

# How my BIOS broke puppet

When a 500 isn't a server error

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# Outline

## Puppet

What we were doing

## The problem

Puppet errors

Aha! Uhm... Uh-oh.

## The fix

What should the serial number be?

How can we set it?

## Fin

# We use puppet

We use puppet to perform a small set of management operations on internal servers.

- ▶ Users
- ▶ Common applications
- ▶ Etc.

## The task at hand

Install puppet agent on our OpenBSD firewalls

We finally got rid of the oldest ones with a too out-of-date ruby a year or so ago

# The first error

```
Error: Could not retrieve catalog from remote
server: Error 500 on SERVER: Server Error: invalid
byte sequence in UTF-8
```

## Start checking things

- ▶ Encoding weirdness in the puppet manifest (but this ran fine on all of the other machines)
- ▶ Locale on the server and client
- ▶ Reboot the client

No luck.

## The last thing that worked

Factor finished successfully  
Error came fetching catalogue  
So lets run factor manually

Aha! Uhm... Uh-oh.

## It's a facter bug!

```
# facter dmi.product.serial_number  
M H@ 8  
A
```



Aha! Uhm... Uh-oh.

## It's an OS bug?

```
# sysctl hw.serialno
hw.serialno=          M H@ 8
                    A
```

Aha! Uhm... Uh-oh.

# It's not a bug.

```
rbsu> SHOW SN
      M H@ 8
      A
```

What should the serial number be?

## Find the correct serial

- ▶ Serial is not listed in the box notes
- ▶ The machine is a hundred miles away
- ▶ Remote hands are expensive
- ▶ BIOS has no idea

What should the serial number be?

## Saving grace

The imagers audit machines when they are imaged  
lshw output gets uploaded to our DCIM system  
lshw output contains system serial!

How can we set it?

## Set the serial number in the BIOS

```
rbsu> SET SN ABC1234DE5  
rbsu> QUIT
```

Simples.

But terrifying that you can do that.

## The moral

If you're getting errors from the server, don't rule out a client hardware issue.