

IBM WebSphere Developer for zSeries Version 6.0.1



Common Access Repository Manager Host Installation and Configuration Guide

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Note

Before using this document, read the general information under "Notices" on page 7.

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About this book

This book discusses the Common Access Repository Manager (CARMA) for WebSphere® Developer for zSeries® (WD/z). It includes instructions on how to install and configure a CARMA server on your z/OS® host system.

Who should read this book

This book is intended for system administrators who would like to install and configure CARMA on their z/OS host system. To use this book, you need to be familiar with the USS and MVS™ host systems.

Chapter 1. Installation

Refer to *Program Directory for IBM® WebSphere Developer for zSeries Common Access Repository Manager (GI10-3367)* for the complete set of installation instructions for CARMA. After completing the installation procedures discussed in that document, you should confirm that the following PDSs exist on your MVS system: *HLQ.SCRACLST*, *HLQ.SCRALOAD*, *HLQ.SCRASAM*, *HLQ.SCRAVSAM*, and *HLQ.SCRAVSAY* (where *HLQ* is the high-level qualifier you chose during your installation). The following tables summarize the member contents of these PDSs:

Table 1. Members in HLQ.SCRACLST

| Member | Description |
|----------|--|
| CRASUBMT | CLIST procedure used to run CARMA and its RAMs |

Table 2. Members in HLQ.SCRALOAD

| Member | Description |
|----------|---|
| CRARBLD | SCLM build module |
| CRAREV | SCLM EVALBLOCK used to send strings between C and REXX |
| CRARLCK | SCLM lock module |
| CRARPDS | Partitioned data set RAM |
| CRARPRM | SCLM promote module |
| CRARSCLM | SCLM main module |
| CRARSV | SCLM save module used to update SCLM accounting information |
| CRARUL | SCLM unlock module |
| CRASERV | TCP/IP Server for CARMA |
| CRA390 | CARMA DLL |

Table 3. Members in HLQ.SCRASAM

| Member | Description |
|---------------------|--|
| CRA390H | Header needed for clients |
| CRA390SD | CARMA/390 DLL side deck |
| CRACLICM | JCL to compile a CARMA client |
| CRACLISA | Sample client source code |
| CRACOB01 - CRACOB18 | COBOL RAM source (including RGVA source) |
| CRACOBC1 | COBOL RAM C utility source |
| CRACOBJ1 | JCL to compile the COBOL RAM |
| CRACOBJ2 | JCL to compile the C utility DLL for the COBOL RAM |
| CRACOBJ3 | JCL to compile the RGVA DLL for the COBOL RAM |

Table 3. Members in HLQ.SCRASAM (continued)

| Member | Description |
|-----------|---|
| CRACPL | JCL to compile, pre-link, and link RAM modules or drivers |
| CRADSDEF | C header needed for clients and RAMs |
| CRAFCDDEF | C header needed for RAMs |
| CRALREPR | IDCAMS JCL to REPRO CRARAM2 |
| CRAMREPR | IDCAMS JCL to REPRO CRAMSG |
| CRAMSGO | Common messages handler |
| CRARAMCM | JCL to compile Skeleton RAM |
| CRARAMCS | JCL to compile the SCLM RAM |
| CRARAMSA | Skeleton RAM source code |
| CRAREPRO | IDCAMS JCL to REPRO CRADEF |
| CRARREXX | JCL to compile the SCLM RAM's REXX modules |
| CRASBLD | SCLM build source code |
| CRASLCK | SCLM lock source code |
| CRASPDS | PDS RAM source code |
| CRASPRM | SCLM promote source code |
| CRASREPR | IDCAMS JCL to REPRO CRASTRS |
| CRASSCLM | Main SCLM source code |
| CRASSV | SCLM save info source code |
| CRASUL | SCLM unlock source code code |
| CRATREPR | IDCAMS JCL to REPRO CRARAM1 |

Table 4. Members in HLQ.SCRAVSAM

| Member | Description |
|----------|------------------------------------|
| CRALINIT | VSAM message file for the SCLM RAM |
| CRAMINIT | VSAM message file for CARMA |
| CRATINIT | VSAM message file for the PDS RAM |

Table 5. Members in HLQ.SCRAVSAY

| Member | Description |
|----------|------------------------------------|
| CRAINIT | CAF VSAM definition file for CARMA |
| CRASINIT | External string file for CARMA |

After verifying that these files exist on your host system, follow the configuration procedures discussed in Chapter 2, "Configuration," on page 3 to complete the installation process.

Chapter 2. Configuration

After installing CARMA, you must configure CARMA by following these steps:

1. Configure the CARMA server on your MVS host
2. **Optional:** Configure the sample RAMs
3. **Optional:** If you plan to use CARMA from WD/z, configure the CARMA components on your USS host
4. **Optional:** Restrict access on the initialization files and VSAM clusters. Under most circumstances, only System Administrators and CARMA developers will need to write to these files, while other users will only require read access.

