

Remote Pointcut

— A Language Construct for Distributed AOP*

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This paper presents our extension to AspectJ for distributed computing. Although AspectJ allows Java developers to modularize a crosscutting concern as an aspect, this paper shows that some crosscutting concerns in distributed computing are not modularized in AspectJ as simple aspects. Rather, aspects modularizing such a concern tend to be in code spread over multiple hosts and explicitly communicated across the network. This paper illustrates this fact with an example of testing a distributed program written in AspectJ with Java RMI. To address this complexity caused by network communication, this paper proposes an extension to AspectJ for distributed computing. The language construct that we call remote pointcut enables developers to write a simple aspect to modularize crosscutting concerns distributed on multiple hosts. This paper presents DJcutter, which is our AspectJ-like language supporting remote pointcuts.

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