



**SELCOPY/i (CBLi) Interactive Environment  
Update Guide for z/OS Systems**

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**This document may be downloaded from <http://www.cbl.com/cblidoc.html>**

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# SELCOPY/i Update Guide for MVS Systems

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## Documentation Notes

This document describes the steps required to update the Interactive Environment component, SELCOPY/i (previously named CBLi), of SELCOPY and CBLVCAT on an MVS system from SELCOPY/i release **1.4x or later**. Upgrading from a release earlier than this will require a full install.

### Note:

As of 2009/03/22, **SELCOPY/i** is the new name for **CBLi**, the CBL interactive environment for users of SELCOPY and CBLVCAT. The rebranding of CBLi to SELCOPY/i will be gradual and the two names may be used interchangeably in CBL documentation to refer to the same software.

*SELCOPY/i Update Guide for MVS Systems* may be obtained from the CBL web pages at:

<http://www.cbl.com>

Related documentation including the **SELCOPY**, **CBLVCAT** and **SELCOPY/i** User Manuals and New Features are also available from this web site.

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At the time of publication, this document is believed to be correct. CBL does not warrant that upward compatibility will be maintained for any use made of these program products to perform any operation in a manner not documented within the user manual.

## Section 01: Introduction

SELCOPY/i is eligible for install and update as part of the SELCOPY and/or CBLVCAT licence agreement.

This guide is intended as a supplement to the *CBL Software Install Guide for MVS Systems* and describes the procedure necessary for successful update of the SELCOPY/i component of SELCOPY/CBLVCAT on z/OS and OS/390. Please read it carefully and **contact CBL if you need help**.

It is assumed that a full CBL product install, as described in the *CBL Software Install Guide for MVS Systems*, has been successfully completed and that libraries, generated during the install process, have not been removed.

Throughout this update procedure, references are made to data sets with the prefix "&PREFIX". This refers to the MVS JCL symbol configured during the full product install to represent the high level qualifiers of the install target libraries and configuration data sets. The low level qualifiers used in this guide are those used at CBL.

### \*\* Important \*\*

The JCL symbol **PREFIX** and low level qualifiers are configured in the **SETOPTS** JCL library member at the start of the CBL software install process. The library &PREFIX..JCL, which includes members SETOPTS and JOBCARD, should already exist. If this is not the case, then a full CBL product install has not been actioned.

The target libraries and configuration data sets should be at least Read Only to all users of CBL software on your system.

## Section 02: Hardware Requirements

As part of the SELCOPY/i Update procedure for z/OS, the following target libraries and temporary data sets are created. The following table lists the minimum storage requirements for each generated data set.

Dataset Name	Org	RecFm	Block Size	Blocks	Dir Blocks
&PREFIX..PACK.I%rel%	Seq	FB	22528	140	-
&PREFIX..PACK.I%rel%.SDEDATA	Seq	FB	22528	10	-
&PREFIX..UNPK.I%rel%	Seq	VS	32740	220	-
&PREFIX..CBLI.SDE.SAMP.F80	PDS(E)	FB	3120	15	1
&PREFIX..CBLI.SDE.SAMP.VAR	PDS(E)	VB	23476	5	1
&PREFIX..SRC.I%rel%	PDS(E)	FB	3120	3015	2
&PREFIX..OBJ.I%rel%	PDS(E)	FB	3120	855	5
&PREFIX..EXE.I%rel%	PDS(E)	U	23476	90	5
&PREFIX..I%rel%.HELP.HTML	PDS(E)	VB	23476	2014	300
&PREFIX..I%rel%.DIST.CBLE	PDS(E)	VB	23476	152	50
&PREFIX..I%rel%.DIST.CMX	PDS(E)	VB	23476	32	5

## Section 03: SELCOPY/i Update Procedure

### Step 1: Copy Target Load Library to Distribution Library

This step is a repetition of section 4, step 28 of the full CBL product install procedure.

In order to be able to restore your existing version of SELCOPY/i, it is important to copy the existing load modules from your install target load library (&PREFIX..EXE) to your distribution load library (&PREFIX..EXE.LLD).

If this has not already been actioned, modify member &PREFIX..JCL(CBLINS15) as described in the comment data in the job and submit it to copy the contents of the target install load library &PREFIX..EXE to the already allocated, distribution library &PREFIX..EXE.LLD.

