

Dell PowerEdge R640

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R640 (1U) - Specs

I purchased this server from PC Server & Parts via Ebay.com, a reputed and certified seller of refurbished enterprise gear and hardware. Dell PowerEdge servers are extremely configurable, which can make it difficult to select the "right" server to purchase. Some factors I considered when purchasing were:

- Power Consumption
- Processors
- Noise level
- RAM & Storage capacity
- iDRAC license

I was able to get lucky and find a server for a decent price point that comes with a 1 year warranty. The specs are as follows (yes, most would consider it overkill, but to me, the more the better...)

Form Factor	1U
Processors	2x Intel Xeon Gold 6148 @ 2.40GHz
Cores	40 Cores (20 each)
Memory (RAM)	DDR4 - 128 GB
Storage	8x 2.5 Drive Bay Capacity (I currently have 4x 1TB SATA SSDs)
Power Supply	Redundant PSU (2 PSUs - 750W)
RAID Controller	Dell H730P
Network Interface	Intel I350 - 4x 1GbE RJ45 ports
iDRAC	Enterprise License

These are some of the important specs of my R640 that I paid closest attention to. The chassis & motherboard also allow for future scalability, so I hopefully shouldn't have to worry about another server for 5-6 years.

iDRAC9 Enterprise

iDRAC9 is Dell's version of remotely accessing and controlling the server. This was probably one of the most important parts of my homelab, as it lets me configure, power on and off, and control the server from anywhere in the house or via my VPN connection

Integrated Dell Remote Access Controller 9
idrac-J6LF3Y2 | PowerEdge R640 | Enterprise

Type the User Name and Password and click Log In.

Username:

Password:

Domain:

[Log In](#)

Security Notice: By accessing this computer, you confirm that such access complies with your organization's security policy.

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The dashboard below will showcase all the options for configuration. There is also a virtual console which allows you to even access system BIOS and the Lifecycle Controller.

Dashboard

[Graceful Shutdown](#) [LED Off](#) [More Actions](#)


[Refresh](#)

Health Information

SYSTEM IS HEALTHY


System Health

✔ **Healthy** [Details](#)



Storage Health

✔ **Healthy** [Details](#)



System Information

Power State	On
Model	PowerEdge R640
Host Name	
Operating System	
Operating System Version	
Service Tag	J6LF3Y2
BIOS Version	2.20.1
iDRAC Firmware Version	6.10.80.00
IP Address	192.168.1.200
iDRAC MAC Address	f4:02:70:a2:5e:1e
License	✔ Enterprise Edit

Task Summary

[View All Jobs](#)

Pending Jobs : 0

No Pending Jobs

In-Progress Jobs : 0

No In-Progress Jobs

Completed Jobs : 9

0 with Errors
1 Failed

Recent Logs

[view all](#)

Severity	Description	Date and Time
✔	The chassis is closed while the power is off.	Tue Mar 12 2024 16:04:12
✘	The chassis is open while the power is off.	Tue Mar 12 2024 16:04:07
✔	The chassis is closed while the power is off.	Fri Mar 08 2024 09:32:43
✘	The chassis is open while the power is off.	Fri Mar 08 2024 09:32:38
✔	Log cleared.	Tue Mar 05 2024 08:02:54

Virtual Console

[Settings](#)



OEM Docs

- [Getting Started.pdf](#)
- [BIOS and UEFI Reference Guide.pdf](#)
- [Dell Systems Management Overview Guide.pdf](#)

Miscellaneous Helpful Notes

To enable Lifecycle Controller - SSH into iDrac and run commands:

```
racadm>>
racadm>>User Manual
ERROR: Invalid command specified.
racadm>>
[racadm>>get LifecycleController.LCAAttributes.LifecycleControllerState
Recovery ]
[racadm>>set LifecycleController.LCAAttributes.LifecycleControllerState 1 ]
Object value modified successfully
[racadm>>serveraction powercycle ]
Server power operation initiated successfully
racadm>>█
```