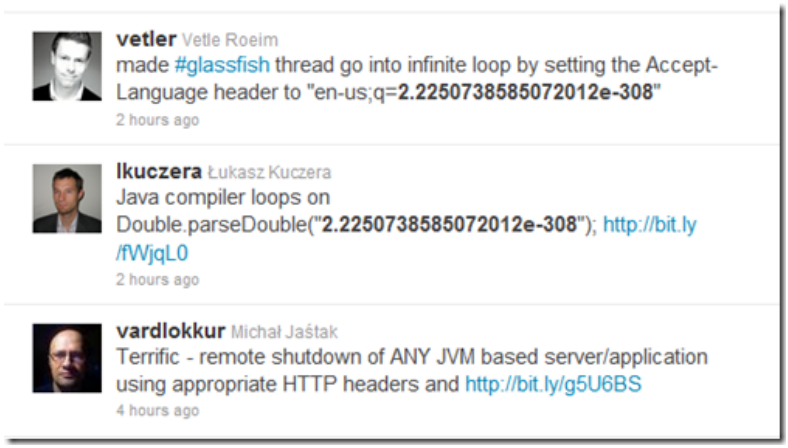
Mitigate Java Vulnerability with iRules

Jason Rahm, 2011-03-02

I got a request yesterday morning to asking if there was a way to drop HTTP requests if a certain number was referenced in the Accept-Language header. The user referenced this post on Exploring Binary. The number, 2.2250738585072012e-308, causes the Java runtime and compiler to go into an infinite loop when converting it to double-precision binary floating-point. Not good. Twitter is ablaze on the issue, and there is a good discussion thread on Hacker News as well. So how do you stop it? At first, this appeared to be a no-brainer, just copy that string and drop if found in that header, right? Well, there's a catch. A few actually. This number can be represented in many ways:



- Decimal point placement => 0.00022250738585072012e-304
- Leading Zeroes => 00000000002.2250738585072012e-308
- Trailing Zeroes => 2.22507385850720120000e-308
- Leading Zeroes in the Exponent => 2.2250738585072012e-00308
- Superfluous Digits past digit 17 => 2.22507385850720129978000001e-308

String match seemed the perfect fit for this as I need a few wildcards to sort this out. I started in the Tcl shell just to make sure all the use cases matched:

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