

Dell Fan Noise Control - Silence Your Poweredge

Link:

https://www.reddit.com/r/homelab/comments/7xqb11/dell_fan_noise_control_silence_your_poweredge/

Hey,

there were some threads complaining about server noise in this sub the last days. I did some research on how to manually controlling the PowerEdge fans.

I read threads on this sub and other boards and found a lot of commands. These are already widely known, but I wanted to list them again. Maybe they will help others.

I tested them with my R210II, T620 and T330. So basically a 11th, 12th and 13th generation PowerEdge. Although you might have to change the sensors' names accordingly.

```
### Dell Fan Control Commands
#
#
# Hex to Decimal: http://www.hexadecimaldictionary.com/hexadecimal/0x1a/
#
#
# print temps and fans rpms
ipmitool -I lanplus -H <iDRAC-IP> -U <iDRAC-USER> -P <iDRAC-PASSWORD> sensor reading "Ambient Temp" "FAI
#
# print fan info
ipmitool -I lanplus -H <iDRAC-IP> -U <iDRAC-USER> -P <iDRAC-PASSWORD> sdr get "FAN 1 RPM" "FAN 2 RPM" "F
#
# enable manual/static fan control
ipmitool -I lanplus -H <iDRAC-IP> -U <iDRAC-USER> -P <iDRAC-PASSWORD> raw 0x30 0x30 0x01 0x00
#
# disable manual/static fan control
ipmitool -I lanplus -H <iDRAC-IP> -U <iDRAC-USER> -P <iDRAC-PASSWORD> raw 0x30 0x30 0x01 0x01
#
# set fan speed to 0 rpm
ipmitool -I lanplus -H <iDRAC-IP> -U <iDRAC-USER> -P <iDRAC-PASSWORD> raw 0x30 0x30 0x02 0xff 0x00
#
# set fan speed to 20 %
ipmitool -I lanplus -H <iDRAC-IP> -U <iDRAC-USER> -P <iDRAC-PASSWORD> raw 0x30 0x30 0x02 0xff 0x14
#
# set fan speed to 30 %
```

```
ipmitool -I lanplus -H <iDRAC-IP> -U <iDRAC-USER> -P <iDRAC-PASSWORD> raw 0x30 0x30 0x02 0xff 0x1e
#
# set fan speed to 100 %
ipmitool -I lanplus -H <iDRAC-IP> -U <iDRAC-USER> -P <iDRAC-PASSWORD> raw 0x30 0x30 0x02 0xff 0x64
```

I wrote a small script, that will check the servers temperature periodically (crontab) and disables or enables the dynamic fan control based on a temperature threshold. You may have to adjust the time frame depending on your server usage.

```
#!/bin/bash
#
# crontab -l > mycron
# echo "#" >> mycron
# echo "# At every 2nd minute" >> mycron
# echo "*/* * * * /bin/bash /scripts/dell_ipmi_fan_control.sh >> /tmp/cron.log" >> mycron
# crontab mycron
# rm mycron
# chmod +x /scripts/dell_ipmi_fan_control.sh
#
DATE=$(date +%Y-%m-%d-%H%M%S)
echo "" && echo "" && echo "" && echo "" && echo ""
echo "$DATE"
#
IDRACIP="<iDRAC-IP>"
IDRACUSER="<iDRAC-USER>"
IDRACPASSWORD="<iDRAC-PASSWORD>"
STATICSPEEDBASE16="0x0f"
SENSORNAME="Ambient"
TEMPTHRESHOLD="29"
#
T=$(ipmitool -I lanplus -H $IDRACIP -U $IDRACUSER -P $IDRACPASSWORD sdr type temperature | grep $SENSORNAME)
# T=$(ipmitool -I lanplus -H $IDRACIP2 -U $IDRACUSER -P $IDRACPASSWORD sdr type temperature | grep $SENSORNAME)
echo "$IDRACIP: -- current temperature --"
echo "$T"
#
if [[ $T > $TEMPTHRESHOLD ]]
then
    echo "--> enable dynamic fan control"
    ipmitool -I lanplus -H $IDRACIP -U $IDRACUSER -P $IDRACPASSWORD raw 0x30 0x30 0x01 0x01
else
    echo "--> disable dynamic fan control"
    ipmitool -I lanplus -H $IDRACIP -U $IDRACUSER -P $IDRACPASSWORD raw 0x30 0x30 0x01 0x00
    echo "--> set static fan speed"
    ipmitool -I lanplus -H $IDRACIP -U $IDRACUSER -P $IDRACPASSWORD raw 0x30 0x30 0x02 0xff $STATICSPEEDBASE16
fi
```

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