

MDCMS User Express Help

Change and Distribution Management for IBM i

Midrange Dynamics

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1. MDCMS User Express Help

This is the MDCMS User Express Help for Change and Distribution Management from Midrange Dynamics. This reference document is intended for developers using MDCMS within a 5250 emulator. The complete User Guide is available [here](#)

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You can download a PDF version of this guide [here](#).

This guide is comprised of these sections:

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1.1 MDCMS overview

MDCMS is a tool that runs directly on the IBM i (iSeries, AS/400) to handle the modification and distribution of objects.

The life cycle for object modification/distribution is as follows:

1. The objects are requested for modification from the application's test or production environment. The source code is then copied to the programmer's library.
2. The modifications are made to the source code within the programmer's library.

Or

1. The objects are requested for migration from a delivered library.
2. Any modifications are made within the delivered library.
3. MDCMS compiles the source code and installs the source code/objects into the test environment. The prior source code or objects are archived.
4. If higher-level environments exist on the system, the modification requests are automatically generated.
5. Once testing is complete, the source code and/or objects are installed into the next environment.
6. If working with multiple iSeries machines or partitions, the modification package can be distributed to those systems.
7. The modification package is received on the remote system and installed into the application environments.

1.2 Starting MDCMS

1. From a command line, type MDCMS and press Enter. If there are multiple instances of MDCMS an Environment ID parameter must be passed to the MDCMS command.

1.3 Request an object for modification

1. Select option 2 (Object Manager) from the MDCMS Main Menu and press Enter.
2. Position cursor to a blank detail line in the Opt field with one of the following options:
 - **N** (New Object) - If the object does not yet exist in the installation library.
 - **M** (Modify Object) - If an existing object needs to be modified.
 - **R** (Recompile) - If an existing object should only be recompiled.
 - **D** (Delete Object) - If an existing object is to be deleted.
 - **U** (Update Object) - If an existing object needs to be updated.
3. Input the name of the object in the Object field or press F4 to select the object from a list. Before pressing F4, some, or all, of the Object name may be entered to quickly position to that name in the list.
4. Input the name of the MDCMS attribute for the object or press F4 to select the attribute from a list. If the object has previously been installed via MDCMS, the attribute may be left blank and MDCMS will enter the value automatically.
5. Input the Application code in the Appl field or press F4 to select from list. If the correct application code is entered as the default value in the Appl Group parameter at the top of the panel, the field may be left blank and MDCMS will enter the value automatically.
6. Input the Project ID in the Project field or press F4 to create or select the correct Project, Task, or Subtask. A Project, Task or Subtask may be used as often as needed until the project has been closed. If the correct Project, Task and Subtask value is entered as the default value at the top of the screen, the field may be left blank and MDCMS will enter the value automatically.

Note: An Object Request may be performed without a Project, Task or Subtask value. However, an Installation is not allowed until every Object is assigned to a Project, Task or Subtask.
7. Press Enter. If required, a Copy Options screen will be displayed where the from library and/or to library names can be modified. Press Enter. The source will be copied from the application library into the programmer library that was specified, where it can be modified and unit tested by the programmer. Modifications should never be made to source directly in the installation library.
8. Input an S for Source Entry Utility (SEU) in the Opt field to modify the source member directly in the programmer library or enter P to enter the Programming Development Manager (PDM) for the source member.
9. Each MDCMS attribute will already have a default compilation command defined for it, if applicable. If your object requires special compilation handling or other special Pre or Post install-time commands, enter option C (commands) in the Opt field. Press F6 to add any commands necessary or copy commands that had been used in the past to reactivate them for this modification.

1.4 Migrate objects from a delivered library

If objects are delivered to your system from a vendor, and they require that they be deployed to your production application, those objects may be quickly requested for migration.