Configuring the CARMA MVS components

Follow these steps to configure your MVS host:

1. Configure the *HLQ*.SCRACLST(CRASUBMT) CLIST (where *HLQ* is your high-level qualifier) to use your chosen high-level qualifier. Edit the following lines in your CLIST file to use your high-level qualifier instead of #hlq and your chosen library for your compiled RAMs instead of #ramlib:

```
//STEPLIB DD DSN=#hlq.SCRALOAD,DISP=SHR
// DD DSN=#ramlib,DISP=SHR
//CRADEF DD DSN=#hlq.VSAMV.CRADEF,DISP=SHR
//CRAMSG DD DSN=#hlq.VSAMV.CRAMSG,DISP=SHR
//CRASTRS DD DSN=#hlq.VSAMV.CRASTRS,DISP=SHR
//CRARAM1 DD DSN=#hlq.VSAMV.CRARAM1,DISP=SHR
//CRARAM2 DD DSN=#hlq.VSAMV.CRARAM2,DISP=SHR
```

2. Configure the *HLQ*.SCRASAM(CRAMREPR) JCL script to REPRO the CARMA VSAM message file (CRAMINIT). Edit the following lines in CRAMREPR to use your high-level qualifier instead of #hlq and your volume serial instead of #volume:

```
//DASD1 DD VOL=SER=#volume,UNIT=SYSDA,DISP=SHR
DEL #hlq.VSAMV.CRAMSG
//INPUT DD DSN=#hlq.SCRASAM(CRAMINIT),DISP=SHR
DEF CLUSTER (NAME('#hlq.VSAMV.CRAMSG') -
KEYS(19 0) VOLUMES(#volume)) -
REPRO INFILE(INPUT) ODS(#hlq.VSAMV.CRAMSG)
LISTCAT ENT('#hlq.VSAMV.CRAMSG') ALL
```

After making the modifications, submit this JCL. Upon successful submission, you should receive a return code of 8.

3. Configure the *HLQ*.SCRASAM(CRAREPR) JCL script to REPRO the CARMA CAF VSAM definition file (CRAINIT). Edit the following lines in CRAREPR to use your high-level qualifier instead of #hlq and your volume serial instead of #volume:

```
//DASD1 DD VOL=SER=#volume,UNIT=SYSDA,DISP=SHR
DEL #hlq.VSAMV.CRADEF
//INPUT DD DSN=#hlq.SCRASAM(CRAINIT),DISP=SHR
DEF CLUSTER (NAME('#hlq.VSAMV.CRADEF') -
KEYS(8 0) VOLUMES(#volume)) -
REPRO INFILE(INPUT) ODS(#hlq.VSAMV.CRADEF)
LISTCAT ENT('#hlq.VSAMV.CRADEF') ALL
```

After making the modifications, submit this JCL. Upon successful submission, you should receive a return code of 8.

Note: The JCL script, CRAREPR, can be used to update the CRADEF VSAM cluster at a later time. To update the cluster, you must point the INPUT DD statement to your chosen sequential data set instead of CRAINIT. Refer to

the *IBM WebSphere Developer for zSeries Version 6.0.1 Common Access Repository Manager Developer's Guide (SC31-6914)* for more information on defining this sequential data set.

4. Configure the *HLQ.SCRASAM(CRASREPR)* JCL script (where *HLQ* is your high-level qualifier) to use your high-level qualifier and volume serial. Edit the following lines in *CRASREPR* to use your high-level qualifier instead of *#hlq* and your volume serial instead of *#volume*:

```
//DASD1 DD VOL=SER=#volume,UNIT=SYSALLDA,DISP=SHR
        DEL #hlq.VSAMV.CRASTRS
//INPUT DD DSN=#hlq.SCRAVSAY(CRASINIT),DISP=SHR
        DEF CLUSTER (NAME('#hlq.VSAMV.CRASTRS') -
                    KEYS(21 0) VOLUMES(#volume)) -
        REPRO INFILE(INPUT) ODS(#hlq.VSAMV.CRASTRS)
        LISTCAT ENT('#hlq.VSAMV.CRASTRS') ALL
```

After making the modifications, submit this JCL. If *CRASTRS* was created successfully, you will receive a return code of 8.

CAUTION:

Failure to provide the correct volume parameter will prevent successful completion of this JCL.

Note: The JCL script, *CRASREPR*, can be used to update the *CRASTRS* VSAM cluster at a later time. To update the cluster, you must point the *INPUT* DD statement to your chosen sequential data set instead of *CRASINIT*. Refer to the *IBM WebSphere Developer for zSeries Version 6.0.1 Common Access Repository Manager Developer's Guide (SC31-6914)* for more information on defining this sequential data set.

