Enhancements & Fixes for Halcyon IBM i Product Suites Network Server Suite and specialist products

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The Experts in Systems Management

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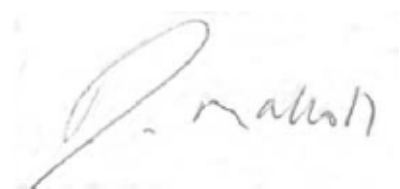*Support:* *technicalservices@halcyonsoftware.com*

Foreword

By Donnie MacColl, Technical Services Director

This update covers product enhancements and fixes between April and June 2013 for all Halcyon IBM i Software Suites, Network Server Suite and specialist products.

These update notifications are intended to provide customers with the technical release information of all the latest product enhancements and fixes of our software so you can decide if you need to, or wish to, upgrade from your current version of Halcyon Software to a newer version.

Information contained in these documents is aimed at technical analysts, administrators and operations staff responsible for the maintenance of our software on their own systems or their client's IBM i (iSeries) systems.

These release notes will also assist with change and version control by providing the information and reasons as to why an upgrade is required.

Donnie MacColl

About Donnie MacColl

Prior to becoming Director of Technical Services at Halcyon Software Ltd, Donnie MacColl has worked for more than 20 years in the IT industry. He first specialized in the management of IBM i systems, (iSeries, AS400), in general manufacturing and logistics companies. Later on in his career Donnie was Network Manager for one of the largest telecommunications corporation in Europe.

He is regular speaker at international IBM events, including IBM Common in Europe and the USA, as well as the Interaction Conference in Australia.

Donnie specialises in advising companies on how to keep a tight control on the management of operations, critical processes, and core services across increasingly complex infrastructures and multi-platform environments.

He has worked with many industry sectors in his time at Halcyon Software to help improve cost efficiencies by implementing solutions in large European and US data centers in companies such as Computacenter, Parker Hannifin, Cap Gemini, Getronics, Logica, BGL Group (Budget Insurance), Arcadia and SunGard Public Sector.

Halcyon IBM i Product Suites

The following product suites are covered within this document:

Level 1   Message Management Suite

Our entry level suite for the IBM i. Closely monitor all your system messages, key applications and critical business processes.

Featuring:
- Message Monitoring
- FTP Monitoring
- TCP/IP Monitoring
- Output Queue Monitoring
- Device Monitoring
- Job Queue Monitoring
- SLA Reporting

Level 2   Systems Operations Suite

Monitor your IBM i system messages and automate the control of significant events.

All the features, of the Message Management Suite, plus:
- Object Monitoring
- Performance Monitoring
- Distribution Queue Monitoring
- User Profile Monitoring
- Inactivity Monitoring
- Audit Journal Monitoring
- Restricted Tasks Management

Level 3   Advanced Automation Suite

This level enables you to optimize performance, disk space and spool file management on your IBM i.

All the features of the Systems Operations Suite, plus:
- Performance Management
- Performance Snapshots GUI
- Disk Space Management
- Disk Space Explorer GUI
- Spooled File Management

Level 4   Operations Center Suite

Raise your operational control to the ultimate level. Contains all the functionality of the previous levels 1 to 3, plus the most advanced job scheduler available today.

Our flagship software suite contains all the features of the previous three suites, with the addition of:
- Advanced Job Scheduling

Halcyon Network Server Suite

Halcyon's Network Server Suite has been designed to provide a comprehensive monitoring solution to keep a close eye on all your critical servers, applications and devices across a multi-platform environment including Windows®, AIX® and Linux®.

Authority Swapper

Authority Swapper allows a user to temporarily swap to a different profile that typically has additional authorities so that they can complete a specific task. Record screens used during a swapped session for auditing purposes.

Task Supervisor

Task Supervisor is a unique, simple and cost-effective solution that enables organizations to list, organize and view all essential tasks in one, centralized location, minimizing the risk of business disruption and human error.

How to use this document:

This publication is split into two chapters:

- Product Enhancements
- Product Fixes

Each of these chapters is then split in the following order:

- **Common Library**

   These are enhancements and fixes that affect all products suites from Level 1 (Message Management Suite) through to Level 4 (Operations Center Suite).

- **Specialist Products** (listed alphabetically)

   These are enhancements and fixes that affect individual products which are contained as modules in one or more of Halcyon's Product Suites.

   For example, an enhancement to Audit Journal Manager is only applicable to Level 2 (Systems Operations Suite), Level 3 (Advanced Automation Suite) and Level 4 (Operations Center Suite).

- **Individual Change Reference**

   Each enhancement and fix is prefixed with a CHGxxxx reference, where xxxx represents a combination of numbers and letters. Within both the Common Library and Specialist Product sections, each enhancement or fix is then listed in numerical and then alphanumeric Change Reference order.

Finding information in this PDF

From within Adobe® Acrobat® Reader®, use either the Search window (accessible from menu options; Edit |Search) or the Find toolbar (shown far right in the image below) to search document content.

Type the text that you wish to use for the basis of the search and press Enter.

We recommend using the CHG reference ID number (for example; CHG03RS), if known, within the Search or Find parameters as this text is unique within the document.

