

1. Go to this link: [redacted]
 - Click on Product Catalog on your left.
 - Then click on PowerEdge Servers
 - Question:
 - a) What are types of server you can find in Dell Enterprise Product?

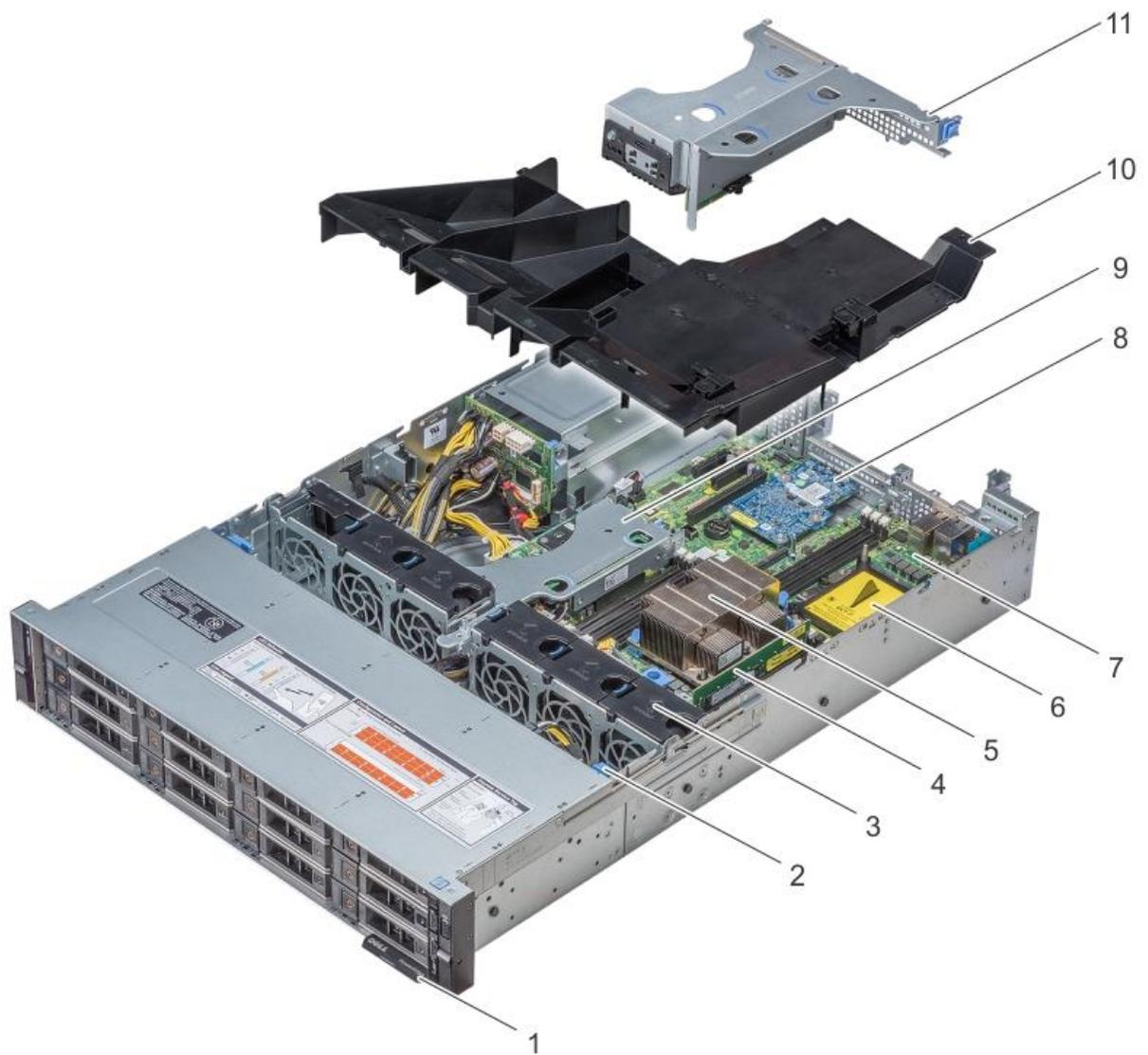
Ans: Type of servers (tower, rack-mounted or blade)

