

Consider Reverse Delta Format

Prior to the availability of the reverse delta format, clients who wanted access to element source outside of Endeavor had to specify a source output library in the LIBRARIES section of the Type definition. This allowed the most current source (i.e. the base combined with all delta instances) to be available in a PDS or PDSE as well as in the Endeavor ELIBs. The source output library could then be searched or browsed, either within or outside of Endeavor. The downside to this technique is that the source is stored in two locations and is not directly accessible for use in processors. If the source output library is modified outside of Endeavor, there may be confusion as to the true source, possibly resulting in code regression or the introduction of unauthorized changes.

The reverse delta element option can be used creatively to provide a better alternative. This option instructs Endeavor to store the most current source as the base and the prior change levels as deltas. By coding the REV(R) delta element option in the Type definition, allocating the delta library as an ELIB, and allocating the base library as a PDS or PDSE, you then have a base library whose contents are exactly like the source output library used in the prior technique. This technique, however, ensures the source is stored in a single repository under Endeavor's control with the added advantage of being able to read the base library directly in processors.

For conversion information see the Endeavor r12 Administration Guide.

Improve ESI Performance

If you have implemented Endeavor's site security interface (ESI), you may want to consider adjusting the LAT parameter located in the ESIDFLTS section of the security table. LAT is the security Look Aside Table.

Endeavor uses the LAT to cache the results of RACROUTE resource access authorization requests sent to the z/OS Security Authorization Facility (SAF) interface. Before calling SAF, Endeavor checks the LAT for a prior authorization result for the same resource and will reuse the prior result to avoid the overhead of calling SAF again. This can greatly improve performance.

The LAT parameter is an integer value from 0 to 524287 which specifies the number of 4K pages to be used for the LAT. Each 4K page holds approximately 35 access request results. A LAT value of 2, for instance, would be 8K in size and store approximately 70 request results. A LAT value of 0 disables the LAT, and 0 is the default value. Hence, unless modified you are not enjoying any of the performance gains.

For maximum benefit be sure the LAT is large enough to hold the results of all access requests a user is likely to encounter during a typical Endeavor session. This is influenced by the number of resource names created by format statements in the NAMEQU section of the security table. Once the LAT is full, Endeavor will make repeated SAF calls for resources whose results could not be cached.

The Security Guide recommends a LAT value between 2 and 10 (70 - 350 requests). Unless your TSO environment is resource constrained, start with a LAT value of 10. Periodically monitor performance using the ESI trace facility to look for repeated SAF calls for the same resource by the same user. This indicates the LAT is too small. Increase it as necessary and pad it with at least 10% extra for good measure.

Note that a LAT is created for each individual user when the user begins an Endeavor session and is discarded when the user exits Endeavor. If a user is denied access to a resource and is subsequently permitted the required access, the user will need to exit and reenter Endeavor for the permission to take effect. Otherwise the cached access denial will continue to prohibit access.

A Fast and Easy Way to List Your Site Options

Imagine if you could obtain information on all your currently active Endeavor configuration settings in a form more comprehensive and complete than provided by the SITE selection from either the ENVIRONMENT OPTIONS MENU or the DISPLAY OPTIONS MENU and without having to find, examine, and decipher the parameters in the source for your Endeavor tables. You can with the Site Options Report.

The Site Options Report provides an all inclusive listing of your site's installation options. It is divided into sections which are formatted in a logical, readable fashion. Sections include:

- Site Options table (C1DEFLTS)
- Site Type Processing Sequence (ETYPESEQ)
- Site Symbolics table (ESYMBOLS)
- Optional Features table (ENCOPTBL)
- Panel Field Default table (ENDICNFG)
- Active User Exits
- ESI Security table (BC1TNEQU)

The report can be produced during either batch or foreground execution of any Endeavor action. For batch add the following DD statement to your batch processing via option 5 (BUILD JCL):

```
//EN$TROPT DD SYSOUT=*
```

For foreground allocate the EN\$TROPT DD via the ISPF ALLOC command as follows:

```
ALLOC DD(EN$TROPT) DS(*) REUS
```

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