

Rocket Aldon Lifecycle Manager for IBM i Housekeeping Recommendations

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Introduction

The goal of this paper is to document a list of areas where companies can keep LMi running at top efficiency by removing outdated and no longer useful information.

The steps listed below are suggestions only.

Each LMi Administrator should carefully evaluate whether or not the suggestion makes sense for their company, decide what parameters to pass and how often to run. If there is a question, please contact Rocket Technical Support before taking any action.

Important Notes:

- Unless otherwise noted, this document is valid for LM(i) versions through 7.5x and higher.
- The prefix for LM(i) created libraries is determined by the value of data area ACMSCTL/UTLNAMPFX on the host and ACMSRCTL/UTLNAMPFX on the remote. If the data area is blank, the prefix is “Z_”. This document assumes that “Z_” is your prefix. If your prefix is different, you’ll need to substitute your prefix in wherever you see “Z_”
- It is strongly suggested that complete backups of LMi be made on a frequent basis, especially before any housekeeping-type functions are run.

Backing up LMi

While LM(i)'s programs don't change very often, its database files change frequently and are critical to your business. All of LM(i)'s libraries should be included in your backup and recovery planning.

Actions:

- On the LM(i) Host System:
 - Backup ACMSCTL, ACMSRCTL and LMWPCTL* every day.
 - Back up all controlled libraries for all LMi release every day. (See LMi Main Menu Option 11: Setup, Option 12: Work with Libraries)
 - Back up all developer's development libraries every day. (See LMi Main Menu, Option 11: Setup, Option 7: Work with Developers, F21: Print)
 - Backup ACMSLIB, ACMSRLIB, ACMSUSER, LMILMIPDN1 and LMWPLIB* once a week.
 - Backup IFS directory, sub-directories and files in /Aldon every week.
- On the LM(i) Remote Systems:
 - Backup ACMSRCTL every day.
 - Backup ACMSRLIB once a week.
- (* If you have Ops Portal)

Purge Development History Log

Every action taken in LMi (e.g. checkout, promote, deploy, etc.) is written into the Development Log. You may wish to purge out records that are older than a certain date.

Actions:

- Take Option 7 Display Log from the LM(i) Main Menu
- F13 to purge earliest records through a specified date

Purge Deployment Log

All actions performed on a deployment set are logged into the Deployment Log file. You may wish to purge out records that are older than a certain date.

Actions:

- Option 6 Deployment menu from the LM(i) Main Menu
- Option 3 Display Deployment log
- F13 to purge earliest records for specified date

Clear Obsolete Conflicts

Conflicts are placed by LM(i) on objects to communicate some information to the users such as that multiple checkouts happened on this object. If this information is no longer useful, it can be deleted.

Actions:

- Take Option 4 Conditions menu from the LM(i) Main Menu
- Option 1 Work with conflicts
- F17 to filter as desired
- Option 2 against conflict(s) to clear
- Note: F13 to repeat is available on this display

Remove Obsolete Requests and Conditions

Requests document when a user asks permission to checkout, promote and deploy. Conditions are informational messages from LM(i) such as asking a user to acknowledge that an emergency checkout was performed. If this information is no longer useful, it can be deleted.

Actions:

- Take Option 4 Conditions menu from the LM(i) Main Menu
- Option 2 Work with requests and non-conflict conditions
- Option 4 against request(s) and/or condition(s) to remove
- Note: F13 to repeat is available on this display

Verify Target Libraries

The goal of this task is to run the verification report to compare what is in your live production libraries against what the LMi Inventory thinks should be there. LMi will highlight exceptions such as objects that were changed in live production that were made outside of LMi, objects in live production that do not exist in LMi, objects in the LMi inventory that do not exist in live production, and objects in live production whose version id does not match the version ID in LMi. The first time you run this, you can expect many pages of exceptions, especially if you've never had a formal ALM process in place until now. Going forward, we would recommend that you run this report once or twice a month to keep the number of exceptions, and the time to resolve them, at a more manageable level.

