

# REDUCE THE FAN NOISE OF THE DELL R720XD (PLUS OTHER 12TH GEN SERVERS) WITH IPMI

Link: <https://blog.filegarden.net/2020/10/06/reduce-the-fan-noise-of-the-dell-r720xd-plus-other-12th-gen-servers-with-ipmi/>

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## Introduction

In this guide I will be showing you how you can reduce the fan noise of the Dell Poweredge r720XD. This will probably work on the r720 and other 12th gen dell servers. To do this, we will be using IPMI to manually override the fan speed.

## Requirements

In order to follow this guide, you will need the following:

- A Linux machine (or anything with `ipmitool` available)
- 12th gen Dell Poweredge Server with iDRAC 7

## Disclaimer

Make sure you keep an eye out on the temperatures of the server or else it will overheat and could cause hardware damage. If you brick your server, thats your problem!

# Getting setup

## Enabling IPMI

The first thing you will need to do is connect to the iDRAC interface on your dell server. You can do so by entering the IP address of the DRAC in a browser. If you are unsure on the IP address, you can find it by powering on the server, pressing F2 to enter the system setup, go to the DRAC section and find the IP somewhere in there. You then need to login. the default credentials are username `root` and password `calvin`.

Once logged in, you will need to go to `Overview -> iDRAC Settings -> Network` and then scroll to the IMPI Settings. You will need to make sure this is enabled.



## Installing IPMI tool

First of all, check if you already have `ipmitool` installed. If you do, you can skip this step. If not, lets install it.

If you are on a debian based machine, you can use apt to install it. First, lets update our apt repo.

```
sudo apt update
```

Now lets install it

```
sudo apt install ipmitool
```

## Controlling some fans

## Enabling manual fan control

Once IPMI has been enabled, we now need to enable remote fan control. We can do so with this command. Make sure to replace the IP, username and password for your system.

```
ipmitool -I lanplus -H SERVERS_IP_HERE -U IDRAC_USERNAME -P 'IDRAC_PASSWORD_HERE' raw 0x30 0x30 0x01 0x00
```

## Setting the speed

You may not have noticed a difference in the sound yet but dont worry, we can now override the current fan speed with our own. Prepare yourself! Use this command to set the fan speed to 20%.

```
ipmitool -I lanplus -H SERVERS_IP_HERE -U IDRAC_USERNAME -P 'IDRAC_PASSWORD_HERE' raw 0x30 0x30 0x02 0xff 0x14
```

If you cant hear the difference or you would like to check the current speed, you can do so via the iDRAC system. go to [Overview -> Hardware -> Fans](#).



## Custom speeds

If you want to change the speed to something other than 20%, you just need to change the value at the end from `0x14` to whatever you'd like. `0x14` is the hexadecimal value for 20. Here are some premade values for you. If your not sure how to work out hexadecimal values, check out this [website](#).

## Set fan speed to 25%

```
ipmitool -I lanplus -H SERVERS_IP_HERE -U IDRAC_USERNAME -P 'IDRAC_PASSWORD_HERE' raw 0x30 0x30 0x02 0xff 0x19
```

## Set fan speed to 30%

```
ipmitool -I lanplus -H SERVERS_IP_HERE -U IDRAC_USERNAME -P 'IDRAC_PASSWORD_HERE' raw 0x30 0x30 0x02 0xff 0x1E
```

## Set fan speed to 50%

```
ipmitool -I lanplus -H SERVERS_IP_HERE -U IDRAC_USERNAME -P 'IDRAC_PASSWORD_HERE' raw 0x30 0x30 0x02 0xff 0x32
```

## Set fan speed to 60%

```
ipmitool -I lanplus -H SERVERS_IP_HERE -U IDRAC_USERNAME -P 'IDRAC_PASSWORD_HERE' raw 0x30 0x30 0x02 0xff 0x3C
```

## Set fan speed to 100%

```
ipmitool -I lanplus -H SERVERS_IP_HERE -U IDRAC_USERNAME -P 'IDRAC_PASSWORD_HERE' raw 0x30 0x30 0x02 0xff 0x64
```

Original Author

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