Homemade NAS

A computer case with wires and cables

Description automatically generated

This is a system made keeping the price to performance in mind. All the parts were picked based on the mindset of future expandability.

Specs:

1. Zebronics H61 Motherboard -
2. Intel Core i5 3470 1.90Ghz
3. 8GB DDR3 Ram
4. Ant Esports VS600L Power supply (non-modular)
5. DEEPCOOL Matrexx 30 SI Steel Computer case
6. 125GB Boot HDD + 2 x Western Digital 4TB WD Red Plus NAS Internal Hard Drive HDD - 5400 RPM, SATA 6 Gb/s,
7. TP-LINK AC1200 Mesh Router

Total Cost: Rs. 33,598

Comparable System: Rs.97,311

Software:

For software, this system is running Synology DiskStation Manager (DSM). It is incredibly lightweight, based on Linux, and has a wide list of services for user convenience. This OS was chosen due to its easy compatibility for desktop and mobile backup.

A screenshot of a phone

Description automatically generated

Configuration:

This server is running in a RAID configuration. This means that if a drive were to fail, all the data is still safe, and an immediate notification would be sent if such an event occurred. It is also set to restart every day at 12AM to ensure hardware health as well as set up to run a Data Scrub every month to protect against Bit Rot\*.

\*While bit rot may not occur on a small capacity nas like this one, it will be helpful when we are dealing with 10 to 20 TB of data which we might not always access.