Need to confirm which Halcyon Products you have installed?

If you are unsure which Halcyon products you have installed on your system, type the following command onto the command line within your Halcyon environment:

DSPPRDINF

Alternatively, from within the Halcyon product menu, select option 70=Technical Information Menu followed by option 1=Display Product Information.

If you are still unsure, please contact: technicalservices@halcyonsoftware.com

Enhancements and Fixes

IBM i Product Suite Enhancements

The following enhancements have been made to Halcyon IBM i Product Suites between April and June 2013, covering releases IBM i: 2013.122 to IBM i: 2013.176.

Common Library – Action Monitors

Reference: CHG05TX   Action Monitors now prioritise specific Actions

To enhance performance of alert processing, Halcyon Actions have been assigned in to two internally assigned Categories: Primary and Secondary. The Primary Action Monitors only pick up and process Primary Actions. The Auxiliary Monitors process Primary or Secondary Actions.

The Primary Actions are;
- CLOSE
- CONSOLE
- DELETE
- EMAILSPLF
- EMAILSTMF
- EXTLOG
- HLDRULE
- REPLY
- RLSRULE
- RSTRULE
- SNDMSG
- SNDTXT
- SNMPTRAP

The Secondary Actions are;
- ARCHIVE
- COMMAND
- CPYOUTQ
- CPYSPLF
- CPYTOSTMF
- EXPORT
- RUNSCRIPT

Common Library – Action Schedules

Reference: CHG02MG   Action Schedules can now be exported

You are now able to export Actions Schedules using the EXPACTSCH command and export Call Schedules using the EXPCALLSCH command.

Reference: CHG057D   New substitution variable replaces *ACTSCH special value

New Substitution Variable &DFTALRTXT (Default Alert Text) has been made available as a replacement for the *ACTSCH special value.

When used in an Action within a Rule it returns the first level Alert text. When used in an Action within an Action Schedule it returns the text defined in the 'Default alert text' parameter on the Action that invoked the Action Schedule.

Please Note
On upgrade, all existing Actions currently using the *ACTSCH special value are changed to the new &DFTALRTXT Substitution Variable. The *ACTSCH special value has been deprecated.

Common Library - Alerts

Reference: CHG05MZ   User created programs can now be called when an Alert is closed

It is now possible to call a user created program when a local system Alert is closed. This is controlled by new system default HAL/ALTCLOSEEXITPGM. If this default is set to *NONE, then no program is called. If set to a program name, the program is called every time a local system alert is closed with the following parameters passed;

*DEC 9   Alert ID of the alert that was closed.

*CHAR 1   The method used to close the alert.

*CHAR 20   The user who closed the alert. If the alert was closed from an IBM i system, this is the user ID of the user who closed it. If the alert was closed from a PC Enterprise Console, this is the PC logon name of the user who closed it.

*CHAR 8   If the alert was closed by a remote Halcyon environment, this is the remote location name of that environment as defined on the local environment.

*CHAR 32   If the alert was closed by a PC Enterprise Console, this is the PC name of the system on which the Enterprise Console was running.

Common Library – Authorization Codes

Reference: CHG056A   Authorization Code Expiry no longer warns if another valid code available

The warning messages sent when Authorization Codes and Maintenance on Authorization Codes are about to or have expired have been changed. Previously, you would get a message for each Authorization Code with an issue. Now, you only get a message when a Product has an Authorization or Maintenance issue across all Authorization Codes.

Common Library - Customized Environments

Reference: CHG05O1   IBM Service Monitoring customization templates are now available

IBM Service Monitoring Customizations, containing 103 TCP/IP and 128 Performance Monitor templates are now available.

Common Library – Job Queues

Reference: CHG05ND   Job Queue *JOB type rules now allow *FIRST within 'Job name'

Job Queue *JOB type rules now allow *FIRST to be specified for the 'Job name' parameter.

Common Library - Languages

Reference: CHG05OC   HAL /SYSCCSID is automatically set to 5026 if *JPN selected on install

A new installation with the language set to *JPN, automatically sets system default HAL/SYSCCSID to 5026.

Common Library – Maintenance Mode

Reference: CHG05V2   'Maintenance mode' added to lock down Environment

Halcyon now has the ability to prevent changes within an Environment via a new 'Maintenance Mode'. Maintenance Mode is switched on and off via the new 'Set Maintenance Mode' (SETMNTMDE) command within the HALPROD library.

The 'Set Maintenance Mode'" (SETMNTMDE) command has a parameter to allow you to end the Monitors using one of the following;

*MNT   End all Monitors EXCEPT the Action, Network Receive and Network Send Monitors. This is the default value.

*ALL   End ALL Monitors.

*NONE   Do not end any Monitors.

When Maintenance Mode is switched on, a reverse image red 'Maint Mode' is shown on the right hand side on Halcyon menus. No changes are allowed within the environment other than by 'Import Environment' (IMPENV) and Exports from other systems and environments. As such you are only allowed to start the Network and Action Monitors. All other Monitors will refuse to start.

Common Library – Message Console

Reference: CHG05PW   Command added to allow clearance of the Message Console

The ability to clear the green screen Message Console has been added. New command CLRMSGCON has been made available for this purpose.

