the "error" channel was created, without the "status" channel being present. This error has been corrected.

2.5   Documentation, Addition of a detailed chapter explaining plugins

A new chapter 2.8 explains in detail the results obtained when using plug-ins.

2.6   CTDSPALR, new option 9 for DSPJOB

The new option 9 allows you to use the DSPJOB command to display the job that has generated a message.

2.7   Various fixes and improvements

- Corrected a RNQ0103 error message in CTAUTO job when analyzing messages.

3   New features 13/07/2023

Version for Documentation = 3.21

3.1 Adding extended data to several commands

Some monitoring servers allow you to display extended data, which provides additional information for each service. The following commands have been modified to add the text of the most recent messages:
- CTCHKMSGQ
- CTCHKMSGW

3.2 New CTCHKJOBS command, monitor jobs in a particular state.

The new CTCHKJOBS command is used to generate an alert if at least one job is in a specific state entered as a parameter. This command has the same role as the CTCHKMSGW and CTCHKLCKW commands, except that the job state to be monitored can be specified.

3.3 CTWRKMSG, Additional controls when copying a scenario

If a scenario is copied with a change of type (*MSGQ, *BRMS, *QHST or *JOBLOG), additional controls are added to ensure that only messages compatible with the new type are copied.

3.4 CTWRKMSG, F11 key to view message details

The F11 key has been added to the display of the list of messages in a scenario so that the main information contained in the message definition can be viewed.

3.5 Optimised message analysis

The analysis of messages defined in CTWRKMSG has been optimised to make it faster when are many messages.

3.6 CTCHKOBJ, ASPDEV parameter for iASP objects

The CTCHKOBJ command can be used to check the presence and size of objects contained in an iASP, by specifying the name of the iASP in this new parameter.

3.7 CTCHKSYSST, New PCTJTBUSE parameter

The new PCTJTBLUSE parameter is used to check that the number of jobs does not approach the maximum number of jobs possible in the system.

3.8 CTCHKPING, New parameter for packet size

A new parameter allows you to choose a packet size other than the standard value.

3.9 Changes to the CTRMTUPD command

New RNMMSHF parameter to replace messages in French with messages without accents. This parameter can only be used if the product is to be installed in French.

After installation, the contents of the transferred key file are deleted.

3.10 Various fixes and improvements

- Removal of the F1 key, which caused an error on some screens

- Removal of the SQL0472 error message which was saturating the joblog of CTAGENT
- CTCHKBCH, if only one job has been found, the duration of the job is added to the performance data in the message
- Corrected a pointer error in the CTCHKJOB, CTCHKJOBQ, CTCHKMSGW, CTCHKLCKW and CTCHKSBS commands
- The plugin check_Control4i_PRTG_Remote.exe has been fixed

4 New features 15/02/2023

Version for Documentation = 3.20

4.1 CTCHKMQST, Taking into account the *STOPPED state

It is now possible to check that a manager is stopped (*STOPPED state)

4.2 Controls for other M81 products

When installing Control for i, if another M81 product is installed (Flash for i or Recover for i), the monitoring commands of these products (FLCHK* or BKCHK*) are automatically copied to the CTL4IUSR library. This makes it easier to monitor these products.

4.3 CTCHKPRB, exception definition

A new parameter (CTPARAM command, CTCHKPRB parameter) allows to indicate a list of SRC codes for which no alert will be generated. This makes it possible not to create alerts for problems that are known, recurrent and without consequence.

4.4 Upgrading the Product and Adding Remote License Keys

In installations with many partitions on which the Control for i product is installed, it is tedious to upgrade the product, or to enter a new license key.
Two new commands CTRMTUPD and CTRMTCHK allow to perform these operations remotely from a "central" partition. Chapter "12 Centralized Update" is dedicated to this function.

5 New features 08/12/2022

Version for Documentation = 3.19

5.1 CTMENU, Reorganization of the menus

All menus have been reorganized to integrate the new commands, and to make a more logical distribution of the covered areas

5.2 CTCHKMQST, Monitor MQ Series Manager

New command to monitor the status of an MQ Series Manager

5.3 CTCHKMQMSG, Check Message Count in MQ Series

New command to generate an alert if there are too many messages waiting in an MQ Series queue

5.4 CTCHKLCLIP, Check local IP address

New command to verify that a local IP address (internal to the partition) is active.

