

# Kernel-Level Threads

**Kernel-level threads** kernel provides system calls to create and manage threads

- 😊 Kernel has full knowledge of all threads
  - ▶ Scheduler may choose to give a process with 10 threads more time than process with only 1 thread
- 😊 Good for applications that frequently block (e.g. server processes with frequent interprocess communication)
- 😞 Slow – thread operations are 100s of times slower than for user-level threads
- 😞 Significant overhead and increased kernel complexity – kernel must manage and schedule threads as well as processes
  - ▶ Requires a full thread control block (TCB) for each thread