Actions:

- LM(i) Main Menu, Option 6: Deployment
- Option 2: Work with Targets (note, use option 2, not option 13)
- F17 filter. Change Release, Application and Group to *ALL and "Deployments from Environment" to '1: Production Only'

- Identify which Targets deploy to the live production libraries that you want to verify.
- Take option 9: Verify
- For your initial run, change “verify for low severity errors” to N, select all verify edits and submit the job to batch. Once you see what kinds of exceptions are reported, you can adjust your future runs to be more inclusive or less inclusive, as desired. Note: you may get a great many “E: Version Number” errors, especially if you have just started using LMi to deploy to this target. This is because LMi creates the version number in the inventory on the LMi host system when the release is activated, but if that object has never been deployed to the target, the target object will have a version number of blanks. This is not necessarily an error.
- Once you get your parameters and targets figured out, you can program this via the ACMSVFYTG command that is in ACMSLIB.

Finish Old Tasks

The goal of this task is to “hide” tasks that are no longer active, e.g. finished, completed, done, cancelled, abandoned, etc. This does not delete the task; it merely sets a flag so that future views of “active” tasks will not show it. You can always change your filter to view finished tasks as well. Regardless of the status of the task, the historical information remains forever in the log files for reporting.

Actions:

- LM(i) Main Menu Option 5: Tasks
- F17 to filter to all releases, all applications, all groups.
- F17 again if you want to select on any other information, e.g. task status.
- F11 until you see the “Date Opened” column
- Option 10: Finish on any task that you deem a candidate to be finished.

Remove Un-needed “Create Non-Resident” Items

The goal of this task is to remove “Create Non-Resident” versions from your controlled QUA and INT libraries that are no longer needed for compiling and testing. These are items that were created as “recompile only” to help test out a change to other items in the task. For example, say a developer changed PFA and PGMA for task ABC1234. When they promoted it to ITG, they told LMi to select as *CRTNONRES all of the objects dependent on PFA, so LMi created LFB, LFC, PGMB and PGMC in the I or Q environment by compiling them from the source in production (create from source that is not resident in I or Q). Depending on how you have LMi configured, when the developer promotes their task up to PDN, the *CRTNONRES items may not be deleted. After a time, these become clutter at best, confusing and incorrect at worst.

Actions:

- LM(i) Main Menu Option 1: Work with Objects by Release

- F17 to filter to all releases, all applications, all groups, and developer = *CRTNONRES
- Use Option 30: Display Log to see who touched it last and when. Consult with that person about removing it.
- To remove it, use Option 4: Delete and *very carefully* select either I or Q depending on what you want to remove.

Delete or Finish Old/Obsolete Deployment Sets

After a certain amount of time, deployment sets have lost their usefulness. Finishing the set creates a special status that “hides” the set from the default view. Deleting the deployment set permanently removes it from the visual list. Both options delete any save files created during extraction. Neither option deletes records from the activity or deployment log file. Neither option deletes the original copies of the objects in LM(i) controlled libraries.

Actions:

- Take Option 6 Deployment menu from the LM(i) Main Menu
- Option 1 Work with Deployment Sets
- F17 to filter as desired
- Option 4 to delete set or 10 to finish them
- Note: F13 to repeat is available on this display

Clean Up Incomplete/Failed Deployment Sets

In order to successfully deploy changes, LMi creates unique libraries for the set. When the set completes normally, most of these libraries are deleted. If the set does not complete normally, the libraries remain in place on the target machine until the set is finished normally or they are purged. Depending on the objects that were in the set, and how many unfinished sets remain, these libraries can consume a large amount of disk space, extend your backups, extend future LMi upgrades, and so on.

Actions:

1. LM(i) Main Menu, Option 6: Deployments
2. Option 1: Deployment Sets
3. F17 to filter to all releases, all applications, all groups. Filter to Status = *NOTCMP.
4. Now you will need to research why this set did not complete. You should take various actions on the set depending on why it did not complete, the age of the set, and whether or not the set's objects have been deployed by a later set.
5. Take Option 31 to display the log for the set. See what the last successful step was, what failed and when.