5.5 CTCHKIFSTX, Find text in IFS file

New command to search a text in an IFS file, and to generate an alert if this text is found, or if it is not found

5.6 CTCHKWEBSV, Monitor web services

New command to check if one or more web services are active.

5.7 CTCHKSYSST, Check number of active jobs

The new NBACTJOBS parameter of the command now allows to check the number of active jobs

5.8 New example of specific probe EXAMPLE04

A new source EXAMPLE04 is provided. It gives an example of a SQLRPGLE program in which an SQL query is used to perform a specific check.

5.9 CTWRKMSG, Add option 10

Adds an option 10 to test the scenario

5.10 CTCHKJOB, Added control of the number of threads

New THREAD parameter to indicate the maximum number of threads allowed.

5.11 PRTG, New method proposed to display alerts

Added in the documentation another method to display alerts in a different way. A new .ovl file is delivered with Control for i.

5.12 CTCHKJOBCUM, Control of M3 jobs over a long period

For M3 software, a new option allows to cumulate the data of jobs over a long period of time to control their duration and activity level.

5.13 Fixed several minor bugs

CTWRKMSG, Error when copying a scenario
CTCHKMSGQ, Alert generated if a message found in an MSGQ does not exist in the message file
CTCHKMSGQ, Error in some cases with generic message ID
Commands not compatible with threads, automatic restart of the agent after 50 000 commands.

CTCHKDSK, Consideration of SQL0462 error
CTCHKMMXDG, Clarification of the documentation for the Threshold

6 New features 20/07/2022

Version for Documentation = 3.18

6.1 Adding extended data in several commands

Some monitoring servers allow to display extended data, which allows to have additional information for each service. The following commands have been modified to add information:
- CTCHKLOG
- CTCHKJRN
- CTCHKPRB

Extended data will be added to other commands in the future without being indicated in this document.

6.2 CTCHKJOBDU command, job status check

The new JOBSTS parameter allows you to specify a job status. If this value is specified, the command will generate an alert if the job has remained in this status for the time specified in warning or critical duration.

7 New features 06/06/2022

Version for Documentation = 3.17

7.1 Backup / Restore settings

The new commands CTSAVCFG and CTRSTCFG allow to save the configuration of the product Control for i contained in the partition, and to restore it in totality or partially
This command does not save the information contained in the monitoring server (Nagios, PRTG, ...)

7.2 Controlling the size of the attached journal receiver

The new CTCHKJRN command allows you to monitor the size and number of entries of the journal receiver currently attached to one or more journals.

8 New features 13/05/2022

Version for Documentation = 3.16

8.1 Enabling/Disabling Nagios Services

The new CTSNDCMD command allows you to send a command to the Nagios or equivalent server to enable or disable a service. This feature is available for Nagios-like servers only. It is not available for PRTG or SolarWinds for example.

An initialization is necessary in order to use this function. See the chapter "Send commands to the monitoring server".

8.2   Extended Data in Messages

Some monitoring servers allow you to display extended data, which provides additional information for each service. Control for i allows you to send this extended data, which will be added to the messages generated by the commands.
The new EXTINFO parameter allows to remove these extended messages for monitoring servers that do not support them.

9   New features 28/03/2022

Version for Documentation = 3.15

9.1   New CTVLDALR and CTVLDLOG commands

These two new commands allow the validation of errors in the product log (CTVLDLOG) or alerts associated with message checks (CTVLDALR). This gives the ability to validate errors or alerts from a user program without the need to use the interactive CTDSPLOG or CTDSPALR commands.

9.2   New CTCHKUPTIM command

This new command allows you to check how long the partition has been active.

9.3   CTCHKBCH, Generic name for jobs

It is now possible to specify generic names for job names. This allows you to check for multiple batch jobs with names starting with the same characters, or a job with a different ending name on different days.

9.4   CTCHKMSGW and CTCHKLCKW, Add JOB parameter

The new JOB parameter is used to specify the list of jobs to be monitored. Only the jobs specified in this list will be monitored. The default value *ALL allows all jobs to be monitored as in the previous version.

9.5   CTCHKUSR, Checking Password Validity

This command now allows you to check the password validity of users. The maximum number of days before an alert is generated must be specified in the new PWDDLY parameter.

9.6   CTCHKMMXDG, Added parameter APYPRC

New parameter added to this command to monitor that the change application process is running correctly.

