1. Server : HPE ProLiant XL645d

Server Support Guide :
https://support.hpe.com/hpesc/public/docDisplay?docId=sd00004456en_us&page=GUID-54FF8328-7A53-4905-8C4F-C66817FA452C.html

2. Operating System:Ubuntu 24.04 LTS: Noble Numbat
- Virtualization Enabled

3. NVDIA GPU Driver : To give GPU resource access to OS
4. Docker Engine : To run docker images
5. NVDIA Container Toolkit : To map Docker engine and NVDIA Driver to consume GPU by docker images
6. Anaconda : Software to download (ML development software)
7. CV2 : Inside Anaconda (computer vision library) - cuda compatible(for GPU mapping)
8. Pytorch : Inside Anaconda (deep learning library) -cuda compatible(for GPU mapping)
9. Tensorflow : Inside Anaconda (deep learning library)
10. Deep cognition studio : AI model builder GUI (compatibility with cuda and anaconda)
11. Deep Stream : Software to be downloaded (for video based ML)
12. DCGM (Data Center GPU Manager): software (for GPU monitoring)
13. DCGM Exporter : for mapping data of monitoring with other monitoring devices like prometheus
14. RAPIDS: Inside Anaconda (alternative to some ML libraries like an ML framework)
15. openNN : C++ based neural network library(downloded from github: https://github.com/Artelnics/OpenNN)
16. Provision for physical removal of second storage bank
17. Automatic Boot Script : (features needed in this ?)
18. Script for GPU allocation : bash scripting , MIG enable on every boot
19. MIG profile creation , and management : Bash scripting
20. GPU resource allocation :Bash scripting
21. Caffe2 : inside Anaconda
22. Chroma DB : Vactor DB
23. Theano :inside Anaconda
24. CUDA(nvdia-cuda-toolkit): for mapping of gpu and other python libraries
25. Transformers : inside Anaconda (for accessing hugging face)

26. JAX : inside Anaconda
27. NLTK : inside Anaconda
28. XG Boost :inside Anaconda
29. TorchVision : inside Anaconda
30. Weights and Bais : inside Anaconda (for monitoring Model)
31. DL4J : inside system (java based ML integration)