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Altri autori (Persone)	LagergrenMarcus
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Nota di contenuto	Cover; Copyright; Credits; Foreword; About the Authors; About the Reviewers; Table of Contents; Preface; Chapter 1: Getting Started; Obtaining the JRockit JVM; Migrating to JRockit; Command-line options; System properties; Standardized options; Non-standard options; Changes in behavior; A note on JRockit versioning; Getting help; Summary; Chapter 2: Adaptive Code Generation; Platform independence; The Java Virtual Machine; Stack machine; Bytecode format; Operations and operands; The constant pool; Code generation strategies; Pure bytecode interpretation; Static compilation Total JIT compilationMixed mode interpretation; Adaptive code generation; Determining ""hotness""; Invocation counters; Software-based thread sampling; Hardware-based sampling; Optimizing a changing program; Inside the JIT compiler; Working with bytecode; Bytecode obfuscation; Bytecode ""optimizers""; Abstract syntax trees; Where to optimize; The JRockit code pipeline; Why JRockit has no bytecode interpreter; Bootstrapping; Runtime code generation; Trampolines; Code generation requests; Optimization requests; On-stack replacement; Bookkeeping; A walkthrough of method generation

in JRockit

The JRockit IR formatJIT compilation; Generating optimized code; Controlling code generation in JRockit; Command-line flags and directive files; Command-line flags; Directive files; Summary; Chapter 3: Adaptive Memory Management; The concept of automatic memory management; Adaptive memory management; Advantages of automatic memory management; Disadvantages of automatic memory management; Fundamental heap management; Allocating and releasing objects; Fragmentation and compaction; Garbage collection algorithms; Reference counting; Tracing techniques; Mark and sweep; Stop and copy

Stopping the worldConservative versus exact collectors; Livemaps; Generational garbage collection; Multi generation nurseries; Write barriers; Throughput versus low latency; Optimizing for throughput; Optimizing for low latency; Garbage collection in JRockit; Old collections; Nursery collections; Permanent generations; Compaction; Speeding it up and making it scale; Thread local allocation; Larger heaps; 32-Bits and the 4-GB Barrier; The 64-bit world; Cache friendliness; Prefetching; Data placement; NUMA; Large pages; Adaptability; Near-real-time garbage collection; Hard and soft real-time

JRockit Real TimeDoes the soft real-time approach work?; How does it work?; The Java memory API; Finalizers; References; Weak references; Soft references; Phantom references; Differences in JVM behavior; Pitfalls and false optimizations; Java is not C++; Controlling JRockit memory management; Basic switches; Outputting GC data; Set initial and maximum heap size; Controlling what to optimize for; Specifying a garbage collection strategy; Compressed references; Advanced switches; Summary; Chapter 4: Threads and Synchronization; Fundamental concepts; Hard to debug; Difficult to optimize

Latency analysis

Sommario/riassunto

Develop and manage robust Java applications with Oracle's high-performance JRockit Java Virtual Machine with this book and eBook