9.7   CTWRKMSG, Possible generic names for jobs and users

In the definition of a message ID to be considered, it is now possible to use generic names to indicate a job name or user profile name.

9.8 CTMENU, Changing the layout of some options

The message control and library management menus have been separated into 2 different sub-menus (options 13 and 14 of the main menu).

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10 New features 17/02/2022

Version for Documentation = 3.14

10.1 New version of the plugin

A new version of the plugin is delivered. This version allows to compare the partition time with the monitoring server time with the CTCHKTIM command.
The upgrade of the plugin on the monitoring server is not mandatory as long as the CTCHKTIM command is not used. The old version can continue to be used.
For PRTG, it is recommended to upgrade the plugin because au bug was fixed in case of negative values.

10.2 CTCHKTIM, New time control command

This new command allows to compare the partition time with the monitoring server time.
It requires that the new version of the plugin is installed on the monitoring server, and that the "-v V02" parameter is used when calling the plugin.

10.3 CTWRKMSG, Increasing the number of occurrences of actions

The maximum number of occurrences of automatic actions for messages is now 999,999 (instead of 999), with the option to specify *NOMAX. This allows automatic actions to be set up for messages generated in large numbers by system jobs, on partitions that are only rarely shut down.

10.4 CTWRKMSG, Text Comparison with the Second level of Messages

In the definition of a message ID to be monitored, it is possible to search for a text in the message. It is now possible to compare this text with the second level (the help) of the message.

10.5 CTWRKMSG, Renaming of definition groups in scenario

The message 'definition groups' are renamed to 'scenarios', for clarity, and for compatibility with the old AXWAY XOC product, which Control for i can replace.

10.6 CTWRKMSG, Bug in automatic actions

2 bugs fixed in the input of automatic actions linked to messages.

10.7 CTCHKMSGQ, Adding the list of message IDs

In case of an alert, the list of the first 10 message IDs has been added to the return of the CTCHKMSGQ command.

10.8 CTWRKLIB, *NOCTL option instead of -1

If an item is not to be checked into the library size, the input is now *NOCTL instead of -1, which was neither practical nor natural.

10.9 CTCHKOBJ, New command

This new command allows to check that an object exists, and to check that its size does not exceed a set limit.

10.10   CTCHKCERT, password not displayed

The parameter containing the password was displayed and kept in the job history.
It has been made invisible.

10.11   CTCHKDSK, performance data change

A new RETTYPE(*PERFDATA) parameter allows a new message format with more information in the performance data.

10.12   CTADDKEY, Adding keys from a file

For users with a large number of partitions, M81 can provide a file containing the license keys for all partitions.
A new parameter in the CTADDKEY command allows the key to be read from this file.

10.13   Fixed several minor bugs

Fixed an error that occurred when the alert message was very long
PRTG, Fixed plugin when there is a negative value
CTCHKDSK, Fixed calculation of disk space evolution after V7R3
CTDSPALR, Searching for text in the message list was not working anymore.

11 New features 22/11/2021

Version for Documentation = 3.13

11.1 CTCHKPRB, New STATUS parameter

This new parameter allows you to select the type of problem to be taken into account by the command.

11.2 CTCHKIFSNF, case sensitive filename

The new parameter CASESEN allows you to select whether the case used in the file name should be respected for the control.

11.3 CTCHKCERT, Checking the existence of the certificate and adding details

In some cases, no error was generated if the certificate store did not exist. This is fixed.

The detailed list of expired certificates is added to the job log. This allows, in case of timeouts, to use the command in an interactive session to get detailed information.

11.4 Automatic restart if there are more than 150,000 checks

The number of threads performed by the CTAGENT job is limited to 200,000. In order to prevent the agent from crashing, a restart is performed automatically once 150,000 threads (or services triggered from Nagios) are reached. The new RESTART parameter allows you to specify the time that the restart will take place.

11.5 Enabling/Disabling Data Collection for M3

The new CTM3CHGCOL command allows you to enable or disable data collection for M3. This avoids error messages generated by data extraction when the M3 GRID or ServerView is stopped.

11.6 Changes to the CTCHKDSK command

If the requested ASP does not exist, a critical error message is generated.
From V7R3 onwards, the total amount of disk space was sometimes incorrect. This has been fixed.

11.7 Error with PreStarted Jobs

In some cases, if one of the Prestarted Jobs (PJ) was suspended or stopped, no more checks with thread-incompatible commands were performed.
This has been fixed.

