# The AML Debugger


**Author:** Lv Zheng <lv.zheng@intel.com>

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"
```