Important
CLRMSGCON deletes the messages from the Message Console. It does **NOT** close the corresponding Alerts.

Common Library – Network Messages

Reference: CHG05QL   Network error messages such as Broken Pipe can now be suppressed

System default HAL /NETDIAG has been modified to allow more control over the messages raised by the Network Monitors. HAL/ NETDIAG now supports three values;

*HIGH   Logs error and diagnostic messages plus additional operational messages such as port allocation and de-allocation messages. It is recommended you only use this value when experiencing network problems.

*NORMAL   Logs error and diagnostic messages. This is the default value.

*LOW   Logs error messages.

Common Library - Output Queues

Reference: CHG05TT   Alerts can now be raised based on spooled file age in hours

Output Queue Monitor now has the ability to Alert based on spooled file age in hours. Within a *SPLF Type Rule, a new parameter for whether the specified age is in Days or Hours is now available.

Common Library – Remote Locations

Reference: CHG05K7   Remote Locations handshake enhanced so Enterprise Console failures are logged

A *PC Remote Location, that also had a Halcyon GUI product installed, would not show as 'Failed' and also would not add a message to the Halcyon Message Log when Enterprise Console was not responding. It would simply show as 'Idle'.

Now, if Enterprise Console has been detected on the *PC Remote Location, as listed within the 'Applications detected' section against the *PC Remote Location, the Status is set to 'Failed' and the following message is added to the Halcyon Message Log if no response is received from the Enterprise Console (where RMTLOCNAME is the name of the Remote Location);

```
HAL0393 - Remote location RMTLOCNAME no longer communicating.
```

It is therefore possible to use Halcyon 'Admin Alert Criteria' (WRKADMALT) to have this message forwarded to the Admin Message Queue defined in system default HAL/ADMINMSGQ, typically QSYSOPR, and then use Message Monitor to Alert if this message is received.

Reference: CHG05LR   Communications between *i5s can now be encrypted

It is now possible to encrypt the communications between *I5 Remote Locations for data sent and received by the Network Monitors.

To enable this, the 'Data encoding' parameter on an *i5 Remote Location now allows a value of *ENCRYPT. Please note that this only applies for outbound communications to the Remote Location. To ensure encryption both ways, you must also set this value for the Remote Location on the Remote System.

Reference: CHG05MT   New values are shown for the Remote Location 'Status' column

The 'Status' column within Work with Remote Locations (WRKRMTLOC) has been revised to show enhanced statuses.

Common Library – User Authority

Reference: CHG05TS   System default added to remove automatic *ALLOBJ Authority to Halcyon
Previously, a user with *ALLOBJ authority on their IBM User Profile was allowed to perform any function within Halcyon, except manage Authority Swapper functions for their own User Profile, regardless of their Halcyon authority.

New system default HAL/AUTHMODE has been introduced which allows you to control this with the following options;

0   Users with *ALLOBJ authority are NOT allowed to perform any Halcyon function without specific authority within Halcyon to do so.

1   Users with *ALLOBJ authority ARE allowed to perform any Halcyon function, except manage Authority Swapper functions for their own profile, even if they do not have specific authority to do so within Halcyon. This is the default value.

Please Note
A user profile with *ALLOBJ and *SECADM authority is always able to access 'Work with User Authority' (WRKUSRAUT). However, these authorities must be on the actual signed on user as they are ignored if you have Swapped to a user with these permissions, using Authority Swapper for example, in order to ensure users do not Profile Swap and then alter their own user authorities.

WARNING
Once you set system default HAL /AUTHMODE to zero, it takes effect immediately. This can mean that you block yourself out of the Environment if you do not have specific authority for your User profile within Work with User Authority (WRKUSRAUT) and you therefore cannot change the system default HAL/AUTHMODE back as you are not authorized. If this happens you can sign-on as a user with *ALLOBJ and *SECADM authority and access Work with User Authority (WRKUSRAUT) to then add specific authority within Halcyon for the relevant user.

Advanced Job Scheduler

Reference: CHG0585   HOLDOVERDUE can now be specified at Environment/Group level

Advanced Job Scheduler now allows you to specify whether to hold an overdue at Group and Job Environment level. On Page 6 of a Group (WRKGRP), new parameter 'Hold if overdue' is now available which allows the following values;

*DFT   Establish whether this Group should be held if overdue from the Job Environment. This is the default/shipped value.

*NO   Do NOT hold this Group if it is overdue.

*YES   Hold this Group if it is overdue.

On Page 8 of a Job Environment (WRKJOBENV), new parameter 'Hold if overdue' is now available which allows the following values;

*NO   Do NOT hold the Group if it is overdue.

*YES   Hold the Group if it is overdue.

Please Note

These changes make system default HJS/HOLDOVERDUE redundant. As such it is removed on upgrade with the old value migrated to the new areas.

Reference: CHG055L   Applications can be defined and assigned to Groups

Advanced Job Scheduler now includes the ability to define Applications which can be assigned to Groups.

The Advanced Job Scheduler Configuration Menu (HJSCFG) has been updated so that menu option 3 is now 'Work with HJS Applications' (WRKHJSAPP) and subsequent options 'Work with Job Environments' and 'Work with Group Partitions' changed to menu options 4 and 5 respectively.

