**Brief**

Adatum is currently running a server 2003 R2 environment on x86 and they have a 2 domain controllers, 1 DNS server 1 DHCP server and 10 Clients Running windows 8.1. The company is wanting to upgrade to a server 2016 environment as the company is always expanding; it needs to be able to expand easily for new clients and can keep the whole infrastructure updated, as well as recover and still run in case of a failure

**Computers**

[**https://nz.pcpartpicker.com/list/d2kwMZ**](https://nz.pcpartpicker.com/list/d2kwMZ)

**PCPartPicker Part List: https://nz.pcpartpicker.com/list/Mrp4RJ**

**CPU: AMD Ryzen 5 3400G 3.7 GHz Quad-Core Processor ($262.00 @ 1stWave Technologies)**

**CPU Cooler: Cooler Master Hyper 212 EVO 82.9 CFM Sleeve Bearing CPU Cooler ($66.00 @ 1stWave Technologies)**

**Motherboard: Asus ROG Strix B450-I Gaming Mini ITX AM4 Motherboard ($259.00 @ 1stWave Technologies)**

**Memory: Crucial 16 GB (1 x 16 GB) DDR4-2666 Memory ($124.76 @ Paradigm PCs)**

**Memory: Crucial 16 GB (1 x 16 GB) DDR4-2666 Memory ($124.76 @ Paradigm PCs)**

**Storage: Corsair MP600 Force Series Gen4 2 TB M.2-2280 NVME Solid**

**State Drive ($886.25 @ Paradigm PCs)**

**Storage: Seagate IronWolf Pro 12 TB 3.5" 7200RPM Internal Hard Drive ($789.00 @ 1stWave Technologies)**

**Case: Phanteks Enthoo EVOLV ITX TG Mini ITX Desktop Case ($99.00 @ PB Technologies)**

**Power Supply: Cooler Master MWE Bronze 450 W 80+ Bronze Certified ATX Power Supply ($74.99 @ PB Technologies)**

**Total: $2685.76**

**Prices include shipping, taxes, and discounts when available**

New Server Hardware

2x [HPE ProLiant DL360 Gen10](https://buy.hpe.com/pdp?prodNum=867962-B21&country=nz&locale=en&catId=15351&catlevelmulti=15351_3328412_241475_1010007891)

Intel® Xeon® Scaleable 4114 2.20 GHz, 13.75M Cache

Windows Server 2016 Standard

**$5,509.82 incl GST**

**$4,791.15 excl GST**

8x HPE 900 GB SAS 15K rpm(per server) Total of 16

RAID 5

**1x** [**HPE 500W Flex slot platinum hot plug low halogen power supply**](https://buy.hpe.com/pdp?prodNum=865408-B21&country=nz&locale=en&catId=329290&catlevelmulti=329290_3446190_3446193_7268787) **(per server)(extra PSU for redundancy)**

**$307.62 excl GST**

**File Server Shares**

Backups

Server

45 Drives Storinator Q30 Enhanced [Quote](https://drive.google.com/file/d/1qZ9bZ4Qw3U70N7Svv0aa3IEyWNsUf3u6/view?usp=sharing)

Intel® Xeon® E5-2620v4 2.10Ghz, 20M Cache

Ubuntu Server 18.04 [Unraid is overkill + keeps cost low]

32x Seagate Exos 4TB HDD

Split File Shares [SAMBA SMB]

40TB for backups [Space for 2 backups per server]

88TB for archival

Software

Windows Server 2016 Backup

Auto delete old backups

DNS DHCP AD VPN

**Costs**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Quantity | Product | Cost Each | Cost (NZD) | Total (NZD) |  |
| 1 | [45 Drives Storinator Q30 Enhanced](https://drive.google.com/file/d/1qZ9bZ4Qw3U70N7Svv0aa3IEyWNsUf3u6/view) | 18671.81 | 18671.81 | 18671.81 |  |
| 2 | [Windows Server 2016 Standard](https://www.softwaregiants.com/en_nz/windows-server-2016-standard.html?gclid=CjwKCAjw1f_pBRAEEiwApp0JKA162WUsKrgDr1rm-jevKQoo0Esp6rT_JIUBv_I7yqqJBBILpOkIMhoC4dAQAvD_BwE) | 799.99 | 1599.98 | 20271.79 |  |
| 2 | [HPE ProLiant DL360 Gen10](https://buy.hpe.com/pdp?prodNum=867962-B21&country=nz&locale=en&catId=15351&catlevelmulti=15351_3328412_241475_1010007891) | 5509.82 | 11019.64 | 31291.43 |  |
| 1 | [Unraid Pro](https://unraid.net/pricing) | 196.88 | 196.88 | 31488.31 |  |
| 10 | [Windows 10 Pro](https://www.pbtech.co.nz/product/OSYMST3706/Microsoft-Windows-Professional-10-32-bit64-bit-Eng) | 320.85 | 3208.5 | 34696.81 |  |
| 16 | [HPE 900GB Enterprise Hard Drive](https://buy.hpe.com/pdp?prodNum=870759-B21&country=nz&locale=en&catId=329290&catlevelmulti=329290_329233_7101711_1009689640) | 1460.90 | 8765.415 | 43462.23 |  |
| 10 | [Custom Build PC](https://nz.pcpartpicker.com/list/Mrp4RJ)S | 2685.76 | 26857.6 | 70319.83 |  |
|  |  |  | 0 | 70319.83 |  |
|  |  |  | 0 | 70319.83 |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  | Sub Total | 59771.85 |  |
|  |  |  | GST | 10547.97 |  |
|  |  |  | Final Total | 70319.83 |  |
|  |  |  |  |  |  |

|  |  |
| --- | --- |
| **Learning Outcomes** | **Done?** |
| Server Hardware Specifications | Y |
| Plan for new and current server roles including licensing requirements | N |
| Upgrade plan with designing architecture using supported networking tools | N |
| Plan for redundancy and backups | Y |
| And additional roles and features that would aid the company | N |
| Network and Server infrastructure | N |
| Required and additional servers | Y |
| Required and additional roles and features that would aid the company | N |
| Redundancy and backups | Y |
| Health and Safety requirements | N |