Check output &PREFIX..LST(LOADDIST).

### Step 2: Download and Unzip the CBL Software Bundle

The CBL software bundle is available to download from the CBL web site at:

<http://www.cbl.com/cblidl.html>

The download file is in a ZIP format which should be expanded using an unzip utility (e.g. PKZIP, WinZip, etc.) Extract the contents of the .zip file to a temporary directory. The following directories are included:

Fileld	Description
CBL_yyyymmdd_SELCOPYi_MVS.BIN	The SELCOPY/i Update binary bundle for MVS Platforms.
CBL_yyyymmdd_SDEData_MVS.BIN	The SELCOPY/i SDE Sample Data binary bundle for MVS Platforms.
SELCOPYi_Update_MVS.PDF	This SELCOPY/i Update Guide.
SELCOPYi_1.70_New_Features.PDF	New Features document for SELCOPY/i Rel 1.70
Readme.TXT	Additional information. (e.g. Zaps created since distribution.)
SETUPD	JCL SET commands member for update library DSNs.
CBLALL02	JCL to allocate MVS SELCOPY/i Update and SDE Sample binary data sets.
CBLUPD01	JCL to unpack (UNTERSE) the update binary.

### Step 3: FTP the Update Bundle and Job Stream to MVS

Use your local file transfer methods to import the following to your MVS system:

1. SETUPD, CBLALL02 and CBLUPD01 JCL job streams.  
FTP these to your existing &PREFIX..JCL library.
2. CBL\_yyyymmdd\_SELCOPYi\_MVS.BIN update binary.  
This will be FTP'd to a new data set, &PREFIX..PACK.1%rel%, where %rel% is the new release of SELCOPY/i (e.g. 170).  
This data set is allocated as new during the FTP upload. (LRECL=1024, RECFM=FB, BLKSIZE=22528)
3. CBL\_yyyymmdd\_SDEData\_MVS.BIN sample SDE data binary.  
This will be FTP'd to a new data set, &PREFIX..PACK.1%rel%.SDEDATA. This data set is allocated as new during the FTP upload. (LRECL=1024, RECFM=FB, BLKSIZE=22528)

In order to ensure that the binary bundles are properly allocated, one of the following should be executed before the binary files are transferred.

1. After uploading the SETUPD and CBLALL02 job streams, edit and modify these members as described in the comment data within the JCL and submit the CBLALL02 job to allocate the binary data sets.

2. Within the FTP session, execute the FTP SITE sub-command to define the default allocation parameters for uploading a new data set. (See example below which uses this technique.)  
i.e.

```
SITE LRECL=1024 RECFM=FB BLKSIZE=22528 BLOCKS PRIMARY=180 SECONDARY=20
```

Beware that, when using FTP client to transfer library members, then members of the same name that already exist in the library will be replaced without warning.

In the following example FTP session, PREFIX is set to 'SYSA.OEM.CBL', therefore, for upgrade to CBLi 1.70...

1. 'SYSA.OEM.CBL.JCL' is the CBL products & PREFIX..JCL library.
2. 'SYSA.OEM.CBL.PACK.I170' is the SELCOPY/i update bundle to be allocated in MVS.
3. 'SYSA.OEM.CBL.PACK.I170.SDEDATA' is the SELCOPY/i SDE sample data bundle to be allocated in MVS.

