

open



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JKstat - kstats and Java

Peter Tribble



1. What's a kstat anyway?

- kstats = kernel statistics
- Namespace is hierarchical
 - module:instance:name:statistic
 - (naming can be erratic!)
 - kstats also have a *class* and *type*
 - Types: NAMED, RAW, IO, ...
- Examples:
 - `cpu_info:0:cpu_info0:clock_MHz` = 2000
 - `unix:0:system_misc:avenrun_1min` = 29
 - `sd:10:sd10:nread` = 378195599



2. How do you access a kstat?

- From C it's quite easy:
 - kstat_open gives you a kstat_ctl_t
 - kstat_lookup gives you a kstat_t
 - Or walk the chain looking for kstats of interest
 - kstat_read gets you the data
 - (which you may have to interpret)
- From perl it's easier
 - kstat(1M) command
 - Associated Sun::Solaris::Kstat module
- Why not Java?



3. Connecting from Java

- Bridge to C using JNI
 - Non portable, but doesn't matter
- Functionality to:
 - Enumerate all kstats
 - Create a filtered subset
 - Retrieve a kstat and its data (as a hash)
- Demo utilities
 - Test implementation
 - Drive design
 - Cool tools!



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Thank you!

Peter Tribble

peter.tribble@gmail.com

<http://ptribble.blogspot.com/>

<http://www.petertribble.co.uk/Solaris/>

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