Configuring the sample RAMs

Follow the instructions in the sections below for the sample RAMs you want to configure.

Note: The sample RAMs are provided for the purpose of testing the configuration of your *CARMA* environment and as examples for developing your own RAMs. **Do NOT use the provided sample RAMs in a production environment.**

Configuring the SCLM RAM

Configure the *HLQ.SCRASAM(CRALREPR)* JCL script (where *HLQ* is your high-level qualifier) to *REPRO* the SCLM RAM's VSAM message file (*CRALINIT*). Edit the following lines in *CRALREPR* to use your high-level qualifier instead of *#hlq* and your volume serial instead of *#volume*:

```
//DASD1 DD VOL=SER=#volume,UNIT=SYSALLDA,DISP=SHR
        DEL #hlq.VSAMV.CRARAM2
//INPUT DD DSN=#hlq.SCRAVSAM(CRALINIT),DISP=SHR
        DEF CLUSTER (NAME('#hlq.VSAMV.CRARAM2') -
                    KEYS(19 0) VOLUMES(#volume)) -
        REPRO INFILE(INPUT) ODS(#hlq.VSAMV.CRARAM2)
        LISTCAT ENT('#hlq.VSAMV.CRARAM2') ALL
```

After making the modifications, submit this JCL. Upon successful submission, you should receive a return code of 8.

Configuring the PDS RAM

Configure the *HLQ*.SCRASAM(CRATREPR) JCL script (where *HLQ* is your high-level qualifier) to REPRO the PDS RAM's VSAM message file (CRATINIT). Edit the following lines in CRATREPR to use your high-level qualifier instead of #hlq and your volume serial instead of #volume:

```
//DASD1 DD VOL=SER=#volume,UNIT=SYSALLDA,DISP=SHR
        DEL #hlq.VSAMV.CRARAM1
//INPUT DD DSN=#hlq.SCRASAM(CRATINIT),DISP=SHR
        DEF CLUSTER (NAME('#hlq.VSAMV.CRARAM1') -
                    KEYS(19 0) VOLUMES(#volume)) -
        REPRO INFILE(INPUT) ODS(#hlq.VSAMV.CRARAM1)
        LISTCAT ENT('#hlq.VSAMV.CRARAM1') ALL
```

After making the modifications, submit this JCL. Upon successful submission, you should receive a return code of 8.

Compiling Skeleton RAM

You must compile Skeleton RAM before it can be used. First, modify the Skeleton RAM compilation JCL, *HLQ*.SCRASAM(CRARAMCM) (where *HLQ* is your high-level qualifier), by following these steps:

1. Replace #clientlib with *HLQ*.SCRASAM(CRAMSA).
2. Replace #target with *HLQ*.SCRALOAD(ESTRAM).
3. Replace #header with *HLQ*.SCRASAM(CRADSDEF).
4. Replace #sidedeck with the PDS you have chosen for storing your side decks (be sure to allocate this PDS first). This DD statement may be commented out if desired.

Note: In the above steps, *HLQ* should be replaced by your high-level qualifier.

After making the modifications, submit this JCL. Upon successful submission, you should receive a return code of 8.

Configuring the CARMA USS components

Follow these steps to configure the USS CARMA components, which were installed with the WD/z RSE+ICU installation (FMID: H001600), on your USS host (where *H001600_INSTALLATION_DIR* is the USS directory where you installed the WD/z RSE+ICU components):

1. Edit the *H001600_INSTALLATION_DIR*/rse/lib/CRASRV.properties file as follows:
 - a. Define the initial CRASRV port as the port that CRASRV will use to send information between CARMA components internal to the host. Communication on this port is confined to your host machine.
 - b. Define the range as the range of ports on which to attempt to connect CRASRV.
 - c. Define the location of the REXX submit script to CRASRV (this should default to *H001600_INSTALLATION_DIR*/rse/lib/rexxsub).

Example: The following is an excerpt from an example CRASRV.properties file:

```
port.start=2000
port.range=200
startup.script=/usr/lpp/wd4z/rse/lib/rexxsub
```

2. Configure the `H001600_INSTALLATION_DIR/rse/lib/rexxsub` CRASRV startup script to point to the location of your CRASRV start-up CLIST and fill in the appropriate value for DSNAME (`HLQ.SCRACLST(CRASUBMT)`, where *HLQ* is your high-level qualifier).

Example: The following is an excerpt from an example rexxsub script in which the high-level qualifier is HLQ:

```
/* REXX */
say 'This was passed :' __argv.0 'arguments:'
/* Configure the CLIST */
DSNAME= "'hlq.scrac1st(crasubmt)'"
say 'Running CLIST: ' DSNAME
```

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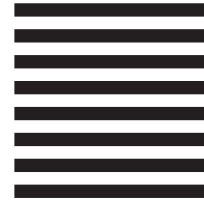
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