'c:\tmp\cbl' is the PC directory that contains the SELCOPY/i update files listed in Step 2.

```
ftp> cd 'SYSA.OEM.CBL.JCL'
      250 The working directory "SYSA.OEM.CBL.JCL" is a partitioned data set
ftp> lcd c:\tmp\cbl
      Local directory now C:\tmp\cbl.
ftp> ascii
      200 Representation type is Ascii NonPrint
ftp> put SETUPD
      200 Port request OK.
      125 Storing data set SYSA.OEM.CBL.JCL(SETUPD)
      250 Transfer completed successfully.
      ftp: 1378 bytes sent in 0.00Seconds 1263000.00Kbytes/sec.
ftp> put CBLALL02
      200 Port request OK.
      125 Storing data set SYSA.OEM.CBL.JCL(CBLALL02)
      250 Transfer completed successfully.
      ftp: 1149 bytes sent in 0.00Seconds 1244000.00Kbytes/sec.
ftp> put CBLUPD01
      200 Port request OK.
      125 Storing data set SYSA.OEM.CBL.JCL(CBLUPD01)
      250 Transfer completed successfully.
      ftp: 6117 bytes sent in 0.00Seconds 3855000.00Kbytes/sec.
ftp> binary
      200 Representation type is Image
ftp> quote SITE LRECL=1024 RECFM=FB BLKSIZE=22528 BLOCKS PRIMARY=140 SECONDARY=20
      200 SITE command was accepted
ftp> put CBL_20090722_SELCOPI_MVS.BIN 'SYSA.OEM.CBL.PACK.I170'
      200 Port request OK.
      125 Storing data set SYSA.OEM.CBL.PACK.I170
      250 Transfer completed successfully.
      ftp: 1921426 bytes sent in 1.83Seconds 952.86Kbytes/sec.
ftp> quote SITE PRIMARY=10 SECONDARY=10
      200 SITE command was accepted
ftp> put CBL_20090722_SDEDATA_MVS.BIN 'SYSA.OEM.CBL.PACK.I170.SDEDATA'
      200 Port request OK.
      125 Storing data set SYSA.OEM.CBL.PACK.I170.SDEDATA
      250 Transfer completed successfully.
      ftp: 5460 bytes sent in 0.00Seconds 5120000.00Kbytes/sec.
```

## Step 4: Unpack the Update Binary to Existing Install Libraries

The CBLUPD01 job stream must be run to perform the following tasks:

1. Execute the IBM TRSMAN utility program to unpack the install bundle and SDEDATA bundle sequential data sets.  
TRSMAN is used to compress/decompress data exchanged with IBM and is freely available from the following URL:  
<http://techsupport.services.ibm.com/390/trsman.html>
2. Execute IEBCOPY to Load existing install libraries and new update libraries with modified members from the unpacked data set.

Modify member CBLUPD01 as described in the comment data in the job and submit it.

The following members are extracted to existing install libraries and new update libraries. Install libraries were allocated as part of the full product install procedure whereas update libraries include the product release (I%rel%) and are allocated in job CBLUPD01. Note that, %rel% is the new CBLi release. (e.g. 170 for CBLi 1.70)

Library	Member	Description
&PREFIX..TXT	@REP%rel%	Reports the build level and module information for the updated release of CBLi.
&PREFIX..JCL	CBLUPD02	Copies all modules from the production load library to the update load library and Link Edits the updated SELCOPY/i and associated modules.
	CBLUPD03	Allocates and loads the update SELCOPY/i Help, CBLe Rexx Macro and CMX libraries.
	CBLUPD04	Renames production SDE Sample data, SELCOPY/i Help, CBLe Rexx Macro and CMX install libraries as backup copy then renames update libraries to production DSNs.
	CBLUPD05	Renames production EXE load library to backup copy then renames update load library to production DSN.
	CBLUPD06	Copies CBLII REXX procedure as SELCOPYI in the same library. (Used to start SELCOPY/i)
&PREFIX..SRC.I%rel%	ULCMX%rel%	Unloaded new and updated CMX files. These must be loaded into libraries with the utility CBLAVARL.
	ULEDT%rel%	Unloaded new and updated CBLe macros. These must be loaded into libraries with the utility CBLAVARL.
	ULHLP%rel%	Unloaded new and updated SELCOPY/i help files. These must be loaded into libraries with the utility CBLAVARL.
&PREFIX..OBJ.I%rel%	APEEINIT	The SELCOPY/i initialisation object deck.
	APEETERM	The SELCOPY/i termination object deck.
	CBLAVARL	The SELCOPY/i RECFM=V file install utility program object deck.
	CBLAVCII	The CBLVCAT Interactive (VCI) SVC install utility program object deck.
	CBLDLL	The CBL Dynamic Link Library object deck.
	CBLI	The CBL Interactive control program object deck.
	SDELIB	The CBL Interactive Structured Data Environment Library object deck.
	CBLVDUMP	The SELCOPY/i DUMP subtask object module. (MVS Only)
	CBLVIMSS	Program invoked by DFSRRC00 for interactive SELCOPY execution with IMS/DL1.
	CBLVIMST	The SELCOPY/i IMS/DL1 interface subtask control program object module.
	CBLVSQL0	The SELCOPY/i SQL interface subtask control program object module.
	CBLVSVC	The CBLVCAT Interactive (VCI) SVC object deck.
	CBLXREXX	The SELCOPY/i REXX interface subcommand environment control program object deck.
&PREFIX..I%rel%.SDE.SAMP.F80	COBSALES	COBOL Copy Book for SDE sample file &PREFIX..CBLI.SDE.SAMP.VAR(DATSALES).
	COBTYPES	COBOL Copy Book for SDE sample file &PREFIX..CBLI.SDE.SAMP.VAR(DATTYPES).
	COBDELIV	COBOL Copy Book for demonstration of SDECOPYF record/field copy macro.
	PL1SALES	PL/1 Copy Book equivalent of COBOL COBSALES Copy Book.
	PL1TYPES	PL/1 Copy Book equivalent of COBOL COBTYPES Copy Book.
	PL1DELIV	PL/1 Copy Book equivalent of COBOL COBDELIV Copy Book.
&PREFIX..I%rel%.SDE.SAMP.VAR	DATSALES	Sample member containing structured record sales data.
	DATTYPES	Sample member containing structured records using different field data types.

