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Is Java Performance 'Good Enough'?

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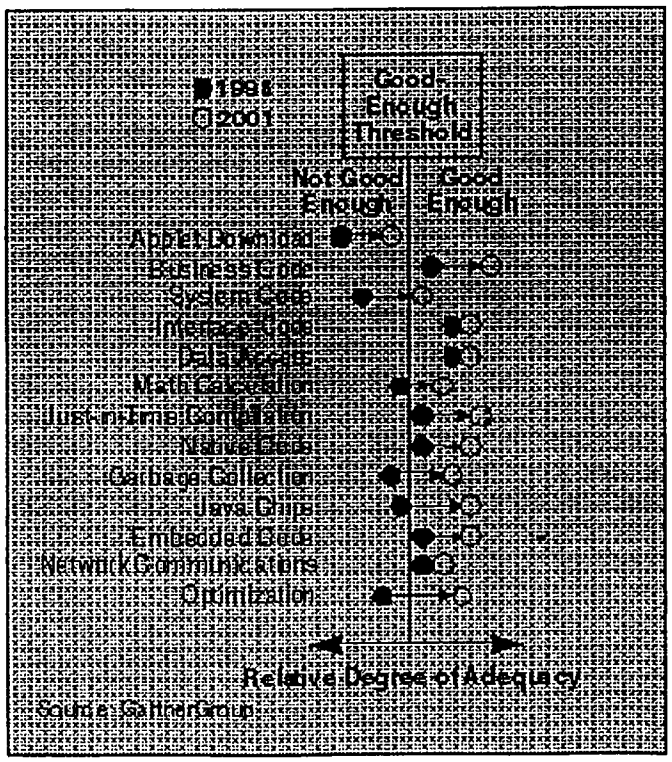
Rather than dwelling on blanket statements about Java speed, organizations should embrace today's Java mechanisms that provide good-enough performance if they offer effective solutions.

Here, we examine some of the areas where Java performance needs improvement and indicate which are "good enough" for effective use today.

When Good Enough is OK: The concept of good-enough performance can be used to illustrate when performance concerns, and which areas these concerns, should affect Java decisions. This concept is predicated on the belief that performance need not be superlative in many areas of development and deployment, but merely good enough to provide an effective solution. Figure 11 provides a comparison of areas where Java performance can be considered capable today and others where it will need to improve through 2001.

Figure 11

Java Performance Comparison



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Areas of Concern: Blanket statements about Java's performance are typically misleading and

usually incorrect. Industry tests place Java performance at anywhere from 20 percent to 70 percent of C++ performance. Areas where performance needs significant improvement include floating-point math calculations, system-level code (including middleware) and the aforementioned applet download time. It is important to bear in mind that even areas where performance is considered slow can still be useful if the tradeoff of speed vs. a given Java feature (e.g., cross-platform support, elegance of language or a thin-client option) is considered to be worth pursuing.

Bottom Line: By and large, Java performance is good enough for the majority of today's Web applications. In addition, by 2001, Java performance will cease to be a major barrier to adoption of the technology for better than 95 percent of deployment opportunities (0.8 probability). Prior to that time, non-Java technologies should be used where areas of poor Java performance are of concern, unless speed can be traded for opportunity. Rather than dwelling on blanket statements about Java speed, organizations should embrace today's Java mechanisms that provide good-enough performance if they offer effective solutions.

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