The Application can be used from F17=Subset when taken from within 'Work with Groups' (WRKGRP) and 'Work with Schedule' (WRKSCH) to only show the Groups for that Application.

New commands have been made available to allow you to Lock (LCKAPP) and Unlock (UNLAPP) Applications.

New commands have also been made available to allow you to Hold (HLDGRPS) and Release (RLSGRPS) Groups using the Application.

Reference: CHG057L   Up to 12 'Run Times' can be specified on a Group

Work with Groups (WRKGRP) now allows you to specify up to 12 'Run Time' values.

Reference: CHG05AG   New 'Calendar mode' allows you to set an inverse calendar for Group/Job Schedule

Advanced Job Scheduler now includes 'Calendar mode' on a Group and Job which allows you to set whether the Group/Job should run on the dates within the Calendar (Normal) or on the dates that are NOT in the Calendar (Inverse).

Reference: CHG05MF   F17=Subset now allows *ALL for 'Job type' parameter

Work with Groups (WRKGRP) within F17=Subset now allows you to specify *ALL for 'Job type'. This means you can subset across all Groups/Jobs. This is particularly useful when combined with a generic 'Job data' value (i.e. *generic*).

Reference: CHG05OI   Changes around use of CHGSYSLIBL for Capture Mode

Advanced Job Scheduler Capture Mode (STRCAPMODE) utilises the IBM CHGSYSLIBL command to allow it to ensure the Halcyon commands/programs are picked up in preference to any others so that the capture works correctly.

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However, IBM recommend that access to use of this command should be restricted but this then meant Capture Mode would fail as it was unable to use this command. Capture Mode uses a QSECOFR adopted program for the specific purpose of adding and removing the required Halcyon libraries via the CHGSYSLIBL command.

Reference: CHG05O3   Event Condition Program enhanced to allow a variable to be passed

Advanced Job Scheduler now allows you to pass a parameter to a Custom Condition Program specified on a Job. A new field 'Parameter value' has been added as part of the Custom Condition Program specification. The value for 'Parameter value' is passed to the program when called as the 6th parameter. The following values can be specified for 'Parameter value';

*NONE   No value is passed at all. This behaves as previously. This is the default value.

*BLANKS   A new parameter is passed, as the sixth parameter, to the Custom Condition Program, with a value which is blank.

value   Specify a value, up to 32chars in length, that is passed, as the sixth parameter, to the Custom Condition Program.

Please note that substitution variables cannot be used in 'Parameter value'.

Reference: CHG05S6   Change in error handling if user not authorized to condition program

The Advanced Job Scheduler Control Monitor (HJSCTL) would fail if it attempted to call a Custom Condition Program, Custom Event Program or Group Initializer Program to which the user running the Monitor was not authorized.

This has been enhanced. Now, for a Custom Condition Program or a Group Initializer Program, the Group/Job goes to INQW Status. For a Custom Event Program, an error is logged and the relevant event held.

Reference: CHG05SG   Tool added to convert Legacy HRP Jobs to New Generation HRP Jobs

Advanced Job Scheduler now includes a tool to change Legacy Record & Playback PLAYSSN Jobs to New Generation Record & Playback RUNHRPSCR Jobs. This is available via the new 'Convert HRP Commands' (CVTHRPCMD) command.

This command updates any Groups using the HRP400/PLAYSSN command to a HRPPROD/RUNHRPSCR command.

Reference: CHG05TP   Groups can be held or released by date/time range for *ALL

Advanced Job Scheduler now includes two new commands which allows you to hold or release multiple Groups on the Schedule by use of a date/time range;

HLDGRPS   Hold Groups. You can specify a single Group or *ALL. You can also specify a date/time range from and to.

RLSGRPS   Release Groups. You can specify a single Group or *ALL. You can also specify a date/time range from and to.

Reference: CHG05UZ   Group description can now be used as a searchable field in F17=Subset

Work with Groups (WRKGRP) now allows you to Subset using the 'Group description' parameter. This parameter, within 'F17=Subset' also supports the use of wildcard values.

Reference: CHG05WP   *ALL can now be specified on LCKGRP/UNLGRP commands

Advanced Job Scheduler 'Lock Group' (LCKGRP) and 'Unlock Group' (UNLGRP) commands now support *ALL for the Group parameter.

Audit Journal Manager

Reference: CHG05FZ   Service Tools (ST) rules allow special value *MCHCTX for Object Library
Audit Journal Manager ST (Service tools) Rules now allow you to use special value *MCHCTX for 'Object library'. This also applies when using 11=Omit against an Audit Journal Manager ST Rule Alert within Work with Alert Log' (WRKALTLOG).

Disk Space Manager

Reference: CHG05OT   Current and deleted files record count amended

Disk Space Manager now caters for files with a record count for current or deleted records above 2,147,483,648 records.

