Day-1

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We decided on the project that we are going to work on as a part of the internship – AI powered Tamper Detection with AMR. We were taken to the server room where we were exposed to how the data is being taken from households using AMR and the data is uploaded into the database of TNEB.

Using Linux and virtual machines only mostly with little windows applications for better protection, like in the case of downloading applications, in windows downloading is pretty easy, whereas in linux a certain command line must be executed to do so.

Starting from using SIM cards from BSNL, AIRTEL, Vi with static IP address that are provided to be within a specific range as TNEB requires are setup inside the AMR present in Solar panels and wind mills to monitor the data without going in-person manually. Then, the data is sent to the modem to be transmitted in the form of 1s and 0s (encoding). The static IP address is required in the place of dynamic IP address as the static IP will be mapped to the server room from the data will be collected. They had HP devices in the server room, along with using intel Xeon series rather than the normal iris that we usually use for better speed. Then, instead of having 1 power supply to the servers, they had 4 this was because even in the case of failure of 1 power supply other could handle the load of all the servers, and 2 ups will also be there in case both supplies fail.

Pretty expensive to install sim cards everywhere so as of now it is kept only in these commercial locations. Now, onto the load balancer, this helps in splitting the network traffic among multiple servers. In case any of the servers fail (orange colour) else green for proper functioning, they will not be removed and they are configured in such a way that other servers will be taking care of their task.

Now, to store the data we make use of storage devices like SSD and hard drives of about 600GB and 1TB, these are much faster and bigger in capacity than what we normally have in our PCs and laptops.

?? Cache 12MB to recover data if lost due to any failure