

Shell Script to List ACPI tables

Finnbarr P. Murphy

(fpm@fpmurphy.com)

ACPI (Advanced Configuration and Power Interface) defines platform-independent interfaces for hardware discovery, configuration, power management and monitoring, and these tables contain lots of useful information for low-level programmers such as myself.

Here is a short shell script which I clobbered together a few days ago to list out the ACPI tables on a system together with a short description of each table where possible.

```
#!/bin/bash
#
# Author: Finnbarr P. Murphy
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# Purpose: List ACPI tables
# License: BSD
#
TMP1=$(mktemp -u -p /var/tmp/ acpiXXXXXX)
TMP2=$(mktemp -u -p /var/tmp/ acpiXXXXXX)
TMP3=$(mktemp -u -p /var/tmp/ acpiXXXXXX)
cat << EOF | sed -e 's/^[ t]*//' > $TMP1
  APIC, Multiple APIC Description
  BERT, Boot Error Record
  BGRT, Boot Graphics Resource
  BOOT, Simple Boot Flag
  CPEP, Corrected Platform Error Polling
  CRST, Core System Resources
  DBG2, Microsoft Debug Port2
  DSDT, Differentiated System Description
  ECDT, Embedded Controller Boot Resources
  EINJ, Error Injection
  ERST, Error Record Serialization
  FACP, Fixed ACPI Description
  FACS, Firmware ACPI Control Structure
  FADT, Fixed ACPI Description
  GTDT, Generic Timer Description
  HEST, Hardware Error Source
  HPET, High Precision Event Timer
  MADT, Multiple APIC Description
  MCFG, Memory Configuration
  MSCT, Maximum System Characteristics
  MSDM, Microsoft Data Management
  PMTT, Platform Memory Topology
  PSDT, Persistent System Description
  RASF, RAS Feature
  RSDP, Root System Description Pointer
  RSDT, Root System Description
  SBST, Smart Battery
  SLIC, Software Licensing Description
  SLIT, System Locality Distance Information
  SPCR, Serial Port Console Redirection
  SRAT, System Resource Affinity
  SSDT, Secondary System Descriptor
  XSDT, Extended System Description
EOF
# get the list of ACPI tables that Linux knows about
ls -l /sys/firmware/acpi/tables | sed '/dynamic/d' > $TMP2
ls -l /sys/firmware/acpi/tables/dynamic >> $TMP2
sort $TMP2 > $TMP3
# output each table with a description where possible
```

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```
awk -F, 'NR == FNR { a[$1] = $2; next }
{
    desc = a[substr($1,1,4)]
    if (desc == "") {
        desc = " Unknown ACPI Table"
    }
    printf "%st-%s Tabellen", $1, desc
}' $TMP1 $TMP3
rm -f $TMP1 $TMP2 $TMP3
exit 0
```

The above code should be self-explanatory to most experienced Linux administrators who are familiar with *bash* and *awk*.

Here is the output for my current system:

```
$ ./listapci
APIC      - Multiple APIC Description Table
BGRT      - Boot Graphics Resource Table
DSDT      - Differentiated System Description Table
FACP      - Fixed ACPI Description Table
FACS      - Firmware ACPI Control Structure Table
HPET      - High Precision Event Timer Table
MCFG      - Memory Configuration Table
SSDT1     - Secondary System Descriptor Table
SSDT2     - Secondary System Descriptor Table
SSDT3     - Secondary System Descriptor Table
SSDT4     - Secondary System Descriptor Table
SSDT5     - Secondary System Descriptor Table
SSDT6     - Secondary System Descriptor Table
$
```

The list of ACPI tables included with the script contains the most common ACPI tables up to revision 5 of the ACPI specification. It does not include some of the more uncommon tables. You can easily add those yourself if you are so inclined.