Document Management System

Reference: CHG05NK   Warning made clearer when hardcopies required and Headers set to *NO

The warning message displayed within Work with Recipient Lists (WRKRCPL) for setting Bundle or Segment Headers to *NO when hard copies are required has been re-worded to;

```
Warning! Headers recommended on Hard Copies. Change or press Enter to
ignore.
```

Reference: CHG05O7   Run Bundle now errors if no Recipient List present on Bundle of any Segments

Run Bundle (RUNBDL) now gives an error when a Bundle is run that does not have a Recipient List on the Bundle or any of the Segments;

```
HEM0975 - No recipients defined for bundle BUNDLENAME or any segments.
```

**Reference: CHG05QG   Bundles now allow Segments to only include spooled files created since
                         last run**

Run Bundle now includes a parameter for the 'From time" for the archived spooled files to be included. This field accepts special value *LASTRUN which will run the Bundle only against archived spooled files with a created date/time, not archived date/time, later than the last archived spooled file included on each Segment the last time the Bundle was run.

Reference: CHG05RS   The analyzing of archived spooled files within Run Bundle is more efficient

There have been efficiency improvements to the process which analyzes archived spooled files for use in Bundles.

Reference: CHG05SM   Work with Bundles no longer shows the status or allows Run

Work with Bundles (WRKBDL) as per menu option 3 from the Spooled File Manager Configuration menu, no longer shows the Bundle or Segment Status or allows you to run a Bundle. This means that the option is now solely used for configuring Bundles and offers a massive performance improvement.

The status and ability to run a Bundle is still available within WRKBDL *USER, as per menu option 12 on the Spooled File Manager menu for Display Bundle Status.

Reference: **CHG05TJ   Option '5=Display' is now available within Work with Bundles *USER mode**
Work with Bundles (WRKBDL) for *USER mode, as per menu option 12/HEMHSM, now includes option '5=Display' to display a Bundle.

HA-MX Monitor

Reference: CHG05G1   Attribute description has been added to Work with MIMIX Status display

Work with MIMIX Status (WRKMMXSTS) now includes a new function key (F11) that when pressed, shows the description for each Attribute.

Reference: CHG05OA   Up to 16 Data Groups can now be specified using Select/Omit

Work with Rules (WRKRULES) for HA-MX Rules now allows you to specify up to 16 Data Groups in the selection criteria.

Message Manager

Reference: CHG05OL   Prefix and/or suffix generic values are now allowed within rules

Message Manager rules now allow you to specify a prefix and/or suffix generic value (i.e. *generic*) for the following values;

- Job name
- User name
- Program name

Reference: CHG05LN   Highlight invalid Select/Omit criteria on Rules

Work with Rules (WRKRULES) now highlights Select/Omit criteria in Message Manager Rules which are invalid.

Reference: CHG05UA   List Message Rules report now includes rule actions

The Lists Message Rules (LSTMSGRUL) report now includes a basic list of actions for the rules.

Reference: CHG05W6   Send Test Message – Option added within Verify Rules to show scoring

Verify Rules (SNDTSTMSG > F15) now has option 8=Scoring available for use against a listed Rule. This will show a list of the "Scores" attributed to the Rule that determined which order the Rule got processed. Rules are processed by highest to lowest score.

Object Monitor

Reference: CHG05QB   Object *DIR and *IFS type rules now allow alerts based on size

Object *DIR and *IFS Rules now allow you to specify 'Comparison' and 'Size and UOM' parameters. For a *DIR Rule this is the total size of all the objects, excluding sub-folders, within the Directory/Folder. For an *IFS Rule this is the size of each object within the Directory/Folder.

Reference: CHG05V0   'SLA statistic' functionality added

Object Rules have been enhanced to include a new 'SLA statistic' parameter.

If set to *YES then the rule is checked on every cycle of the Object Monitor and a flag set to say whether the Rule was triggered or not. This occurs even if the Rule is suspended because of an Alert and is only ignored if the Rule is Held.

A History is built up of each check. This information is then used within Performance Analyzer Performance Reporting. However, it can be viewed within the Performance Analyzer Display Statistics and shows as a simple 0 or 1 flag denoting whether any rules with 'SLA statistic' set to *YES were triggered.

Performance Analyzer

Reference: CHG05OB   Job Queue details are now available on Work with Job History display

Work with Job History (WRKJOBHST) now registers, where possible, the Job Queue from which the job originated. This can be shown by using new function key 'F11=JobQ'.

Reference: CHG05OG   Timestamp fields for job details has been added to file HEMPMH

The Work with Job History (WRKJOBHST) file, HEMPMH, has had fields added to store the various dates/times in date stamp format. This is so that user written reports that access the file directly can perform age based calculations.

Performance Monitor

Reference: CHG05E4   New 'Function type' and 'Function name' parameters added to *JOB rules

New parameters 'Function type' and 'Function name' have been added to the Select/Omit criteria on Performance *JOB Rules. This allows selection based on the first and second part of the 'Function' as shown against jobs.

Record & Playback

Reference: CHG059A   Number of supported parameters for running a script increased to 255

Record & Playback now supports up to 255 parameters for Run HRP Script (RUNHRPSCR).