12 New features 24/06/2021

Version for Documentation = 3.12

12.1 iTera, 2 new commands to monitor iTera

The new commands CTCHKITAST and CTCHKITADL now allow to monitor the replication from iTera.
They are based on the internal monitoring done by the product.
The iTera audits are the same as in Mimix. Use the command CTCHKMMXAU to monitor the iTera audits.

12.2 Errors in a new version of PRTG

Starting with PRTG version 21.1.66, the performance data contained in the messages without unity are not interpreted correctly by PRTG (contrary to what the PRTG documentation says) and generates a JSON interpretation error.
All Control for i messages have been checked and/or modified so that all performance data has unity.

12.3 M3 Controls, Adding Authentication

The definition of M3 servers in the CTPARAM command has been changed to allow the authentication info to be specified on the GRID or ServerView server

13 New features 25/03/2021

Version for Documentation = 3.11

13.1 CTWRKMSG, Possibility to analyze BRMS messages

In the message analysis module, added the possibility to analyze BRMS messages (DSPLOGBRM command) in addition to the 3 existing origins (*MSGQ, *JOBLOG and *QHST).
Available starting with V7R2, with PTF

13.2 CTCHKBRM, Adding the name of the last volume

The name of the last volume used during the BRMS backup is added in the return message of the CTCHKBRM command

13.3 CTCHKPING, Add Round Trip data

Add Round Trip information in the return message of the CTCHKPING command

13.4 Correction of several minor bugs

- Interception of the MCH0601 message by the agent at startup
- Interception of CPF4102 message by the CTAUTO job if a QHSTxxxx file is empty
- Correction of actions of type *PGM2 in actions related to messages
- Wrong return code in the PRTG plugin in message mode (not in JSON mode)
- Keyword PWDEXP(*NO) when creating user profiles during product installation
- CTCHKMMXDS, Taking into account very large values

14 New features 10/09/2020

Version for Documentation = 3.10

14.1 Better consider accents and special characters

The accents and special characters (£, #, …) were not well handled by the product. This point is fixed.

14.2 New parameter in the MSGQ actions

In the management of MSGQ, when defining an action that will be performed when a message is received, the new type *PGM2 has been added. It sends the same information as the *PGM type, plus the data associated with the message. This makes it possible to carry out more targeted actions.

15 New features 20/07/2020

New version for Documentation = 3.09

15.1 New CTCHKSYSST command, System status

This new command allows to monitor the information provided by the system command WRKSYSSTS

15.2 New command CTCHKCFGST, Check configuration status

This new command allows to check the status of the communication elements (lines, controllers and devices).

15.3 Modification of the limits for CTCHKCPU

The maximum CPU utilization rate was 999%. This value has been increased to 9,999%.

15.4 CTCHKMSGW/LCKW, List of sub-system names increased from 10 to 100

For the 2 commands CTCHKMSGW and CTCHKLCKW, it is now possible to indicate a list of 100 subsystem names to be included or omitted, instead of 10 previously.
It is also possible to enter generic names.

15.5 CTCHKEDH, Allows the control of delay and non-synchronous objects without checking if the environment is started.

It is now possible to specify the value *ANY for the parameter STATUS. This makes it possible to check for large replication delays, or unsynchronized objects, without the environment to be started.

15.6 CTCLEAR, Statistical Data Cleansing added

Library size and disk % used statistics cleanup added to CTCLEAR command

15.7 PRTG plugin, taking into account decimal values

The specific plugin for PRTG did not take into account the decimal values in the graph data. It only took into account the integer part. This point is fixed.

15.8 NBCHKIFSNB, Several additions to this command

It is now possible to control the files contained in subdirectories.
It is also possible to check the age of the files, and to generate an alert if the files contained in a directory (and its sub-directories, if any) were created some time ago. This time can be calculated in minutes, hours or days.
The messages have been modified to add performance data, which allows to automatically generate graphs in Nagios.

16 New features 29/05/2020

New version for Documentation = 3.08

16.1 New command CTCHKBRMDP

Added the new CTCHKBRMDP command to check the tape duplications (DUPTAP) made by BRMS.

16.2 New command CTCHKCERT

Added the new CTCHKCERT command to check the validity date of certificates.

16.3 CTCHKJOBQ, Adding status of the jobs

It is now possible to indicate the status of the jobs (SCD, HLD, RLS) that will be counted.