1. Select option 2 (Object Manager) from the MDCMS Main Menu and press Enter.
2. Position cursor to a blank detail line and input option L (Library Migration) in the Opt field.
3. Input the name of the Library in the Object field or press F4 to select the library from list of all user libraries. Before pressing F4, some, or all, of the Library name may be entered to quickly position to that name in the list. To select IFS Objects from a directory, enter a "/" followed by a full or partial directory name or place a "/" at the beginning of the Object field to view a list of all directories.
4. Leave the attribute field blank This will be handled as the objects are being selected from the library as instructed below.
5. Input the Application code in the Appl field or press F4 to select from list. If the correct application code is entered as the default value in the Appl Group parameter at the top of the panel, the field may be left blank and MDCMS will enter the value automatically.
6. Input the Application Level in the Lvl field or press F4 to select from list. This field may also be left blank and MDCMS will enter the value automatically based off the Application that was entered.
7. Input the Project ID in the Project field or press F4 to create or select 1 or more Projects, Tasks, or Subtasks. A Project, Task or Subtask may be used as often as needed until the project has been closed. If the correct Project ID, Task and/or Subtask is entered as the default value in the Project, Task/Subtask field at the top of the panel, the field may be left blank and MDCMS will enter the value(s) automatically.

Note: An Object Request may be performed without a Project, Task or Subtask value if the admin has configured the application to not require these on checkout. However, an Installation is not allowed until every Object is assigned to a Project.

8. Press Enter. All objects in the library will be displayed. The filters at the top of the panel can be used to limit the objects to work with. Enter option M (Migrate) before each object that is to be migrated. F13 may be used to repeat the option from the last entered M until the end of the list. Enter option S (Source Members) before source files to migrate and compile source.
9. MDCMS makes a best guess as to what the MDCMS attribute for each Object should be. If a different attribute should be used, enter it in the attribute field or press F4 to select the attribute from a list. F14 may be used to repeat the attribute from where the cursor is positioned until the end of the list for each object with the same object type.
10. Press Enter to request each selected Object for migration. If an Object is flagged as already being reserved, option 5 (view request details) may be entered to get more information about the request.

1.5 Assign objects to a Promotion Package (RFP)

Before requested objects can be promoted to the next level, the objects must be assigned to an RFP (request for promotion). The RFP is a number used to identify the promotion package and is used only once on a system. The Object Manager screen shows the RFP number and RFP Status next to each object request. If the status is 00, then the object is not yet assigned to an RFP. Otherwise, the object is assigned, and the assigned RFP number is displayed. There is no limit to the number of objects in an RFP. The only restriction is that all the objects must exist in the same ASP (Auxiliary Storage Pool).

1.5.1 Create new RFP

1. Select option 3 (RFP Manager) from the MDCMS Main Menu and press Enter.
2. Press F6=Add on the RFP Manager screen.
3. Input all RFP information on the Request for Promotion Number Details screen. Press Enter to save. The RFP number will appear and message 'RFP created' will be displayed at the bottom of the screen. Press Enter again to return to the RFP Manager screen.

1.5.2 Assign individual objects

1. Select option 2 (Object Manager) from the MDCMS Main Menu and press Enter.
2. Input an A in the Opt field for each object to be assigned an RFP number and press Enter. For each object, you will be prompted to select the appropriate RFP from a list.

3. Select an RFP from the list and press Enter or to create a new RFP, press F6=Add on the RFP Manager screen. Input all RFP information on the Request for Promotion Number Details screen and press Enter to save. Press Enter again to return to the RFP Manager screen.
4. Input 1 to select the new RFP for object assignment. Press Enter to confirm RFP assignment selection and return to the Object Manager screen.

1.5.3 Assign an RFP to a group of objects

1. Press F9 (RFP Manager) from the Object Manager panel. On the RFP Manager screen, select the appropriate RFP from a list or create a new RFP.
2. Press F10 (Assign RFP) and the RFP number will be automatically assigned to all open objects in the list with a matching application and level.

1.6 Include related objects in Promotion Package (RFP)

If the MDXREF database has been created for the application, some or all related objects can be requested to be included in installation. For example, if a physical file is modified, all logical files and programs that use the physical file may be requested for modification or recompilation. Or, if the parameters for a program are modified, all programs, commands, menus, etc. that call the program may also be requested for modification.

