dmidecode

SYNOPSIS

dmidecode [OPTIONS]

DESCRIPTION

dmidecode is a tool for dumping a computer's DMI (some say SMBIOS) table contents in a human-readable format. This table contains a description of the system's hardware components, as well as other useful pieces of information such as serial numbers and BIOS revision. Thanks to this table, you can retrieve this information without having to probe for the actual hardware. While this is a good point in terms of report speed and safeness, this also makes the presented information possibly unreliable.

The DMI table doesn't only describe what the system is currently made of, it also can report the possible evolutions (such as the fastest supported CPU or the maximal amount of memory supported).

SMBIOS stands for System Management BIOS, while DMI stands for Desktop Management Interface. Both standards are tightly related and developed by the DMTF (Desktop Management Task Force).

As you run it, dmidecode will try to locate the DMI table. If it succeeds, it will then parse this table and display a list of records like this one:

```
Handle 0x0002, DMI type 2, 8 bytes.  Base Board Information
        Manufacturer: Intel
        Product Name: C440GX+
        Version: 727281-001
        Serial Number: INCY92700942
```

Each record has:

- A handle. This is a unique identifier, which allows records to reference each other. For example, processor records usually reference cache memory records using their handles.
- A type. The SMBIOS specification defines different types of elements a computer can be made of. In this example, the type is 2, which means that the record contains "Base Board Information".
- A size. Each record has a 4-byte header (2 for the handle, 1 for the type, 1 for the size), the rest is used by the record data. This value doesn't take text strings into account (these are placed at the end of the record), so the actual length of the record may be (and is often) greater than the displayed value.
- Decoded values. The information presented of course depends on the type of record. Here, we learn about the board's manufacturer, model, version and serial number.

bios-version, bios-release-date, system-manufacturer, system-product-name, system-version, system-serial-number, system-uuid,

baseboard-manufacturer, baseboard-product-name, baseboard-version, baseboard-serial-number, baseboard-asset-tag, chassis-manufacturer, chassis-type, chassis-version, chassis-serial-number, chassis-asset-tag, processor-family, processor-manufacturer, processor-version, processor-frequency. Each keyword corresponds to a given DMI type and a given offset within this entry type. Not all strings may be meaningful or even defined on all systems. Some keywords may return more than one result on some systems (e.g. processor-version on a multi-processor system). If KEYWORD is not provided or not valid, a list of all valid keywords is printed and dmidecode exits with an error. This option cannot be used more than once, and implies --quiet. Mutually exclusive with --type and --dump.

-t, --type TYPE
Only display the entries of type TYPE. TYPE can be either a DMI type number, or a comma-separated list of type numbers, or a keyword from the following list: bios, system, baseboard, chassis, processor, memory, cache, connector, slot. Refer to the DMI TYPES section below for details. If this option is used more than once, the set of displayed entries will be the union of all the given types. If TYPE is not provided or not valid, a list of all valid keywords is printed and dmidecode exits with an error. Mutually exclusive with --string.

-u, --dump
Do not decode the entries, dump their contents as hexadecimal instead. Note that this is still a text output, no binary data will be thrown upon you. The strings attached to each entry are displayed as both hexadecimal and ASCII. This option is mainly useful for debugging. Mutually exclusive with --quiet and --string.

-h, --help
Display usage information and exit

-V, --version
Display the version and exit

DMI TYPES
The SMBIOS specification defines the following DMI types:

Type	Information
0	BIOS
1	System
2	Base Board
3	Chassis
4	Processor
5	Memory Controller
17	Memory Device
18	32-bit Memory Error
19	Memory Array Mapped Address
20	Memory Device Mapped Address
21	Built-in Pointing Device
22	Portable Battery
23	System Reset

```
  24   Hardware Security
  25   System Power Controls
  26   Voltage Probe
  27   Cooling Device
  28   Temperature Probe
  29   Electrical Current Probe
  30   Out-of-band Remote Access
  31   Boot Integrity Services
  32   System Boot
  33   64-bit Memory Error
  34   Management Device
  35   Management Device Component
  36   Management Device Threshold Data
  37   Memory Channel
  38   IPMI Device
  39   Power Supply
```

Additionally, type 126 is used for disabled entries and type 127 is an end-of-table marker. Types 128 to 255 are for OEM-specific data. dmidecode will display these entries by default, but it can only decode them when the vendors have contributed documentation or code for them.

Keywords can be used instead of type numbers with --type. Each keyword is equivalent to a list of type numbers:

Keyword	Types
bios	0, 13
system	1, 12, 15, 23, 32
baseboard	2, 10
chassis	3
processor	4
memory	5, 6, 16, 17
cache	7
connector	8
slot	9

Keywords are matched case-insensitively. The following command lines are equivalent:

- dmidecode --type 0 --type 13
- dmidecode --type 0,13
- dmidecode --type bios

SEE ALSO

biosdecode(8), **mem(4)**, **ownership(8)**, **vpddecode(8)**