**Finding System Information:**

**uname –a**

**cat /etc/redhat-release**

**dmidecode**

**uname:**

Sometimes it is required to quickly determine details like kernel name, version, hostname, etc of the Linux box you are using.

Even though you can find all these details in respective files present under the proc filesystem, it is easier to use uname utility to get these information quickly.

The basic syntax of the uname command is:

uname [OPTION]...

Now lets look at some examples that demonstrate the usage of ‘uname’ command.

uname without any option

When the ‘uname’ command is run without any option then it prints just the kernel name. So the output below shows that its the ‘Linux’ kernel that is used by this system.

$ uname

Linux

You can also use uname -s, which also displays the kernel name.

$ uname -s

Linux

Get the network node host name using -n option

Use uname -n option to fetch the network node host name of your Linux box.

$ uname -n

dev-server

The output above will be the same as the output of the hostname command.

Get kernel release using -r option

uname command can also be used to fetch the kernel release information. The option -r can be used for this purpose.

$ uname -r

2.6.32-100.28.5.el6.x86\_64

Get the kernel version using -v option

uname command can also be used to fetch the kernel version information. The option -v can be used for this purpose.

$ uname -v

#1 SMP Wed Feb 2 18:40:23 EST 2011

Get the machine hardware name using -m option

uname command can also be used to fetch the machine hardware name. The option -m can be used for this purpose. This indicates that it is a 64-bit system.

$ uname -m

x86\_64

Get the processor type using -p option

uname command can also be used to fetch the processor type information. The option -p can be used for this purpose. If the uname command is not able to fetch the processor type information then it produces ‘unknown’ in the output.

$ uname -p

x86\_64

Sometimes you might see ‘unknown’ as the output of this command, if uname was not able to fetch the information on processor type.

Get the hardware platform using -i option

uname command can also be used to fetch the hardware platform information. The option -i can be used for this purpose. If the uname command is not able to fetch the hardware platform information then it produces ‘unknown’ in the output.

$ uname -i

x86\_64

Sometimes you might see ‘unknown’ as the output of this command, if uname was not able to fetch the information about the platform.

Get the operating system name using the -o option

uname command can also be used to fetch the operating system name. The option -o can be used for this purpose.

For example :

$ uname -o

GNU/Linux

**cat /etc/redhat-release:**

* This file provides information about your system distribution and its version
* You can also run /etc/\*rel\* for systems that are not on CentOS or Redhat

**Dmidecode:**

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.

Take a look at

man dmidecode

to find out all options. The most common option is the --type switch which takes one or more of the following keywords:

bios, system, baseboard, chassis, processor, memory, cache, connector, slot

You can as well specify one or more of the following numbers:

Type Information

----------------------------------------

0 BIOS

1 System

2 Base Board

3 Chassis

4 Processor

5 Memory Controller

6 Memory Module

7 Cache

8 Port Connector

9 System Slots

10 On Board Devices

11 OEM Strings

12 System Configuration Options

13 BIOS Language

14 Group Associations

15 System Event Log

16 Physical Memory Array

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

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

Here are a few sample outputs from one of my servers:

**dmidecode --type bios**

server1:/home/admin# dmidecode --type bios

# dmidecode 2.8

SMBIOS 2.5 present.

Handle 0x0000, DMI type 0, 24 bytes

BIOS Information

Vendor: American Megatrends Inc.

Version: V1.5B2

Release Date: 10/31/2007

Address: 0xF0000

Runtime Size: 64 kB

ROM Size: 1024 kB

Characteristics:

ISA is supported

PCI is supported

PNP is supported

APM is supported

BIOS is upgradeable

BIOS shadowing is allowed

ESCD support is available

Boot from CD is supported

Selectable boot is supported

BIOS ROM is socketed

EDD is supported

5.25"/1.2 MB floppy services are supported (int 13h)

3.5"/720 KB floppy services are supported (int 13h)

3.5"/2.88 MB floppy services are supported (int 13h)

Print screen service is supported (int 5h)

8042 keyboard services are supported (int 9h)

Serial services are supported (int 14h)

Printer services are supported (int 17h)

CGA/mono video services are supported (int 10h)

ACPI is supported

USB legacy is supported

LS-120 boot is supported

ATAPI Zip drive boot is supported

BIOS boot specification is supported

Targeted content distribution is supported

BIOS Revision: 8.14

Handle 0x0028, DMI type 13, 22 bytes

BIOS Language Information

Installable Languages: 1

en|US|iso8859-1

Currently Installed Language: en|US|iso8859-1

server1:/home/admin#

**dmidecode --type system**

server1:/home/admin# dmidecode --type system

# dmidecode 2.8

SMBIOS 2.5 present.