1. Select option 2 (Object Manager) from the MDCMS Main Menu and press Enter.
2. Input option 1 (Include Related Objects) in the Opt field next to the requested object and press Enter.
3. A list of all related objects is displayed. Enter one of the following options in the Opt field before each object. Press F13 after inputting the option on the first line if the same option should be repeated until the end of the list.
 - **M** (Modify Object) - to request the object(s) for modification.
 - **R** (Recompile) - to request the object(s) that only requires a recompile.
 - **D** (Delete Object) - to request the object(s) that need to be deleted.
 - **U** (Update) - to request object(s) for update.
 - **S** (View Source) - to view the source prior to selecting a request option.
 - **5** (View Request) - to view the Object Request Detail for an object that is already requested for the target location.
4. MDCMS makes a best guess as to what the MDCMS attribute for each Object should be. If a different attribute should be used, enter it in the attribute field or press F4 to select the attribute from a list. F14 may be used to repeat the attribute from where the cursor is positioned until the end of the list for each object with the same object type.
5. After all options and attributes are input, press Enter.
6. For objects selected for modification, a confirmation screen will be displayed where the library information may be changed. Input any necessary changes and press Enter. If an Object is flagged as already being reserved, option 5 (view request details) may be entered to get more information about the request. After returning to the Object Manager panel, Press F5 to refresh the listing.

1.7 Remove objects from a Promotion Package (RFP)

1. Select option 2 (Object Manager) from the MDCMS Main Menu and press Enter. The objects can be removed individually or by every request on an RFP.

1.7.1 Remove individual objects from RFP

1. Input an R (remove object request from RFP) in the Opt field for each object to be removed from an RFP promotion package and press Enter. A confirmation screen will be displayed.
2. Press Enter to confirm or F12 to return to the previous screen without confirmation.

1.7.2 Remove all assigned objects from RFP

1. Press F9 (RFP Manager).
2. Input a 7 (reset RFP to lower status) next to the correct RFP and press Enter. A confirmation screen will appear where the user has the option to return all object requests to status 00 (unassigned) or to delete the object requests entirely.

1.8 Cancel the modification of an object

1. Select option 2 (Object Manager) from the MDCMS Main Menu and press Enter.
2. Input a 4 (Delete request) in the Opt field for each object that should no longer be reserved in MDCMS and press Enter. A confirmation screen will be displayed. If the request is at the lowest level on a machine, you may choose to also delete the source and object from the programmer library. Press Enter.

1.9 Compile a Promotion Package (RFP)

1. Select option 2 (Object Manager) from the MDCMS Main Menu and press Enter.
2. Press F7 (Submit RFP).

OR

1. Select option 3 (RFP Manager) from the MDCMS Main Menu and press Enter.
2. Press F7 (Submit RFP).
3. Select the desired RFP from the list with option 1=Submit and press Enter.
4. The RFP Submission Confirmation - Promote screen is displayed where a submission date and time can be entered and the Job Queue parameters can be overridden. Press Enter to submit the RFP. Job submission information will appear at the bottom of the screen.
5. Press F5 to refresh the screen. If the compile completes successfully the RFP will disappear from the Submit RFP screen once the job is completed.
6. If the compile fails, the RFP Status will be "01E". Input S (Spooled Files generated by RFP) next to the RFP or press F4 on the option line next to the RFP and select S. View the spooled file(s) to determine errors that need to be corrected.
7. Detailed error analysis can also be performed by working with the submitted job (F8=Submitted Jobs from the MDCMS Main Menu or from the Object Manager) and viewing the spooled files for the compilations and job log.

Note: If automatic approval and installation is allowed for the promotion level, the objects will be directly installed into the application environment libraries after a successful submission.

1.10 Approve a Promotion Package (RFP)

This step is only required for application promotion levels that have the Automatic RFP Approval option set to "N" for promotions.

1. Select option 3 (RFP Manager) from the MDCMS Main Menu and press Enter.
2. When approval is required for the promotion level the RFP Status will be 02. Press F8 (Approve) to navigate to the Approve RFP screen.
3. Input option 1 (Approve) to select the desired RFP from the list and press Enter or F4 for additional options.
4. If the promotion level has Auto Install set to "Y", the RFP Submission Confirmation - Install screen will be displayed where a submission date and time can be entered and the Job Queue parameters can be overridden. Press Enter to submit the RFP.

1.11 Install a Promotion Package (RFP)

This step is only required for application promotion levels that have the Automatic RFP Install option set to "N" for promotions.

