

Date: 08:13AM, Thursday , February 01, 2018
Engineering Technical Order

NEXRAD Private Network Traffic Management Upgrade for NWS and DoD 4G LTE Cellular Routers, Software Note 155

Existing 4G LTE routers that provide backup communications for WSR-88D commercially provided telecoms that include NWS commercial wideband and DoD to NWS Private IP circuits will be upgraded with new router configurations and firewall settings to enable Private Network Traffic Management (PNTM) with Quality of Service (QOS) prioritization.

The Radar Operations Center (ROC) documented two cases of congestion on the Verizon 4G LTE backbone during two separate weather events. When primary terrestrial service failed and 4G backup service was engaged, the Verizon 4G LTE backbone failed to reliably pass all data from the remote \ radar to the Weather Forecast Office (WFO) due to competing traffic on an oversubscribed network. Quality of Service (QOS) Router and Firewall configuration changes are necessary to enable priority network service for NEXRAD devices on Verizon's 4G backbone. These changes will also enable RF priority once Verizon makes this service available for the NEXRAD fleet.

The PNTM feature set will be enabled by Verizon on the 4G LTE cellular SIM cards currently in use on all existing NWS commercial wideband and DoD to NWS Private IP circuits prior to deployment of this modification. As locations complete Attachments 1 and 2, PNTM is then activated on the applicable "end". Either end can be configured for PNTM prior to the other end being completed and configured and not affect the functionality of the backup communications link.

http://www.roc.noaa.gov/ssb/sysdoc/techman/subs/DISCLAIMER_IFRAME.ASP?FILENAME=soft155fnl.pdf