Handle 0x0001, DMI type 1, 27 bytes

System Information

Manufacturer: MICRO-STAR INTERANTIONAL CO.,LTD

Product Name: MS-7368

Version: 1.0

Serial Number: To Be Filled By O.E.M.

UUID: Not Present

Wake-up Type: Power Switch

SKU Number: To Be Filled By O.E.M.

Family: To Be Filled By O.E.M.

Handle 0x0027, DMI type 12, 5 bytes

System Configuration Options

Option 1: To Be Filled By O.E.M.

server1:/home/admin#

dmidecode --type baseboard

server1:/home/admin# dmidecode --type baseboard

# dmidecode 2.8

SMBIOS 2.5 present.

Handle 0x0002, DMI type 2, 15 bytes

Base Board Information

Manufacturer: MICRO-STAR INTERANTIONAL CO.,LTD

Product Name: MS-7368

Version: 1.0

Serial Number: To be filled by O.E.M.

Asset Tag: To Be Filled By O.E.M.

Features:

Board is a hosting board

Board is replaceable

Location In Chassis: To Be Filled By O.E.M.

Chassis Handle: 0x0003

Type: Motherboard

Contained Object Handles: 0

Handle 0x0025, DMI type 10, 6 bytes

On Board Device Information

Type: Video

Status: Enabled

Description: To Be Filled By O.E.M.

server1:/home/admin#

dmidecode --type chassis

server1:/home/admin# dmidecode --type chassis

# dmidecode 2.8

SMBIOS 2.5 present.

Handle 0x0003, DMI type 3, 21 bytes

Chassis Information

Manufacturer: To Be Filled By O.E.M.

Type: Desktop

Lock: Not Present

Version: To Be Filled By O.E.M.

Serial Number: To Be Filled By O.E.M.

Asset Tag: To Be Filled By O.E.M.

Boot-up State: Safe

Power Supply State: Safe

Thermal State: Safe

Security Status: None

OEM Information: 0x00000000

Heigth: Unspecified

Number Of Power Cords: 1

Contained Elements: 0

server1:/home/admin#

dmidecode --type processor

server1:/home/admin# dmidecode --type processor

# dmidecode 2.8

SMBIOS 2.5 present.

Handle 0x0004, DMI type 4, 40 bytes

Processor Information

Socket Designation: CPU 1

Type: Central Processor

Family: Other

Manufacturer: AMD

ID: B2 0F 06 00 FF FB 8B 17

Version: AMD Athlon(tm) 64 X2 Dual Core Processor 5600+

Voltage: 1.5 V

External Clock: 200 MHz

Max Speed: 2800 MHz

Current Speed: 2900 MHz

Status: Populated, Enabled

Upgrade: Other

L1 Cache Handle: 0x0005

L2 Cache Handle: 0x0006

L3 Cache Handle: 0x0007

Serial Number: To Be Filled By O.E.M.

Asset Tag: To Be Filled By O.E.M.

Part Number: To Be Filled By O.E.M.

server1:/home/admin#

dmidecode --type memory

server1:/home/admin# dmidecode --type memory

# dmidecode 2.8

SMBIOS 2.5 present.

Handle 0x0008, DMI type 5, 20 bytes

Memory Controller Information

Error Detecting Method: 64-bit ECC

Error Correcting Capabilities:

None

Supported Interleave: One-way Interleave

Current Interleave: One-way Interleave

Maximum Memory Module Size: 512 MB

Maximum Total Memory Size: 1024 MB

Supported Speeds:

70 ns

60 ns

Supported Memory Types:

SIMM

DIMM

SDRAM

Memory Module Voltage: 3.3 V

Associated Memory Slots: 2

0x0009

0x000A

Enabled Error Correcting Capabilities:

None

Handle 0x0009, DMI type 6, 12 bytes

Memory Module Information

Socket Designation: DIMM0

Bank Connections: 0 5

Current Speed: 161 ns

Type: ECC DIMM

Installed Size: 1024 MB (Double-bank Connection)

Enabled Size: 1024 MB (Double-bank Connection)

Error Status: OK

Handle 0x000A, DMI type 6, 12 bytes

Memory Module Information

Socket Designation: DIMM1

Bank Connections: 0 5

Current Speed: 163 ns

Type: ECC DIMM

Installed Size: 1024 MB (Double-bank Connection)

Enabled Size: 1024 MB (Double-bank Connection)

Error Status: OK

Handle 0x0029, DMI type 16, 15 bytes

Physical Memory Array

Location: System Board Or Motherboard

Use: System Memory

Error Correction Type: None

Maximum Capacity: 8 GB

Error Information Handle: Not Provided

Number Of Devices: 2

Handle 0x002B, DMI type 17, 27 bytes

Memory Device

Array Handle: 0x0029

Error Information Handle: Not Provided

Total Width: 64 bits

Data Width: 72 bits

Size: 1024 MB

Form Factor: DIMM

Set: None

Locator: DIMM0

Bank Locator: BANK0

Type: DDR2

Type Detail: Synchronous

Speed: 333 MHz (3.0 ns)