Reference: CHG05RB   Messages can now be sent from within Record & Playback Scripts

Record & Playback Scripts now allow you to send a message using new function; Send Message (SNDMSG). SNDMSG has two formats to allow you to send specific text or to send a message defined within a message file;

SNDMSG msgq, msgtext
SNDMSG msgq, msgid, msgf, msgdata

Examples;
SNDMSG QSYSOPR, 'Playback operation was successful. '
SNDMSG QSYSOPR, USR1234, 'QGPL/USRMSGF', AAAAAAAAAA

Reference: CHG05TC   Screen shots can be captured and sent via email

Record & Playback now has the ability to capture a screenshot via use of new function:

`%SCRNDUMP()`

This function outputs a bitmap image to the IFS as defined System Default HRP DMPDIR and then returns the full path to the image - which can therefore be assigned to a variable;

e.g. `&PATHTOSCRN = %SCRNDUMP().`

Reference: CHG05U3   Cursor position is now included as part of a Bitmap screenshot

Record & Playback now includes an indicator of where the cursor was positioned when you take a screen dump to a bitmap image using %SCRNDUMP(). The cursor position is shown as reverse image highlighting on the row/column on which the cursor is positioned.

Reference: CHG05VG   Iteration within FOR…NEXT loop functionality added to Scripting

Record & Playback scripting now includes new function; ITER. ITER can be used within a FOR...NEXT loop to process the next Iteration without processing any of the statements after the ITER up to the NEXT statement.

Restricted Tasks Manager

Reference: CHG05KE   Batch Timeout can be overridden at Group level

Restricted Tasks Manager Groups (WRKTSKGRP) now have parameter 'Batch mode time limit' available on Page 4. This value, determined in minutes, specifies the maximum time for which the Group can run in Batch Mode. Valid values are;

*SYSDFT   Use the value from the System Default HRT/BCHTIMLMT. This is the default/shipped value.

*NOMAX   No time-out.

value   Specify a value from 5mins to 9999mins (166hrs 39mins) that is the maximum run time for the Group.

Reference: CHG05RG   Copy Task Group (CPYTSKGRP) command added

Restricted Tasks Manager now includes a Copy Task Group (CPYTSKGRP) command.

Spooled File Manager

Reference: CHG043E   Spooled File Scripting enhanced to support expression evaluator

Spooled File Manager Scripting has been enhanced as follows;

Scripting previously treated every variable as 378 in length and treated values as ending at the end of the non-blank characters. This has been changed. Scripting now supports variable length fields including trailing blanks/spaces. This means that function %LEN now returns the correct length including any trailing blanks/spaces.

As an example;

Previously %LEN could see no difference in length for the values 'A' and 'A '. Now it will correctly return different values for %LEN.

This change means that if your script is dependent on the length without the trailing blanks/spaces you need to add the %TRIM function as part of the %LEN to remove the trailing blanks/spaces;
```
%LEN(%TRIM(&NAME))
```

Complex Expression Evaluation
Scripting now supports complex expression evaluation up to a maximum length of 1024chars. Previously you could only use simple evaluation;
```
&C = &A + &B
&D = &C * 10
```

Now, you can combine these evaluations in to a single statement;
```
&D = (&A + &B) * 10
POSITION 1, &Y +5, &X + 2
&A = %SUBST(&C,&S+5,&L-1)
```

This also applies to string manipulation (e.g. *CAT) and within an IF statement;
```
IF (&X = 1 OR &X = 2 OR &X = 3) AND (&Z <10 OR &Z >= 20) THEN
```

Reference: CHG05E6   Subset Template now allows a generic* value for Job User

Work with Subset Templates (WRKSUBTMP) now allows a generic* value for 'Job user'.

Reference: CHG05LC   CSV templates can be defined for use against spooled files

Spooled File Manager now has the ability to define a CSV Template which can be applied to a spooled file in order to convert it to CSV format.

Work with Report Types (WRKRPTTYP)
Work with Report Types now includes new option 30=Change CSV Layout. This option allows you to define how a spooled file, that matches the Report Type parameter 'Report identification elements', is converted to CSV.

There are three possible ways to convert a spooled file to CSV format;

*AUTO   Halcyon Spooled File Manager will attempt to automatically identify columns and convert to CSV. If the spooled file does not only include columned data then the resulting CSV is likely to be one column of the entire line.

*USER   You define a template of how to extract the columns.

*SCRIPT   Use a Spooled File Manager script.

Change CSV Layout - *USER
For the *USER CSV Layout Option, you can define the 'line from' and 'line to' that are to be processed as well as defining each column to be extracted with an appropriate column heading.

There are two ways in which to define the column layout;

Table view: This is the initial view shown. It is a list from where you define the values for;

- **Pos** The starting column for the CSV column.
- **Len** The length of the CSV column value.
- **Attr** The attribute of the data within the CSV column. This defines the data type expected to be in the column such as *DATETIME, *DEC or *ANY. Use "F4=Prompt" for a full list of possible values.

Column Heading: This is the text to be used as the column heading for the CSV column.

- **Report view**   Having selected a spooled file, this presents a display of the selected spooled file whereby you can use mouse clicks to define the CSV columns. Clicking the mouse at the first position for a CSV column displays a popup window allowing you to define the details for the column as per 'Table view' above.

