**OPROFILE**

By

Regards

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OProfile is a system-wide profiler for Linux systems, capable of profiling all running code at low overhead. It consists of a kernel driver and a daemon for collecting sample data, and several post-profiling tools for turning data into information

OProfile is optional component during KERNEL build. It may have been enabled by default. You can confirm that the kernel has OProfile support, by looking for following lines in the <mydroid\_folder>/kernel/.config file OProfile can be used for profiling the Android kernel and native applications.

1. Make sure your kernel is compiled with OProfile support

(CONFIG\_OPROFILE=y,

CONFIG\_HAVE\_OPROFILE=y)

1. If you want to profile the kernel, have the vmlinux binary ready
2. If you want to profile a native application, compile it with debug symbols (-g)
3. After system has loaded, execute once:

“opcontrol –setup –event=CPU\_CYCLES:50000″

If you also want to profile the kernel, add the params “–vmlinux=full-path-to-your-vmlinux-file-on-target –kernel-range=start-of-kernel-text-section, end-of-kernel-text-section”

(use your toolchain’s objdump to find the relevant addresses)

1. Before beginning the profiling, execute on the target:

“opcontrol –reset”

1. To begin profiling, execute:

“opcontrol –start”

1. During profiling, you might want to make sure that samples are being collected:

“opcontrol –status”

1. Stop profiling by executing:

“opcontrol –stop”

1. On your host: cd mydroid/external/oprofile
2. On your host, execute:

“./opimport\_pull result\_folder” (imports the  
samples collected from the target, saves them in a newly created folder  
and prints a basic report)

1. On your host, execute:

“cd mydroid/prebuilt/linux-x86/oprofile/bin”

1. To get an annotated report, execute:

“./opannotate –p <path-to-folder-with-your-native-app-w-symbols-and-any-other-binary-you-want-detailed-report-of-like-libc-so-for-example> -s -d <path-to-source-files-e.g.-mydroid> –session-dir=path-to-your-samples-dir”

1. To get a simple report, execute:

“./opreport -g -l -p <same-path-like-before> –session-dir=path-to-your-samples-dir”