Manufacturer: Manufacturer0

Serial Number: SerNum0

Asset Tag: AssetTagNum0

Part Number: PartNum0

Handle 0x002D, DMI type 17, 27 bytes

Memory Device

Array Handle: 0x0029

Error Information Handle: Not Provided

Total Width: 64 bits

Data Width: 72 bits

Size: 1024 MB

Form Factor: DIMM

Set: None

Locator: DIMM1

Bank Locator: BANK1

Type: DDR2

Type Detail: Synchronous

Speed: 333 MHz (3.0 ns)

Manufacturer: Manufacturer1

Serial Number: SerNum1

Asset Tag: AssetTagNum1

Part Number: PartNum1

server1:/home/admin#

dmidecode --type cache

server1:/home/admin# dmidecode --type cache

# dmidecode 2.8

SMBIOS 2.5 present.

Handle 0x0005, DMI type 7, 19 bytes

Cache Information

Socket Designation: L1-Cache

Configuration: Enabled, Not Socketed, Level 1

Operational Mode: Varies With Memory Address

Location: Internal

Installed Size: 256 KB

Maximum Size: 256 KB

Supported SRAM Types:

Pipeline Burst

Installed SRAM Type: Pipeline Burst

Speed: Unknown

Error Correction Type: Single-bit ECC

System Type: Data

Associativity: 4-way Set-associative

Handle 0x0006, DMI type 7, 19 bytes

Cache Information

Socket Designation: L2-Cache

Configuration: Enabled, Not Socketed, Level 2

Operational Mode: Varies With Memory Address

Location: Internal

Installed Size: 1024 KB

Maximum Size: 1024 KB

Supported SRAM Types:

Pipeline Burst

Installed SRAM Type: Pipeline Burst

Speed: Unknown

Error Correction Type: Single-bit ECC

System Type: Unified

Associativity: 4-way Set-associative

Handle 0x0007, DMI type 7, 19 bytes

Cache Information

Socket Designation: L3-Cache

Configuration: Disabled, Not Socketed, Level 3

Operational Mode: Unknown

Location: Internal

Installed Size: 0 KB

Maximum Size: 0 KB

Supported SRAM Types:

Unknown

Installed SRAM Type: Unknown

Speed: Unknown

Error Correction Type: Unknown

System Type: Unknown

Associativity: Unknown

server1:/home/admin#

dmidecode --type connector

server1:/home/admin# dmidecode --type connector

# dmidecode 2.8

SMBIOS 2.5 present.

Handle 0x000B, DMI type 8, 9 bytes

Port Connector Information

Internal Reference Designator: J1A1

Internal Connector Type: None

External Reference Designator: PS2Mouse

External Connector Type: PS/2

Port Type: Mouse Port

Handle 0x000C, DMI type 8, 9 bytes

Port Connector Information

Internal Reference Designator: J1A1

Internal Connector Type: None

External Reference Designator: Keyboard

External Connector Type: PS/2

Port Type: Keyboard Port

Handle 0x000D, DMI type 8, 9 bytes

Port Connector Information

Internal Reference Designator: J2A2

Internal Connector Type: None

External Reference Designator: USB1

External Connector Type: Access Bus (USB)

Port Type: USB

Handle 0x000E, DMI type 8, 9 bytes

Port Connector Information

Internal Reference Designator: J2A2

Internal Connector Type: None

External Reference Designator: USB2

External Connector Type: Access Bus (USB)

Port Type: USB

Handle 0x000F, DMI type 8, 9 bytes

Port Connector Information

Internal Reference Designator: J4A1

Internal Connector Type: None

External Reference Designator: LPT 1

External Connector Type: DB-25 male

Port Type: Parallel Port ECP/EPP

Handle 0x0010, DMI type 8, 9 bytes

Port Connector Information

Internal Reference Designator: J2A1

Internal Connector Type: None

External Reference Designator: COM A

External Connector Type: DB-9 male

Port Type: Serial Port 16550A Compatible

Handle 0x0011, DMI type 8, 9 bytes

Port Connector Information

Internal Reference Designator: J6A1

Internal Connector Type: None

External Reference Designator: Audio Mic In

External Connector Type: Mini Jack (headphones)

Port Type: Audio Port

Handle 0x0012, DMI type 8, 9 bytes

Port Connector Information

Internal Reference Designator: J6A1

Internal Connector Type: None

External Reference Designator: Audio Line In

External Connector Type: Mini Jack (headphones)

