Physical Hardware

Basic Components

Compute



Processor

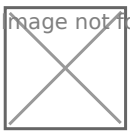
Intel Core i7-8700k - This is the processor I had been using in this PC prior to converting it into a "*home server*" and there is nothing particularly special about it other than it was at the top of the charts for performance when I bought it. It is a great consumer CPU even to this day but it is starting to feel more limiting as a server CPU due to its lack of ECC support, lower cores/thread count, and limited PCI lanes that it provides.

Cores / Threads	6 / 12
Base Frequency	3.6 GHz
Burst Frequency	4.7 GHz
Cache	12MB L3 Cache
TDP	95W

GPU

Intel UHD Graphics 630

Base Frequency	350 MHz
Burst Frequency	1.2 GHz
Max Memory	64GB
QuickSync Video	Yes



Motherboard

Similarly this motherboard was bought with the intent of building a powerful PC instead of a more server oriented box. It mirrors a lot of the same constraints as the processor but since it was intended for higher end gamers it manages to provide just enough storage and expansion that it has ended up being as good of a motherboard as you'll get without upgrading to one with a more specific server focus.

Manufacturer	Gigabyte
Model	Z370 AORUS Gaming 7 (rev 1.0)
CPU	Support for 8th Generation Intel Core i7 / i5 / i3 processors in the LGA1151 package
Chipset	Intel Z370
Memory	• 4x DDR4 DIMM supporting up to 64GB • Dual channel memory architecture
Display	• 1x HDMI 1.4 • 1x DisplayPort 1.2
Networking	• 1x Intel 1GbE • 1x Rivet Networks Killer E2500
Expansion	• 2x PCIe 3.0 x16 (running x16/x0 or x8/x8) • 1x PCIe 3.0 x16 (running at x4) • 3x PCIe 3.0 x1
Storage	• 3x M.2 PCIe x4/x2 • 6x SATA3
USB	• 2x USB 3.1 Gen2 (Type-C) • 1x USB 3.1 Gen2 (Type-A) • 7x USB 3.1 Gen1 (Type-A)

Memory

Slot 1 Image not found or type unknown	Corsair Vengeance LPX 16GB DDR4 2666MHz (1x16GB) • 2Rx8 Dual Rank • CAS Latency 16 • timing 16-18-18-35 • 1.2V

Image not found or type unknown **Slot 2**	Corsair Vengeance LPX 16GB DDR4 2666MHz (1x16GB) • 2Rx8 Dual Rank • CAS Latency 16 • timing 16-18-18-35 • 1.2V
Image not found or type unknown **Slot 3**	Corsair Vengeance LPX 16GB DDR4 2666MHz (1x16GB) • 2Rx8 Dual Rank • CAS Latency 16 • timing 16-18-18-35 • 1.2V
Image not found or type unknown **Slot 4**	Corsair Vengeance LPX 16GB DDR4 2666MHz (1x16GB) • 2Rx8 Dual Rank • CAS Latency 16 • timing 16-18-18-35 • 1.2V

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Case

Fractal Design - Define R6 USB C (Blackout) - A fantastic case with an attractive minimalistic design that holds a lot of hard drives and is exceptionally quiet due to sound dampening panels and excellent construction.

Manufacturer	Fractal Design
Model	Define R6 USB C (Blackout)
Features	• 10x HDD, 2x SSD • Sound dampening • Excellent build quality

Storage

#	Capacity	Interface	Type	Manufacturer & Model	Speed
Image not found or type unknown 4x	10TB	SATA	HDD	Western Digital WD1000WMAZ	SATA3 6.0Gb/s

#	Capacity	Interface	Type	Manufacturer & Model	Speed
6x 	18TB	SATA	HDD	Western Digital WD181KFGX	SATA3 6.0Gb/s
2x Image not found or type unknown	512GB	SATA	SDD	Samsung SSD 860 EVO	SATA3 6.0Gb/s
2x 	1TB	NVMe	SDD	Inland Professional	PCIe 3.0 x2
2x 	1TB	NVMe	SDD	SK hynix MN8BN16291080BN2A	PCIe 3.0 x4
2x 	16GB	NVMe	SDD	Intel MEMPEK1W016GA	PCIe 3.0 x2

Cooling

CPU Image not found or type unknown	Noctua NH-D15
Case (rear) Image not found or type unknown	Noctua NF-A14 PWM 140mm
3x Case (front) Image not found or type unknown	Noctua NF-F12 PWM 120mm
Case (bottom) Image not found or type unknown	Noctua NF-F12 PWM 120mm

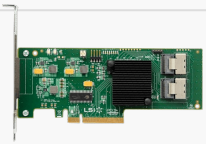
Power Supply

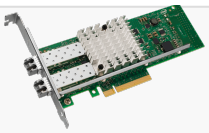
Manufacturer	EVGA
Model	SuperNOVA 850 G+
Features	• 850W • fully module

UPS

Manufacturer	APC
Model	Back UPS PRO BN-M2 1500VA
Features	• 900Watts / 1.5kVA • 6x Batter backed outlets • 4x Surge outlets

Add-On Cards

PCIe 3.0 x1 	10Gtek Intel 82576 Dual RJ45 • PCIe Gen3 x1 • 2x RJ45 1GbE ports
PCIe 3.0 x8 (x16 physical)	QNAP QM2-4P-384A Quad M.2 PCIe SSD Expansion Card • PCIe Gen3 x8 • 4x switched PCIe x4 NVMe
PCIe 3.0 x8 (x16 physical) 	LSI SAS9211-8I 8PORT • PCIe Gen3 x8 (x16 physical) • 2x Mini SAS SFF-8087 ports
PCIe 3.0 x1 	~~ZOTAC GeForce GT 710 1GB PCIe~~ • ~~PCIe Gen3 x1~~ (removed)

PCIe 3.0 x4 (x16 physical) 	~~10Gtek Intel 82599ES Dual SFP+ PCIe x8~~ • ~~PCIe Gen3 x8~~ • ~~2x SFP+ 10GbE ports~~ • ~~SR-IOV~~ (removed)

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