16.4 CTCHKOUTQ, Adding status of the OUTQ

A new parameter allows to check the status of the OUTQ (RLS or HLD), in addition to the status of spools.

16.5 Improvement of the version change process

The internal functioning of the CTRSTPRD product restore command has been improved to avoid any risk of data loss during a version change.

16.6 Limited version of Control for i available in V6R1

The Control for i product can now be installed on a V6R1 partition with some limitations compared to the standard product (starting with V7R1).
- Some commands are not available
- The agent doesn't use Threads.

An explicit request must be made to M81 to obtain this version.
New features will not be available in this version.

17 New features 30/03/2020

New version for Documentation = 3.07

17.1 New command CTCHKJOBDU

Added the new CTCHKJOBDU command to generate an alert if jobs have been active for too long.

17.2 CTCHKBRMEX Command, Adding Location

The name of the location of the volumes has been added to this command.
This makes it possible to check the number of expired volumes for a media class, and at a particular location.

17.3 New CTCHKBRMFC command

Added the new CTCHKBRMFC command to check the status of the FlashCopy function in BRMS. This option is part of the BRMS Network option, and is used when backups are made with BRMS by creating a "clone" of disks using FlashCopy or Snapshot. For example with the Flash for i product.

17.4 CTCHKOUTQ command, Adding status of the spools

It is now possible to indicate the status of the spools (RDY, HLD, SAV, ...) that will be counted.

17.5 CTM3CHKBCH command, Adding a users list

It is now possible to select between 1 and 10 users under which the jobs did run.

17.6 CTM3GETJOB control, accepting several GRID versions

Depending on the version of M3 or Grid, the list of information is not the same.
Several versions are now accepted.

17.7 Performance data in Nagios

Due to a change in the previous release, performance data was no longer available in Nagios.
This has been restored.

17.8 Fixes for minor bugs

CTCHKLCKW, Fixed a bug that included system tasks in the jobs list.
CTCHKDSK, Taking into account disk spaces of more than 10TB
CTDSPLIB, Adding this command in the menus
CTWRKMSG, Searching for a text in a message was case sensitive (upper/lower case). This is no longer the case.
Parameter IPLIST, Checking the list of allowed Nagios servers didn't work properly.

18 New features 17/09/2019

New version for Documentation = 3.06

18.1 Support for Zabbix and PRTG

2 new plugins are delivered to support the Zabbix monitoring tools (which works slightly differently from Nagios) and PRTG (under Windows).

18.2 New Unknown state in case of communication error

A new parameter in the plugin allows you to obtain a Unknown state instead of Critical in Nagios in case of a network problem, or if the agent does not respond.

18.3 New library size control module

A new module allows to control the size of libraries, and to follow their evolution.
The CTWRKLIB command allows you to enter the list of libraries to be checked as well as the size and number of objects from which an alert will be generated, and the maximum rate of change.
The collection of library size and number of objects is done automatically (programmed in the actions (CTPARAM command) every day.
The CTDSPLIB command allows you to view the data collected and its history.
The CTCHKLIBSZ and CTCHKLIBEV commands can be added to Nagios controls to generate an alert when the defined limit values are exceeded.

19 New features 31/05/2019

New version for Documentation = 3.05

19.1 Excessive CPU usage for CTAGENT

In some cases, when the agent was starting (subsystem CONTROL4I), the job CTAGENT used a lot of CPU. This has been fixed.

19.2 New command CTWRKMSG to work with message control definitions

The CTWRKMSG command is used to define the controls to be performed on the MSGQ, QHST and JOBLOG. This definition was done before with the CTPARAM command, then select the parameter CTCHKMSGQ.

19.3 System Log Messages Control

It is now possible to generate alerts based on the messages from the system log (DSPLOG or QHST). These alerts are managed with the same method as for MSGQs, with the CTWRKMSG and CTCKMSGQ commands.

19.4 Ability to enable / disable controls for a message group

The new CTCHGMSGST command allows you to enable or disable controls for a message control definition. It therefore enables the analysis of messages with a command in addition to the modification using CTWRKMSG.

19.5 Bug fixed in command CTCHKBRMEX

Control of the number of available tapes for BRMS did not work.

19.6 Different way of working for MIMIX controls

MIMIX controls are not compatible with Threads. In some cases, if 2 DataGroup control commands were run at the same time in 2 different threads, it stopped the agent.
These controls are now done by separate jobs.