Port Type: Audio Port

Handle 0x0013, DMI type 8, 9 bytes

Port Connector Information

Internal Reference Designator: J6B1 - AUX IN

Internal Connector Type: On Board Sound Input From CD-ROM

External Reference Designator: Not Specified

External Connector Type: None

Port Type: Audio Port

Handle 0x0014, DMI type 8, 9 bytes

Port Connector Information

Internal Reference Designator: J6B2 - CDIN

Internal Connector Type: On Board Sound Input From CD-ROM

External Reference Designator: Not Specified

External Connector Type: None

Port Type: Audio Port

Handle 0x0015, DMI type 8, 9 bytes

Port Connector Information

Internal Reference Designator: J6J2 - PRI IDE

Internal Connector Type: On Board IDE

External Reference Designator: Not Specified

External Connector Type: None

Port Type: Other

Handle 0x0016, DMI type 8, 9 bytes

Port Connector Information

Internal Reference Designator: J6J1 - SEC IDE

Internal Connector Type: On Board IDE

External Reference Designator: Not Specified

External Connector Type: None

Port Type: Other

Handle 0x0017, DMI type 8, 9 bytes

Port Connector Information

Internal Reference Designator: J4J1 - FLOPPY

Internal Connector Type: On Board Floppy

External Reference Designator: Not Specified

External Connector Type: None

Port Type: Other

Handle 0x0018, DMI type 8, 9 bytes

Port Connector Information

Internal Reference Designator: J9H1 - FRONT PNL

Internal Connector Type: 9 Pin Dual Inline (pin 10 cut)

External Reference Designator: Not Specified

External Connector Type: None

Port Type: Other

Handle 0x0019, DMI type 8, 9 bytes

Port Connector Information

Internal Reference Designator: J1B1 - CHASSIS REAR FAN

Internal Connector Type: Other

External Reference Designator: Not Specified

External Connector Type: None

Port Type: Other

Handle 0x001A, DMI type 8, 9 bytes

Port Connector Information

Internal Reference Designator: J2F1 - CPU FAN

Internal Connector Type: Other

External Reference Designator: Not Specified

External Connector Type: None

Port Type: Other

Handle 0x001B, DMI type 8, 9 bytes

Port Connector Information

Internal Reference Designator: J8B4 - FRONT FAN

Internal Connector Type: Other

External Reference Designator: Not Specified

External Connector Type: None

Port Type: Other

Handle 0x001C, DMI type 8, 9 bytes

Port Connector Information

Internal Reference Designator: J9G2 - FNT USB

Internal Connector Type: Other

External Reference Designator: Not Specified

External Connector Type: None

Port Type: Other

Handle 0x001D, DMI type 8, 9 bytes

Port Connector Information

Internal Reference Designator: J6C3 - FP AUD

Internal Connector Type: Other

External Reference Designator: Not Specified

External Connector Type: None

Port Type: Other

Handle 0x001E, DMI type 8, 9 bytes

Port Connector Information

Internal Reference Designator: J9G1 - CONFIG

Internal Connector Type: Other

External Reference Designator: Not Specified

External Connector Type: None

Port Type: Other

Handle 0x001F, DMI type 8, 9 bytes

Port Connector Information

Internal Reference Designator: J8C1 - SCSI LED

Internal Connector Type: Other

External Reference Designator: Not Specified

External Connector Type: None

Port Type: Other

Handle 0x0020, DMI type 8, 9 bytes

Port Connector Information

Internal Reference Designator: J9J2 - INTRUDER

Internal Connector Type: Other

External Reference Designator: Not Specified

External Connector Type: None

Port Type: Other

Handle 0x0021, DMI type 8, 9 bytes

Port Connector Information

Internal Reference Designator: J9G4 - ITP

Internal Connector Type: Other

External Reference Designator: Not Specified

External Connector Type: None

Port Type: Other

Handle 0x0022, DMI type 8, 9 bytes

Port Connector Information

Internal Reference Designator: J2H1 - MAIN POWER

Internal Connector Type: Other

External Reference Designator: Not Specified

External Connector Type: None

Port Type: Other

server1:/home/admin#

dmidecode --type slot

server1:/home/admin# dmidecode --type slot

# dmidecode 2.8

SMBIOS 2.5 present.

Handle 0x0023, DMI type 9, 13 bytes

System Slot Information

Designation: AGP

Type: 32-bit AGP 4x

Current Usage: In Use

Length: Short

ID: 0

Characteristics:

3.3 V is provided

Opening is shared

PME signal is supported

Handle 0x0024, DMI type 9, 13 bytes

System Slot Information

Designation: PCI1

Type: 32-bit PCI

Current Usage: Available

Length: Short

ID: 1

Characteristics:

3.3 V is provided

Opening is shared

PME signal is supported