

Useful LE/VSE Run-Time Options

The following list documents Language Environment for VSE/ESA (LE/VSE) run-time option related topics you may find valuable in your environment:

Run-Time Option	Additional Information
ABTERMENC(ABEND)	Required for LE ABEND handling. (DUMP, ...).
ALL31(OFF)	Allows AMODE switch, especially under CICS. Use ALL31(ON), if all programs are migrated to 31-bit. In some situations LE/VSE can automatically set ALL31(OFF) under CICS. See APAR PQ23382 for details on the specific situations.
CBLOPTS(ON)	ON for compatibility to COBOL II. // EXEC program,PARM='program arguments/run-time options' OFF for language independent syntax. // EXEC program,PARM='run-time options/program arguments'
CHECK(ON)	Maps to VS COBOL II SSRANGE run-time option. Requires SSRANGE to be set at compile time.
ERRCOUNT(0)	Required for PL/I. Default is ERRCOUNT(20).
HEAP(ANYWHERE)	Required for DATA(31) compiled applications. Don't use HEAP(BELOW). It ignores DATA(31) settings and you'll run out of 24-bit storage or get errors for heap requests larger than 64k in CICS.
NODEBUG	Required for better performance. Use DEBUG only when the USE FOR DEBUGGING clause has been coded in your COBOL/VSE program.
NOTEST	TEST, if running Debug Tool.
RTEREUS(OFF)	(ON) for very special environments repeatedly calling LE batch, can have nasty side effects.
STACK(BELOW)	Use STACK(BELOW) with ALL31(OFF). Use STACK(ANY) with ALL31(ON).
STORAGE(NONE,,K)	If no uninitialized variables used.
STORAGE(00,,)	Maps to VS COBOL II WSCLEAR. Migrations assist for DOS/VS COBOL relying on preinitialized storage pattern.
TERMTHDACT(UADUMP)	For diagnosis in batch Use TERMTHDACT(DUMP) under CICS.
TRAP(ON MAX)	Permanent setting to keep LE/VSE's integrity Use TRAP(OFF) only on request of IBM service personal. TRAP(ON,MIN) should be used for local application debugging when more information than is provided in the CEE5DMP output is required.

Run-Time Options to Use with Caution

- Use LE/VSE run-time option **TERMTHDACT(UADUMP)** or **TRAP(ON,MIN)** for diagnosis in a *batch environment*. It generates a VSE partition dump and (UADUMP) a corresponding LE/VSE dump.
- For problem determination under both *CICS/VSE* and *CICS TS* it is recommended to specify **TERMTHDACT(DUMP)**. Please also be aware that use of TERMTHDACT(UADUMP) with database managers will bypass backout processing that may be required after application failure. Any files still open at point of failure will not be closed. Additional reference will be available via Info APAR II11817.
- The default run-time option **HEAP(...,ANYWHERE,..)** is important because of the correlation to COBOL compile options DATA(24/31), RMODE and RENT. Be aware that there is a 64k limit for CICS/VSE 2.3 GETMAIN storage requests below the 16MB line. Note: Avoid HEAP(BELOW), it ignores the COBOL DATA(xx) compile setting for location of dynamic data areas (such as working storage).
- Setting **TRAP(ON,MAX)** ensures LE/VSE's integrity when handling abnormal conditions. TRAP(OFF) should only be activated on request of IBM service personal. TRAP(ON,MIN) is the recommended setting in place of TRAP(OFF).
- The **3rd parameter** of the STORAGE run-time option can be of importance in PL/I migration environments. It deals with **PL/I automatic variable storage** and provides an initialization service in case the programming style did not consider start values for variables. However the associated performance impact can be significant (dependent on how the application is coded). Since it deals with the LE/VSE stack it can degrade overall run-time performance for all languages ! Therefore a setting of STORAGE(00,NONE,00,xk) should be used very carefully, with respect to application specific, (for example, via tailored CEEUOPT.OBJ or JCL PARM override) settings.
- In general **PL/I users** should also take care about their run-time option settings for: DEPTHCONDLMT, ERRCOUNT, USRHDLR and XUFLOW.

Overriding Run-Time Options with an EXEC card (Batch)

There might be a need to override installation-wide run-time options (temporarily) while running a single application. For example if a dump needs to be taken. For batch you may wish to pass the desired run-time options via PARM-string definition in the EXEC statement. Then the following should be considered:

- The "/" character is used as a separator between program-arguments and run-time options.
- The position of the slash is related to the setting of run-time option CBLOPTS.

Presuming a default setting of CBLOPTS(ON) there is a language dependent approach as follows.

C/VSE or PLI/VSE:

A trailing slash after the run-time option string is required.

```
// EXEC PGM,SIZE=PGM,PARM='RPTSTG(ON)/program arguments if any'
```

This example overrides the default run-time option RPTSTG(OFF) producing a storage report to the current job output.

COBOL/VSE:

Program arguments are expected before run-time options. Therefore the slash should be specified in a way like:

```
// EXEC PGM,SIZE=PGM,PARM='program arguments if any/RPTOPTS(ON)'
```

This example overrides the default run-time option RPTOPTS(OFF) producing a run-time option report to the current job output. This difference mainly exists to support the way programmers are accustomed to interact with programs written in a specific language. A setting of CBLOPTS(OFF) would suit to support overrides in a common way (all languages).

Note:

There are many related references in the LE/VSE Bookshelf, mainly in LE/VSE Customization Guide, SC33-6682, Appendix A + section "COBOL Compatibility", LE/VSE Programming Guide SC33-6684, Chapter 4, 5 and LE/VSE Programming Reference, SC33-6685, Chapter 2. Non-LE conforming assembler programs that act as drivers for LE-conforming applications cannot, by default, pass any runtime option overrides supplied on the JCL PARM card.

LE/CICS-wide Run-Time Options to VSE Console

You may wish to display active LE/CICS-wide run-time option defaults immediately (without the need on global report option setting via run-time option RPTOPTS(ON)).

This is supported via transaction "**ROPC**" (security enabled for CICS Transaction server) and shipped in CICS GROUP (CEE). Running this transaction will show LE/CICS-wide default options on VSE console.

Also available is transaction "**NEWC**" which allows for the LE CICS-wide runtime options to be "newcopied" while CICS is still running. This is useful if the CEECOPT.PHASE options module has been changed and the new settings are required to be activated without a restart of the CICS system.

CLER Usage in multiple CICS environments

LE/CICS run-time option tailoring transaction CLER (available since VSE/ESA 2.7) is intended for dynamic, temporary overrides in a single, active CICS/VSE or CICS

TS subsystem. As such, CLER customization will not take effect in other CICS subsystems nor are the changes introduced retained after CICS recycling.

Note:

LE/VSE run-time options that are commonly shared between multiple CICS subsystems (referring to the same CEECOPT module) are better tailored via customizing CEEWCOPT skeleton and CEECOPT.A option source.

More details about possible run-time options settings are available in LE/VSE Customization Guide, SC33-6682.

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