Worker Threads

TLC can run multiple threads to compute and check the set of reachable states in parallel. You can choose how many such worker threads it should use in the model's How to run? section of the Model Overview page. There is no point using more threads than your computer has physical processors (known these days as *cores*).

With a good Java runtime and good operating system support for multithreading, we have found that TLC will run almost n times faster using n cores, for n up to 8. With Oracle's Java runtime and Windows 7, using two worker threads speeds up TLC by a factor of about 1.5 on this spec.

TLC can run hundreds of threads using multiple networked computers. See the Toolbox's help pages to find out how to make it do that.

TLC checks liveness properties by executing an algorithm on the state graph. The number of threads TLC can use for this depends on the liveness property, but is usually quite small—often, just 1. Moreover, checking liveness slows down computation of the state graph.

CLOSE