The AML Debugger

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This document describes the usage of the AML debugger embedded in the Linux kernel.

1. Build the debugger

The following kernel configuration items are required to enable the AML debugger interface from the Linux kernel:

```
CONFIG_ACPI_DEBUGGER=y
CONFIG_ACPI_DEBUGGER_USER=m
```

The userspace utilities can be built from the kernel source tree using the following commands:

```
$ cd tools
$ make acpi
```

The resultant userspace tool binary is then located at:

```
tools/power/acpi/acpidbg
```

It can be installed to system directories by running "make install" (as a sufficiently privileged user).

2. Start the userspace debugger interface

After booting the kernel with the debugger built-in, the debugger can be started by using the following commands:

```
# mount -t debugfs none /sys/kernel/debug
# modprobe acpi_dbg
# tools/power/acpi/acpidbg
```

That spawns the interactive AML debugger environment where you can execute debugger commands.

The commands are documented in the "ACPICA Overview and Programmer Reference" that can be downloaded from

https://acpica.org/documentation

The detailed debugger commands reference is located in Chapter 12 "ACPICA Debugger Reference". The "help" command can be used for a quick reference.

3. Stop the userspace debugger interface

The interactive debugger interface can be closed by pressing Ctrl+C or using the "quit" or "exit" commands. When finished, unload the module with:

```
# rmmod acpi_dbg
```

The module unloading may fail if there is an acpidbg instance running.

4. Run the debugger in a script

It may be useful to run the AML debugger in a test script. "acpidbg" supports this in a special "batch" mode. For example, the following command outputs the entire ACPI namespace:

```
# acpidbg -b "namespace"
```