6. Run the following command to view the spooled files for the set. In this example, assume the set number is 0000107: `WRKSPLF SELECT(ALDONCMS *ALL *ALL 0000107*)`. Depending on where the set failed, you may need to run this command on the LMi Host and/or the LMi Remote. See if you can find clues why the set did not complete.
7. If the set is recent, you may be able to fix what went wrong and then try the installation again by taking option 16: Install, on the set. This picks up the set from where it last was successful and takes it the rest of the way through installation.
8. Get a list of the objects in the set by taking Option 5: Display on the set, then Option 2: Display Objects. Note the release, the environment, the object, the type, the attribute and the version.
9. For each object in the set:
 - a. From the Work with Objects by Release, take option 30: Display Log on the objects.
 - b. Press F11 until you see the columns for Act Code, Deployment Set and Location.
 - c. Determine if this object has subsequently been successfully deployed by another set.
10. If all of the objects in the set have been subsequently deployed by other sets, you can safely remove the set
 - a. LM(i) Main Menu, Option 6: Deployment
 - b. Option 1: Deployment Sets
 - c. Option 18: Delete Restore Library
 - d. Option 10: Finish. This cleans up related save files and changes the status to “finished” so it is hidden from most displays. The set remains in the system and in the history.
11. If some of the objects have been subsequently deployed but some have not, the safest bet is to redeploy all of the items again. This will take the current copy of all objects and redeploy them. Those that are already current will get replaced with the same version and those that are not will get updated to the current version.
 - a. LM(i) Main Menu, Option 6: Deployment
 - b. Option 1: Deployment Sets
 - c. Option 3: Copy on the set you want to redeploy.
 - d. If there are any objects that you do NOT want to redeploy (e.g. files with data), take option to “Select Objects” and de-select them with Option 4: Remove from Set.
 - e. Fill in the desired parameters on the Auto-Start Deployment Set menu and submit the set.
 - f. Once this set has completed normally, return to the original set and do an 18: Delete Restore Library and a 10: Finish as described above.

Less Frequent Housekeeping Tasks

Delete Items Downloaded/Created for New Installation

When you install any of the Rocket Aldon solutions, you download and create various installation files. Once you have confirmed that your software is up and running, you may safely remove these items to save on disk space and confusion later when it is time to upgrade. If you followed the recommended steps when you installed, these are the items that you can search for to remove:

- Zip files and installation instruction documents that you downloaded from the Rocket Customer Portal to a PC.
- Copies of the ISO image that you FTP'd over to the IBM i Host System's IFS. Look in directories such as '/home/InstallImages' (that's *Install* followed by *Images*) for the files to remove.

Delete old Backup Libraries from Past Upgrades

When you upgrade LM(i), it protects the prior version of its libraries by renaming them. They are not deleted after an upgrade in case you want to restore back to them. After your upgrade is confirmed to be successful, you can remove them.

Actions:

- Search for libraries named Z_Xnnnnnnnn or Z_Unnnnnnnn
- Back them up.
- Delete them.

Delete Orphaned Temporary Libraries

There are various types of libraries that start with "Z_" (excluding Z_X and Z_U, which are upgrade libraries, see "deleting old backup libraries from past upgrades"). Normally, LMi cleans these up automatically unless it runs into an issue while performing an action in the product. When an issue is encountered and the process does not complete successfully, these libraries will not be automatically cleaned up by the process and will need to be manually removed. All of these libraries are a result of something not finishing correctly. As long as the job that generated these temporary libraries has completed and if no further troubleshooting remains to be done, these libraries can be manually deleted (refer to the below list for examples of temporary objects).

For example:

- Z_CL libraries are temporary archive work libraries created during deployment installs
- Z_CR libraries are temporary work libraries created during creates and promotes
- Z_GN library are temporary work libraries created during a verify

- Z_IN libraries are temporary work libraries created during deployment installs
- Z_PC and Z_PD libraries are additional temporary work libraries that can be removed if there are no unresolved processes pending
- Z_WH libraries are work libraries built by Windows Harmonizer. They can be removed if no comparisons are being done.

Actions:

- Search for libraries which begin with “Z_” (but not Z_X or Z_U)
- If they are in the list above, determine if they were created by ALDONCMS.
- If so, back them up and delete them.

Delete Orphaned Temporary Objects

There are various types of objects that start with “Z_”. Normally, LMi cleans these up automatically unless it runs into an issue while performing an action in the product. When an issue is encountered and the process does not complete successfully, these objects will not be automatically cleaned up by the process and will need to be manually removed. All of these objects are a result of something not finishing correctly. As long as the job that generated these temporary objects has completed and if no further troubleshooting remains to be done, these objects can be manually deleted.

Examples of temporary objects that can be deleted include:

- Z_RP objects are program objects that are moved to QRPLOBJ on the remote.
- Z_SC objects are temporary objects used during installation
- Z_SD objects are temporary copies of objects that are being replaced by load.
- Z_SI objects are temporary objects used during installation

Delete *DTAQ objects in library ACMSCTL

These objects can be deleted as long as there are no LM(i) promotion or deployment batch jobs currently submitted or executing. These *DTAQ objects are only used to communicate from the interactive to the batch portion of a submitted job.