- A. C-series, 1U 2 sockets,
- B. FC-series, 2S M640 enclosure
- C. M-series, 28-core processors
- D. MX-series, SAS Switch for MX-series storage sleds
- E. R-series, HPC & Infrastructure class, great I/O
- F. T-series, 5U 2 sockets for DC
- G. XC-series, Nutanix SMB segment allows Virtualization
- H. DSS-series, Artificial Intelligence platform with 10 nVidia GPUs via PCIe
- I. 1855 (Glacier) – 2004 model used for students / training
- J. OEM Branding – 2013 model rebranding of a system board
- K. FM-series – Low power Intel Atom processors (4 processors per sled) for web servers with great performance per watt
- L. WCS (Quanta + Foxconn) – too little information found

2. How many generation of Server are there?

Depends on the definition of “generation”. For example: MX, R and T are the popular series. MX5000s/5016s/7000/740c/840c/9200M was RTS in September 2018 and R440/R540 was RTS in September 2017, R540 MLK in June 2019, R840/R940xa in May 2018. PowerEdge servers using Itanium was the first generation but quickly abandoned in 2005. In 2006, Dell partnered with AMD to use their Opteron processors. Letters indicate the type R (rack-mountable), M (modular), T (tower) followed by 3 digits (number of CPU sockets, **generation**, and maker of CPU) for example: PowerEdge M610 was a two socket server of the 11th generation using Intel CPU while R605 was a two socket AMD-based rack-server of the 10th generation. Prior to Gen 10 the naming convention was: (height of server in rack units, **generation** of server, server type, blade/independent box) example: PowerEdge 2650 (2 = 2U server, 6 = 6th generation, 5 = rack server 0 = normal)

3. For Dell PowerEdge R540;
Question:
 - a) Please provide at least 5 hardware component you can see.



Cooling fans	Memory module	CPUs 1 & 2	System board
Information tag	Drive Backplane		

4. Please go through this video to understand

Dell PowerEdge RAID Controllers Part 1 & 2

Part 1: <https://www.youtube.com/watch?v=nKiOECFu1HE>

Part 2: <https://www.youtube.com/watch?v=IWKmkNT5K5U>

Link: <https://www.youtube.com/watch?v=DkwDVXvMJYM>

iDRAC Basic

Link: <https://www.youtube.com/watch?v=spjXS65HUg8>

5. Provide me your understanding in summary about below question:

a) What is no POST?

The firmware driven test immediately after power is supplied. During this pre-boot sequence, Memory Drives CPU Mainboard and other internal hardware are examined before the bootstrap loader is invoked to an Operating System. For example, in AMI BIOS, 5 beeps indicate Processor Failure and continuous beeping indicates motherboard has not detected a RAM module.

b) What is no Boot?

The process of starting a computer by pressing a button or via software command. Some processes are executed to load software into memory before being executed. The full term "bootstrap" implies that some mechanism must exist to load initial software on to the computer. Read only Memory (ROM) allowed computers to be shipped with a small program in memory to allow pre-boot and boot sequences to be programmed.

c) What is no Power?

When pressing a button or via software command to boot, there is zero response and no hardware initializes. Fans, motherboard indicators, audible beeps are all absent in this scenario.

d) What is RAID?

Large volumes can be created by combining a bunch of disk (JBOD). For servers, having data available, secure and free from error requires that multiple copies of data are stored on multiple disks. Backing up is one way or one crucial process in the ecosystem. But RAID 0, 1 and 5 gives performance enhancements, ability to rebuild failed drives in the event of error and also redundancy by spreading parity over multiple drives. If Drive 3 of 5 fails, simply swap the failed drive and the RAID Controller will rebuild the drive automatically.

e) What is BIOS?

The non-volatile firmware used to perform hardware initialization during POST. It is the middleman between the processor, motherboard, hard disk and the connected peripherals. In Greek, it means "bring life" (to the computer).

Philip Khor