

Sun hostid / MAC address manipulation

Sometimes you may need to change a machine's hostid or MAC address temporarily (e.g. due to a hardware failure of a machine carrying licensed software).

To change the hostid, usually it's sufficient (and very easy) to use the **hid** (or **hid2**) programs, which change the hostid of the running kernel. See the excellent **Sun NVRAM/hostid FAQ** at <http://www.squirrel.com> for more details.

However **hid2** doesn't seem to work on Solaris 8, and anyway sometimes the licensing software (Veritas Volume Manager is one example) actually makes a call to see the contents of the PROM, rather than looking at the hostid in the kernel, so you will need to modify the hostid in the PROM.

This is not as tricky as you might imagine, although there is the (fairly remote) possibility that a typo you make could render your machine unbootable, so proceed with caution !

How the hostid and MAC address are stored

You probably know that when you type **banner** at the PROM ok prompt, you see the system's serial number, hostid and MAC address :

ok **banner**

```
Sun Ultra 60 UPA/PCI (UltraSPARC-II 296MHz), Keyboard Present
OpenBoot 3.11, 512 MB memory installed, Serial #10573911.
Ethernet address 8:0:20:a1:58:57, Host ID: 80a15857
```

Note that the serial number is the last 3 bytes of the HostID (a15857), converted to decimal.

You can also see this info in less verbose format using the **.idprom** command at the ok prompt:

ok **.idprom**

```
Format/Type: 1 80 Ethernet: 8 0 20 a1 58 57 Date: 0 0 0 0
```

```
Serial: a1 58 57 Checksum: a9
```

To see the contents of the PROM from the command line on a running system, use **prtconf**:

```
# prtconf -vp|grep idprom
```

```
idprom: 01800800.20a15857.00000000.a15857a9.00000000.00000000.00000000.0000 0000
```

The contents of this long string of numbers are interpreted as follows:

Byte position	Contents	Explanation
0	01	Always 01
1	80	First byte of hostid (machine type). Normally 80
2-7	08.00.20.a1.58.57	Ethernet (MAC) address. First 3 bytes always 8:0:20
8-B	00000000	Date of manufacture? Often all zeroes
C-E	a15857	Second, third and fourth bytes of hostid
F	a9	XOR Checksum of bytes 0-E

The easiest way to change the MAC address and/or hostid at the same time is using the PROM **mkpl** command.

However first you have to set the XOR checksum to an invalid value using the PROM **mkp** command:

```
ok 57 f mkp (this means write the value 57 into byte location f )
```

Now set the MAC and/or hostid: suppose we want to keep the same MAC address and change the hostid to 80c3cd91:

```
ok 8 0 20 a1 58 57 c3cd91 mkpl <Control-D> <Control-R>
```

```
MAC_address hostid(last 3 bytes)
```

```
-NB it's very important that the hostid is typed with no spaces between the bytes (c3cd91)
```

If **mkpl** works ok it should return the ok prompt when you type <Control-R>; if it gives a Copyright message then it hasn't worked, you need to invalidate the checksum again.

Now you can verify the contents of the PROM by using the **banner** or **.idprom** commands.

If all seems ok, type **reset** to restart your machine.

See the **Sun NVRAM/hostid FAQ** (www.squirrel.com) for a fuller explanation of the above methods.