Examples include:

- Z_AD work DTAQ for ACMSADDAPP
- Z_AV work DTAQ for ACMSOBJSCN
- Z_CR work DTAQ for ACMSCHKOUT
- Z_GN work DTAQ for ACMSVERIFY
- Z_LP work DTAQ for ACMSOBJSCN
- Z_OB work DTAQ for ACMSCREATE
- Z_PO work DTAQ for ACMSPROMOT
- Z_SR work DTAQ for ACMSOBJSCN

Delete Deployment Staging Libraries

As a deployment set works its way through the six steps from start on the Host system to completed on the target, LMi creates ACMS#Oxxx and/or ACMS_xxx staging libraries, where “xxx” are the last three characters of the deployment set. The description of the library contains the name of the full deployment set number. When a set completes normally, these libraries are deleted.

Actions:

- Search for libraries named ACMS#Oxxx and ACMS_xxx
- Determine the deployment set number.
- Examine that deployment set. Can it be finished? Deleted?
- If so, back up the library.
- Delete it.

Remove Deployment Sets Records on Remote Systems

On the remote system, there is not a way to purge the "old" deployment set records. The records in the files listed below can be reviewed and then deleted for "old" deployment set numbers that were Finished. The field “DSTCTL” contains the set number. After deleting records from the file, reorganize them with RGZPFM.

Actions:

- Files to explore in ACMSRCTL on the host (for local deployments) and on the remotes (for remote deployments):
 - RMTCMD
 - RMTCNVOPT3
 - RMTSETOBJ3
 - RMTSETTGT2
 - RMTSET2
 - RMTTGTLIB2

Purge Deployment Reports

You can configure LM(i) on the remote systems to send their deployment reports back to the LM(i) host. Old reports can be deleted. These are stored in the IFS directory on the host here: Aldon/AldonLMi/Reports/Deployments.

Actions:

- WRKLNK '/aldon/aldonlmi/reports/deployments'
- Use F17 to position to. Note you can position to the top or the bottom of the list.
- Look for directories with the name “Setnnnnnnn” where “nnnnnnn” is the set number.
- Option 8 to see when it was created.

- Option 5 to see the reports in the directory (set)
- The object name field contains
 - The type of report
 - The set number if a deployment
 - The date/time stamp when the spooled file was created
- Option 5 to view the report
- Option 4 on the set DIR to delete all reports for that set.

Reorganize LM(i) Files

A reorganization of the files should be done based on volume and usage of LM(i). This job can be scheduled for overnight or on weekends.

Actions:

- RGZPFM FILE(ACMSCTL/....)
 - ARCPINS
 - ATVLOG
 - DPLLOG
 - FILEINFO
 - MBRINFO
 - NTFN
 - PFINFO
 - PGMINFO
 - PINSXASM
 - PRTDEF
 - PRTDEP
 - PRTFINFO
 - PRTINS
 - PRTXASM
 - TSK

Delete Unwanted LM(i) Demo Releases

When LM(i) is installed, you have the option of restoring several demonstration/sample releases. If you do not need these releases any longer, you may safely delete them. If you ever want them back, you can rerun the installation routine to just restore those items. ALDON/LMIDEMO/BASE is a good one to keep around, even if you are no longer training in LMi. It's a good place to experiment on objects that aren't your bet-the-business source and objects!

Actions:

- LM(i) Main Menu, Option 13: Work with Releases
- For any release that you want to delete, take option 5 to display and write down that release's controlled libraries.
- Take option 4 to delete the release.

- Delete the libraries.

- List of Demonstration Releases:

Application	Release	Level	Text
=====	=====	=====	=====
ADOM/DEMO	BASE	BASE	ADOM Demonstration
ALDON/JDECOMMON	A73	BASE	JD Edwards Release A73
ALDON/JDEMODS	A73	BASE	JD Edwards Release A73
ALDON/LMIDEMO	BASE	BASE	Vendor Base Release
ALDON/PACKAGE	MODS	01	Local Mods to Vendor Release
ALDON/SITE	CORPORATE	BASE	Base Release
ALDON/SITE	LA	01	LA Modifications
ALDON/SITE	NY	01	New York Modifications