&PREFIX..JCL contains the job streams used in the subsequent product update steps.

Check output in &PREFIX..LST(UNTERSE2), &PREFIX..LST(UNTERSE3) and &PREFIX..LST(LOAD2).

## Step 5: Link Edit the Updated SELCOPY/i Program Modules

Modify member CBLUPD02 as described in the comment data in the job and submit it to perform the following tasks:

1. Execute IEBCOPY to copy existing modules from the production (target) load library (&PREFIX..EXE) to the update load library (&PREFIX..EXE.I%rel%).
2. Execute IEWL to Link Edit the latest SELCOPY/i product object modules into the update load library.

As in the full CBL product install, SETCODE AC(1) is used to link the CBLI program as an authorised program.

Check output in &PREFIX..LST(COPYLOAD) and the job output queue.

## Step 6: Apply Product Maintenance

Any available SELCOPY/i product maintenance should be applied to load modules in the update load library before proceeding.

Latest fixes may be reviewed and downloaded from <http://www.cbl.com/cblisupp.html>

See "CBL Software Install Guide for MVS Systems", "Section 6: Applying Maintenance" for details on how to apply CBL product maintenance.

## Step 7: Load the Updated SELCOPY/i Help, CBL macro & CMX members

Modify member CBLUPD03 as described in the comment data in the job and submit it to perform the following tasks:

1. Allocate the following CBLi Help, CBL macro and CMX update libraries:
  - ◆ &PREFIX..I%rel%.HELP.HTML  
Library containing existing, new and updated help members for SELCOPY/i.
2. &PREFIX..I%rel%.DIST.CBLE  
Library containing existing, new and updated CBL macro members for SELCOPY/i.
3. &PREFIX..I%rel%.DIST.CMX  
Library containing existing, new and updated sample CoMmand eXecution (CMX) members for SELCOPY/i.
4. Execute IEBCOPY to copy existing members from the production versions of these libraries to the appropriate update load libraries.
5. Execute CBLAVARL in the &PREFIX..EXE.I%rel% load library to extract members from the ULHLP%rel%, ULEDT%rel% and ULCMX%rel% bundles in library &PREFIX..SRC.I%rel%. The extraction will add new members and replace existing members in the update libraries only.

Check output in members COPYLIBS, CBLIHEL2, CBLICBL2 and CBLICMX2 of the &PREFIX..LST library.

## Step 8: Promote the Updated Sample Data, SELCOPY/i Help, CBL macro & CMX members

Modify member CBLUPD04 as described in the comment data in the job and submit it to perform the following tasks:

1. Execute IDCAMS DELETE to delete any existing backup copies of the Sample Data, SELCOPY/i Help, CBL macro & CMX target libraries. RC=08 from the IDCAMS DELETE is **not** considered to be an error.
2. Execute IDCAMS ALTER NEWNAME to rename existing Sample Data, SELCOPY/i Help, CBL macro & CMX target libraries to backup copies. These target libraries are:
  - ◆ &PREFIX..CBLI.SDE.SAMP.F80
  - ◆ &PREFIX..CBLI.SDE.SAMP.VAR
  - ◆ &PREFIX..CBLI.HELP.HTML
  - ◆ &PREFIX..CBLI.DIST.CBLE
  - ◆ &PREFIX..CBLI.DIST.CMX

If upgrading from SELCOPY/i (CBLi) release 1.40, then the SDE Sample data target libraries do not already exist and so RC=08 will be returned from the attempted rename of these libraries. This is **not** considered to be an error.