19.7 Selecting States that Cause an Alert in Mimix Audits

Mimix audits can be in 14 different states. It is now possible with the command CTPARAM then CTCHKMMXAU to choose for each state if it is a normal condition or an error.

19.8 Fixes for minor bugs

For following commands
- CTCHKBCH
- CTCHKSBS
- CTM3HSTSTS

20 New features 12/12/2018

New version for Documentation = 3.04

20.1 New auto-reply function to messages

The MSGQ check now allows to reply automatically to messages

20.2 New solution to avoid accent problems (in French version)

In the French version, there are often problems of accents conversion between the IBM i partition and Nagios. The messages of the product may now be replaced by a version without accents.

20.3 Changes in documentation

New chapter explaining how to initialize the JSON extraction and conversion (only for M3 checks)

20.4 Fixes for minor bugs

21 New features 29/10/2018

New version of the product = 3
New version for Documentation = 3.03

21.1 New version of the product : V03

Look at the specific memo to upgrade the product from version 1
No special instruction to upgrade from version 2

21.2 No change for the plugin

The plugin to install on Nagios server has not changed in this version. It's not necessary to upgrade it. It's the same plugin as the on in version 2.

21.3 New menus

The menus displayed by command CTMENU have been changed to include the new commands.

21.4 New module to check MSGQ and JOBLOG

A new module allows to check Message queues (MSGQ) and Job logs.
A new parameter in CTPARAM command is available to enter the definitions of messages to check.
The new command CTCHKMSGQ can be used in Nagios to check the number of messages that have generated an alert.
The new command CTDSPALR displays the list of alerts, and allows to validate them.

It's possible to analyze the log of an active job.

21.5 New command CTCHKIFSNF

The new command CTCHKIFSNF counts the number of files in an IFS directory, and generates an alert if the number is too big or too low.
It's possible to use generic names for the files in the directory.

21.6 New command CTCHKOUTQ

The new command CTCHKOUTQ checks the number of spool files in an output queue.

21.7 New command CTCHKDTAQ

The new command CTCHKDTAQ checks the number of entries in a data queue.

21.8 New commands to check M3 (MOVEX)

Ability to read JSON format used by the last version of GRID server in M3.
New parameter to activate/deactivate automatic extraction of data from the GRID.
New commands to check M3. They are based on data sent by the ServerView, or by the GRID. Those commands are compatible with M3 version 13.

CTM3APPERR	Check applications errors (thru GRID)
CTM3APPSTS	Check applications status (thru GRID)
CTM3APPWRN	Check applications warnings (thru GRID)
CTM3CHKBCH	Check if batchs have run
CTM3G_JOB	Check CPU and activity level of M3 jobs (thru ServerView)
CTM3G_NBAJ	Check number of autojobs (thru ServerView)
CTM3G_NOD	Check Nodes status (thru GRID)
CTM3G_SVC	Check Services status (thru GRID)
CTM3HSTSTS	Check Hosts status (thru GRID)
CTM3JOBQ	Check number of jobs in JOBQ
CTM3JOBSTS	Check jobs status (thru ServerView)

21.9 Check for MIMIX

New command CTCHKMMXAU to check MIMIX audits
Improve command CTCHKMMXDG

21.10 CTCHKDTAA, Returns content of DTAARA in the message

If the content of the data area is different than expected (and passed in CTCHKDTAA command), the resulting message now contains the Data area content.

21.11 CTDSPLOG and CTDSPSLOG, display messages second level

Those 2 commands display a list of messages. Option 5 displays the detail of the message.
This option now displays the second level of the message.

21.12 Several license keys available

It's now possible to enter up to 6 license keys for Control for i product. This allows for example, on a production partition, to enter the license key of the local production partition, and another key for a DRP partition.
During a switch over to the DRP partition, it's not necessary to enter the new license key.
The first validated key (within a maximum of 6 keys entered) is used.
Use the commands CTADDKEY and CTWRKKEY to manage those keys.

21.13 Necessary to choose language during install

When installing or upgrading the product (command CTRSTPRD), it's now necesseray to choose the language (English or French).

21.14 Excessive CPU usage for CTAGENT

In some cases, when the agent was starting (subsystem CONTROL4I), the job CTAGENT used a lot of CPU.
This has been fixed.

21.15 Fixes for minor bugs