Reference: CHG05LQ   **Work with Archived Spooled Files Subset allows only 'Job name' to be specified**

Work with Archived Spooled Files (WRKARCSPLF) now allows you to Subset just using the 'Job user' parameter without the need to also specify the 'Job name' and 'Job number'.

Reference: **CHG05N1**   **Hyphens (-) are now allowed within Report Type Names**

Spooled File Manager Report Types (WRKRPTTYP) now support using a hyphen within the Report Type Name.

Reference: CHG05UM   **Iteration within FOR…NEXT loop functionality added to Scripting**

Spooled File Manager scripting now includes new function; ITER. ITER can be used within a FOR...NEXT loop to process the next Iteration without processing any of the statements after the ITER up to the NEXT statement.

Reference: CHG05UN   **Scripting – Comments can be added to right of statement**

Spooled File Manager scripting now allows comments to be added to the right side of statements. The comment must be prefixed with a semi-colon (;) as shown in the example below;

```
FOR &COUNT = 1 TO 100 ; Count from 1 to 100
```

Reference: **CHG05V8   Copy Spooled File can now be submitted to batch**

Copy Spooled File (CPYSPLF) now includes additional parameters to allow you to submit the copy to batch and provide a Job name to ensure the job name is correct against the newly created spooled file.

TCP/IP Monitor

Reference: CHG05OF   Up to 35 TCP/IP Auxiliary Monitors can now be specified

You are now able to have up to 35 TCPIP Auxiliary Monitors. The number of Monitors to be used is controlled by the system default HMM/ TCPAUXMON.

Authority Swapper Enhancements

The following enhancements have been made to Halcyon Authority Swapper between April and June 2013, covering releases IBM i: 2013.122 to IBM i: 2013.176 and GUI release 2013.134.

Authority Swapper

Reference: **CHG05HZ   Display Screen Capture now allows left/right positioning**

Display Screen Capture within an Authority Swapper Session now allows you to move left/right using new 'F19=Left' and 'F20=Right' function keys.

Reference: CHG05II   'Zoom' facility added to Display Screen Capture within the GUI

The Authority Swapper GUI now has the ability to zoom in and out of Screen Captures.

Reference: CHG05M0   Authority Swapper GUI is now compatible with Google Chrome

The Authority Swapper GUI is now compatible with Google Chrome.

Network Server Suite Enhancements

The following enhancements have been made to Halcyon Network Server Suite (Unicode Edition) between April and June 2013, covering release 2013.176.

Network Server Suite v9.0 (Unicode)

Reference: CHG05RX   Fully Qualified Domain Name (FQDN) can be used for device addresses

NSS Version 9 now supports the use of Fully Qualified Domain Names (FQDN) for the Device address.

Task Supervisor Enhancements

The following enhancements have been made to Halcyon Task Supervisor between April and June 2013, covering release 2013.100.

Task Supervisor

Reference: CHG05MO   Who completed task added to reporting & reporting retention settings
The Task Supervisor History report has been modified to show the name of the user who cancelled/completed/failed/started a task.

Reference: CHG05N3   Copy function added to provide ability to copy tasks

A 'Duplicate' function has been added to the Task Supervisor context and Action menus, for all items other than Users.

Reference: CHG05NE   New Tasks are now sorted by time

Adding new Tasks within Task Supervisor now sorts by time .

Product Suite Fixes

IBM i Product Fixes

The following fixes have been made to Halcyon IBM i Product Suites between April 2013 and June 2013, covering releases IBM i: 2013.122 to IBM i: 2013.176.

Common Library – FTP Monitoring

Reference: CHG05G0   ***UPGRADE now correctly restarts *FTP if *CTLFTPMON specified**

Under some circumstances, an upgrade with *CTLFTPMON specified to control FTP Monitoring would not restart FTP Monitoring correctly. This could result in FTP not being active and/or not responding. This has been fixed.

Common Library – Import Environment (IMPENV)

Reference: CHG05VX   ***NONSYS now imports user script files (QSCRIPTS)**

Import Environment (IMPENV) was not importing the user scripts files such as QSCRIPTS for a *NONSYS import. This has been fixed.

Reference: CHG05WA   **Check introduced for QGPL being locked on remote location**

Import Environment (IMPENV) will now trap errors relating to library QGPL being in use on the remote machine.

Common Library – Substitution Variables

Reference: CHG05SY   **Substitution Variable for *DATE now correctly converts to *DEC 15,5**

An attempt to use a Substitution Variable which was to set to return the date as *DEC 15,5 would fail. This has been fixed.

Advanced Job Scheduler

Reference: CHG05RC   **Interval Job now continues as expected when 'G' specified on Group**

In certain situations, an Advanced Job Scheduler Interval Group with On Interval Error of 'G' (Go) specified, did not get its next occurrence scheduled to run if an error occurred. This has been fixed.

Reference: CHG05RD   **Interval Group now runs when run-time is less than current time**

Advanced Job Scheduler now runs an Interval Group, at the next interval, if the next scheduled run time is set to before the current time when the Monitors are started.

Document Management System

Reference: CHG05KO   GUI: AFPDS control characters no longer appear in displayed spooled file

In some archived spooled files the Document Management System GUI was showing AFPDS control characters. This has been fixed.