1. Select option 3 (RFP Manager) from the MDCMS Main Menu and press Enter.
2. Select F9 (Install).
3. Input option 1 (Install/Launch MDRapid) on the desired RFP in the list and press Enter or press F4 to view other options.
4. The Submit Confirmation and Override panel is displayed where a submission date and time can be entered and the Job Queue parameters can be overridden. Press Enter to submit the RFP.

1.12 Send a Promotion Package (RFP) to remote system

1. Select option 8 (Send RFP to Remote System) from the MDCMS Main Menu and press Enter.
2. If necessary, use option O to add or remove Objects in the RFP
3. Enter option 1 (Send) next to the RFP and press Enter. Review parameters in the Send Promotion to Remote System panel and press Enter.
4. If an RFP is to be sent, but is not in the list, press F6 (add). On the Create Send Package screen enter the following information:
 - Application and Level, or F4 to prompt to select
 - Description for the RFP
 - Empty RFP: 'Y' or 'N'= Fill with Install History based on Filters.
 - Filters (If answered N above):
 - Install Date Range
 - RFP Number Range
 - Project
 - Task/Subtask
 - Object Requester
 - Object Library
 - MDCMS Attribute
 - Include RFP Cmd/Scr: N/Y
 - Split DB and Non-DB: N/Y=DB Objects on different RFP than non-DB Objects
 - Non-DB Objs per RFP: 0=all non-DB Objects on same RFP.
5. Press Enter. The new RFP will also be in the list. Repeat prior steps.
6. A message from MDCMS as to whether or not the send could complete successfully will be issued.

1.13 Receive a Promotion Package (RFP) from remote system

1. Select option 9 (Receive RFP from Remote System) from the MDCMS Main Menu and press Enter.
2. Ensure that the Transmitted flag is set to the correct value (1 for SNA, 2 for FTP/Other, 3 for Tape, or 4 for Optical Device). For SNA transmissions, ensure that the Netfile user is the same user that was entered on the sending machine.
3. Press F4 in the MD Filename field to select a promotion package (RFP). Select the RFP with option 1 and press Enter.
4. A message from MDCMS as to whether or not the receipt could complete successfully will be issued. A report will be generated by MDCMS if any objects could not be requested or if dependant objects are missing in the RFP for received files.

1.14 Rollback a Promotion Package (RFP)

Rolling back some or all of the objects in an RFP is only possible if archiving is activated for the application level.

The new RFP generated from this process will delete any new objects, restore any deleted objects, and return all modified objects to their previous versions.

The rollback can be performed directly on a target system if needed, or on the development system and sent to all target systems.

The additional steps for the Compile, Approval, Installation, Sending and Receiving of an RFP can be found above in this document.

1.14.1 Rollback by Object

1. Select option 5 (Object History/Archive) from the MDCMS Main Menu and press Enter.
2. Filter by any of the following options to narrow your search: Application, Level, RFP number, Attribute, Programmer, Project, Task/SubTask, Reason, Minimum and/or Maximum Install Date.
3. Position to the object(s) on the RFP that are to be rolled back and input option 9 (Rollback) next to those object(s) and then press Enter.
4. The Promotion Rollback screen will appear which lists the objects that were on the RFP. Place a 1 before each object to rollback individual objects or press F13 to select all objects in the list. Press Enter.
5. The Submit Confirmation and Override panel is displayed where a submission date and time can be entered and the Job Queue parameters can be overridden. Press Enter to submit the RFP to rollback the objects.

1.14.2 Rollback by RFP

1. Select option 4 (RFP History) from the MDCMS Main Menu and press Enter.
2. Filter by the RFP number and place an R(Rollback) next to the RFP number or Press F4 to select R(Rollback Objects in RFP) on the RFP Manager Options screen and press Enter.
3. The Promotion Rollback screen will appear which lists the objects that were on the RFP. Place a 1 before each object to roll back individual objects or press F13 to select all objects in the list. Press Enter.
4. The Submit Confirmation and Override panel is displayed where a submission date and time can be entered and the Job Queue parameters can be overridden. Press Enter to submit the RFP to rollback the objects.