OpenMP Environment Variables (4A)

Please send corrections (or suggestions) to youngwlim@hotmail.com.

This document was produced by using LibreOffice.

Based on

https://www.openmp.org/wp-content/uploads/OpenMP-4.0-C.pdf

Environment Variables (1)

OMP_CANCELLATION : Set the possibility to use the #pragma omp cancel directive

OMP_DISPLAY_ENV : Shows the OpenMP version and the environment variables.

OMP_DEFAULT_DEVICE : Configure the device used in the target regions

OMP_DYNAMIC : Activates dynamic thread adjustment.

OMP_MAX_ACTIVE_LEVELS : Sets the maximum number of nested parallel regions.

OMP_MAX_TASK_PRIORITY : Sets the maximum priority of a task .

OMP_NESTED : Enables the use of nested parallel regions. If TRUE then the members of a thread team can create new thread teams.

OMP_NUM_THREADS : Sets the number of simultaneous threads.

OMP_PROC_BIND : Sets whether the threads can be moved between processors.

OMP_PLACES : Configures the CPUs in which the wires must be fixed.

OMP_STACKSIZE : Sets the size of the stack of each thread.

OMP_SCHEDULE : Set the schedule type by default.

OMP_THREAD_LIMIT : Sets the maximum number of threads.

OMP_WAIT_POLICY : It configures the wait algorithm in the barriers. It can be active or passive waiting.

https://es.wikipedia.org/wiki/OpenMP

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OMP_CANCELLATION

OMP_CANCELLATION policy

Sets the cancel-var ICV. policy may be true or false. If true, the effects of the cancel construct and of cancellation points are enabled and cancellation is activated

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OMP_DEFAULT_DEVICE

OMP_DEFAULT_DEVICE device

Sets the default-device-var ICV that controls the default device number to use in device constructs.

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OMP_DISPLAY_ENV

OMP_DISPLAY_ENV var

If var is TRUE, instructs the runtime to display the OpenMP version number and the value of the ICVs associated with the environment variables as name=valuepairs. If var is VERBOSE, the runtime may also display vendor-specific variables. If var is FALSE, no information is displayed.

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OMP_DYNAMIC

OMP_DYNAMIC dynamic

Sets the dyn-var ICV. If true, the implementation may dynamically adjust the number of threads to use for executing parallel regions

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OMP_DYNAMIC

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Sets the dyn-var ICV. If true, the implementation may dynamically adjust the number of threads to use for executing parallel regions

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OMP_MAX_ACTIVE_LEVELS

OMP_MAX_ACTIVE_LEVELS levels

Sets the max-active-levels-var ICV that controls the maximum number of nested active parallel regions.

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OMP_NESTED

OMP_NESTED nested

Sets the nest-var ICV to enable or to disable nested parallelism. Valid values for nested are true or false.

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OMP_NUM_THREADS

OMP_NUM_THREADS list

Sets the nthreads-var ICV for the number of threads to use for parallel regions.

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OMP_PLACES

OMP_PLACES places

Sets the place-partition-var ICV that defines the OpenMP places available to the execution environment. places is an abstract name (threads, cores, sockets, or imple-mentation-defined), or a list of non-negative numbers.

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OMP_PROC_BIND

OMP_PROC_BIND policy

Sets the value of the global bind-var ICV, which sets the thread affinity policy to be used for parallel regions at the corresponding nested level. policy can be the values true, false, or a comma-separated list of master, close, or spread in quotes.

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OMP_SCHEDULE

OMP_SCHEDULE type[,chunk]

Sets the run-sched-var ICV for the runtime schedule type and chunk size. Valid OpenMP schedule types are static, dynamic, guided, or auto.

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OMP_STACKSIZE

OMP_STACKSIZE size[B | K | M | G]

Sets the stacksize-var ICV that specifies the size of the stack for threads created by the OpenMP implementation. size is a positive integer that specifies stack size. If unit is not specified, size is measured in kilobytes (K).

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OMP_THREAD_LIMIT

OMP_THREAD_LIMIT limit

Sets the thread-limit-var ICV that controls the number of threads participating in the OpenMP program.

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OMP_WAIT_POLICY

OMP_WAIT_POLICY policy

Sets the wait-policy-var ICV that provides a hint to an OpenMP implementation about the desired behavior of waiting threads. Valid values for policy are ACTIVE(waiting threads consume processor cycles while waiting) and PASSIVE.

https://www.openmp.org/wp-content/uploads/OpenMP-4.0-C.pdf

References

[1] ftp://ftp.geoinfo.tuwien.ac.at/navratil/HaskellTutorial.pdf

[2] https://www.umiacs.umd.edu/~hal/docs/daume02yaht.pdf