

CMNet PRODUCTION ENVIRONMENT FOR 2019

CMNet is about to enter year six of operation. The system continues to function as robustly as in previous years with only minor issues with equipment failures and annoying False Radar contacts. Despite several attempts to cure this we still have them on a monthly basis. Changing the firmware should have fixed the problem but they then return and the affected units jump frequencies which then have to be reset, this anomaly is still under investigation. There have been a number of minor power outages over the year but all units have rebooted when the power has been restored.

The only major outage of the year was in October 2019 when we were hit with a power outage at Plockton High School caused by maintenance being carried out on the main distribution box. We unfortunately had not been warned of this in advance. The system was down for approximately 30 hours and all customers were switched to the Lochcarron relay enabling us to maintain a service to our customers. On completion of the maintenance customers were switched back to the Plockton line.

In April low speeds were reported on the system, investigation revealed the fault to be outwith our system and a defect report was raised with Zen. Zen later reported that the low speeds were down to them and the defect rectified. At the same time, by coincidence, the Router on CM High that feeds Braeintra went defective and a new router was fitted the following day.

The main server has rebooted a couple of times over the year resulting in the loss of 24 hours of data on each occasion.

During the course of the year four units went defective and were changed, 1xNano Beam, 1x Router and 2x AirRouters. One Nano Station was changed for a Nano Beam

The system currently has 1 x Fibre line coming from Plockton and 1 x Fibre line coming from Lochcarron. The line from Plockton is almost running at capacity and speeds are holding up well. The line from Lochcarron is not functioning as well as expected and is probably due to the poor quality of the BT line. Work is ongoing with the proposed installation of a third line in Achmore Hall. A Hosting Agreement has been agreed with the Hall Committee and signed off. We are now trying to register an address for the hall with the Post Office, this is a requirement before Open Reach will give us a quote for the work to install the line

Work is almost complete on the new relays. The relays are in place, units have been fitted, 0.7Km of cable has been run and placed in trunking and the power has been tested and some limited testing carried out. There is still a lot of work to be carried out in testing and aligning the units, not to mention the burying of 0.7Km of power cable. All of this work is weather dependent.

The data capacity of the system has now exceeded the 3Tera Byte threshold for six of the last eight months.

The tariff remains at £1 per 50GB and customers who qualify have been given a £60 rebate, I doubt you will ever get that from BT.

The table below shows monthly usage and the daily averages. It can be quite clearly seen that the system is now being heavily used and we have hit full capacity for the Plockton line on numerous occasions.

	Monthly Usage (TB)	Daily Average (GB)
September 2018	2.1	69.8
October 2018	2.25	74.4
November 2018	2.19	73
December 2018	2.63	84.83
January 2019	3.17	120
February	2.95	105
March	3.023	97.5
April	2.99	99
May	3.037	97.6
June	2.99	99
July	3.46	111.8
August	3.6	116.17
September	3.34	111.4
October	3.626	117

We currently have 45 subscribers on one line from the Plockton exchange and currently no customers are connected to the line from Lochcarron.

We have another 30 customers waiting to be connected. The work on the new relays is progressing well, however, there have been many delays due to the weather. Strome Low and Strome High relays are complete and 0.7 Km of power cable has been laid and tested. There is still a significant amount of work to be carried out in aligning and testing all of the equipment on the new relays and burying the power cable.

Joe Grimson.