3. Execute IDCAMS ALTER NEWNAME to rename the Sample Data, SELCOPY/i Help, CBL macro & CMX update libraries to the target library DSNs.

Check output in members UPDSAMF, UPDSAMV, UPDHTML, UPDCBLE and UPDCMX of the &PREFIX..LST library to ensure that the IDCAMS ALTER NEWNAME operations for the update libraries were successful.

## Step 9: Rename CBLII Invocation Procedure to SELCOPYI

CBLI has been rebranded as SELCOPY/i and so, for releases of the software later than 1.60, the distributed software bundle includes the REXX procedure SELCOPYI which is tailored by the installer and subsequently executed by all users to invoke the SELCOPY/i product load module.

Installations of SELCOPY/i (CBLI) 1.60 and earlier already use a site specific, tailored version of this REXX procedure, named CBLII, to start the SELCOPY/i environment.

In order to maintain uniformity, modify member CBLUPD06 as described in the comment data in the job and submit it to IEBCOPY the CBLII procedure to SELCOPYI within the same library (default &PREFIX..ISPEXEC). Note that the library containing CBLII (and SELCOPYI) exists within the TSO SYSEXEC concatenation.

Check output in members UPDCBLII of the &PREFIX..LST library to ensure that the member was copied successfully. If desired, the CBLII member may be deleted and an ALIAS name of CBLII generated for member SELCOPYI.

## Step 10: Verify Update of SELCOPY/i

Before promoting the updated SELCOPY/i load modules into production, verify successful installation under TSO ISPF.

1. Make a copy of the SELCOPYI REXX procedure in the TSO SYSEXEC library concatenation, as member name SELCI%rel%.
2. Update the CBLiLoadLibs variable assignment in member SELCI%rel% as follows:

```
CBLiLoadLibs = "'&prefix%.EXE.I%rel%'"
```

Where %prefix% is your chosen high level qualifiers DSN prefix (see &PREFIX) and %rel% is the updated SELCOPY/i release.

3. Re-start SELCOPY/i using SELCI%rel% to verify that the update is successful. (In ISPF, execute **TSO SELCI%rel%**)

If upgrading from SELCOPY/i (CBLI) 1.4x, the user will be presented with the following pop-up message:

```

CBLi 1.70: Upgrade by USER01                                x
CBLi has detected a release upgrade since last
login by user USER01.

An introduction to the Structured Data
Environment (SDE) will be added to your HOME
command-centre.

      +-----+          +-----+
      |  OK  |          | Cancel |
      +-----+          +-----+

```

Select "OK" to introduce the latest changes to the current user's CBLIINI and personal CMX (command centre) data sets.

Otherwise, the user will be presented with the following pop-up message:

```

CBLi 1.70: Upgrade by USER01                                x
CBLi has detected a release upgrade since last
login by user USER01

      +-----+
      |  OK  |
      +-----+

```

Select "OK" to continue.

If you also want to test the updated SELCOPY/i as a VTAM application (RACF logon required) before promoting it in to production, the &PREFIX..EXE.I%rel% library must be made APF authorised and a test VTAM APPLID defined. (See "CBL Software Install Guide for MVS Systems", section 4, steps 7. and 17.)

**Step 11: Promote the Updated Load Library**

**Note:** Before executing this step, ensure that job CBLINS15 has been executed (see step 1.) to commit changes to modules in the production (target) load library (&PREFIX..EXE) to the distribution load library (&PREFIX..EXE.LLD).

Modify member CBLUPD05 as described in the comment data in the job and submit it to copy updated SELCOPY/i and associated modules from the updated load library (&PREFIX..EXE.I%re/%) to the production (target) load library.

Check output in member UPDLOAD in the &PREFIX..LST library.

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The SELCOPY/i Interactive Environment is now updated - Thank you for using it.

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