Reference: CHG05MG   Single character generic entry available for Report Type within Subset

Work with Report Types (WRKRPTTYP) would not list anything if you attempted to Subset (F17) using a wildcard with only 1 character (e.g. A*) for the Report Type Name. This has been fixed.

Reference: CHG05OM   Run Bundle produces output for all Segments

In certain situations, Run Bundle (RUNBDL) was not running all Segments within the Bundle. This has been fixed.

Reference: CHG05P2   Run Bundle now actions the distributions set on Segments

Run Bundle (RUNBDL) was not performing the distributions specified on the assigned Recipient List within Segments. This has been fixed.

Reference: CHG05T3   Segment now correctly combines output into one PDF

Run Bundle (RUNBDL) was incorrectly generating a spooled file, and stream file if requested, per input archived spooled file for a Segment when it should only ever output one which combines all the inputs. This has been fixed.

Reference: CHG05TH   Bundle output to *STMF with *ADDSEQ now generates a valid name for use in QDLS

Run Bundle (RUNBDL) would generate a file name too long for use in QDLS if the Recipient List sent a *STMF to QDLS and the '&BDLSTMF' Substitution Variable was used to name the file within the 'Path' with *ADDSEQ for 'Stream file option'. This has been fixed.

Reference: CHG05UH   Work with Bundles now available after upgrading

Work with Bundles (WRKBDL) would fail if you upgraded from a release dated prior to 2013 to the latest release. This has been fixed.

Reference: CHG05UW   Run Bundle processes all segments if an optional segment does not produce output

Run Bundle (RUNBDL) would incorrectly stop running a Bundle if an Optional Segment did not produce any output. This has been fixed.

Reference: CHG05VJ   Required Segment *YES no longer reports error condition with *CURRENT and *PREVIOUS Multi-Copy Actions

Run Bundle (RUNBDL) was incorrectly showing an error that the Bundle had failed when a required Segment for multiple copy archived spooled files produced output but not for all the selected archived spooled files. This has been fixed.

Reference: CHG05VR   Run Bundle not showing as failed when no output for Required Segment *YES

In certain situations work with Bundles (WRKBDL) was not showing an error when a Bundle run failed. This has been fixed.

Reference: CHG05VT   Run Bundle no longer allows run of "Active" Bundle

Work with Bundles (WRKBDL) no longer allows you to run a Bundle that is in Active status.

Reference: CHG05X6   GUI: New users can now logon without error

In certain situations the Document Management System GUI would error when new users attempted to logon. This has been fixed.

Message Manager

Reference: CHG02WL   Verify Rules now only shows one line per Rule

For reasons of clarity, Verify Rules (SNDTSTMSG > F15) now only shows one line per Rule.

Reference: CHG05QZ   Messages sent at 23:59:59 are now included on the message log

Message Manager was not picking up messages sent in the tenths of seconds after 23:59:59. This has been fixed.

Reference: CHG05VU   Message now generated if no message queues are set to be monitored

The Message Manager Monitor now logs the following message to the Halcyon Message Log if no message queues are set to be monitored.

```
HMM0063 - Message monitor closed down because no message queues are
being monitored.
```

Performance Monitor

Reference: CHG05UD   *JOB Rule now alerts for all specified Jobs

In certain situations a Performance Monitor *JOB Rule was only Alerting for the first 12 Jobs specified. This has been fixed.

Restricted Tasks Manager

Reference: CHG05UY   ENDSYS routine changed to forcibly end SysRq1 alternate sign-on

Restricted Tasks Manager Console would fail to complete the ENDSYS phase if a SysRq1 had been used for another sign-on on the Console terminal as it would not end the job.

This has been fixed. Now, the alternate sign-on under SysRq1 will be forcibly ended and then the ENDSYS phase started.

Spooled File Manager

Reference: CHG05LS   **Users with 'limited capabilities' assigned can now retrieve archived spooled files**

Work with Archived Spooled Files (WRKARCSPLF) was not allowing a Limited Capabilities user to retrieve an archived spooled file. This has been fixed.

Reference: CHG05ME   **Work with Archived Spooled File F22=Print no longer truncates Output Queue name**

F22=Print, when taken from Work with Archived Spooled Files (WRKARCSPLF), would incorrectly truncate the output queue to 7 characters.

Reference: CHG05U5   **Generic values including hyphen (-) can now be specified in Report Types Subset**

Work with Report Types (WRKRPTTYP) was not allowing you to subset using a wildcard value if the value also included a hyphen (-). This has been fixed.

Reference: CHG05UX   **Archive subset now allows *ALL for Job / Job User / Number**

Work with Archived Spooled Files (WRKARCSPLF) was not allowing *ALL in the Job fields within F17=Subset. This has been fixed.

Authority Swapper Fixes

No fixes have been made to Halcyon Authority Swapper between April and June 2013.

Network Server Suite Fixes

No fixes have been made to Halcyon Network Server Suite between April and June 2013.

Task Supervisor Fixes

Task Supervisor

Reference: CHG05N4   **Hyperlink function now opens documents**

In certain scenarios the Task Supervisor would not open a hyperlink to a document. This has been fixed.

************************************REPORT ENDS********************************