**Incident Report**

**January 26, 2021 Verizon Internet Outage**

**Public Safety and Homeland Security Bureau, Federal Communications Commission**

**February 10, 2021**

On January 26, 2021, Verizon Communications (Verizon) experienced an outage that affected its Internet customers in the Northeastern areas of the United States. The Federal Communications Commission’s Public Safety and Homeland Security Bureau (Bureau) is providing information about the outage below.[[1]](#footnote-1) The Bureau notes that this report is based on information compiled about the incident as of February 5, 2021.

**Start of the outage:** 11:24 AM EST.

**Duration of the outage:** 1 hour and 18 minutes.

**What was affected:** Three network routers that enable customers to access the Internet in the Northeastern areas of the United States.

**Number of customers potentially affected:** Because the outage was intermittent, Verizon tells the Bureau that it is not able to determine the total number of customers affected by the outage. Verizon noted that the outage did not affect all customers in the Northeast and that it did not affect Voice over Internet Protocol (VoIP) calling users.

**Cause and description of the outage:** The outage started when Verizon implemented a traffic filter to improve network security. Verizon tells the Bureau that in the past it has implemented similar filters to the live network without prior testing. Verizon reports that because the filter was much larger than those it had implemented in the past, it caused instability by overloading the routers due to technical limitations of the routers. As such, the affected routers were unable to successfully process Internet traffic. The outage was intermittent because those routers were periodically able to pass some Internet traffic throughout the event.

Verizon also experienced a fiber cut in Brooklyn, New York, that coincided with the Internet outage event (starting at 11:50 AM EST), but that fiber cut only had local effects on Verizon customers and was unrelated to the Internet outage that affected the Northeastern areas of the United States.

**Restoration method:** After discovering the implementation affected Internet traffic, Verizon removed the filter and restored the normal flow of all traffic by 12:42 PM EST.

**Steps taken to prevent reoccurrence:**

* Verizon has since frozen additional updates of this nature to its routers pending further testing.
* Verizon tells the Bureau that it has developed and will implement testing procedures for this type of filter implementation in the laboratory to determine the threshold that the routers can handle without affecting traffic.
* Verizon is working with its router vendor to review and refine implementation procedures.

As it has done in the past, the Bureau urges network operators and service providers to validate upgrades, new procedures and commands in a laboratory or other test environment that simulates the target network and load prior to the first application in the field.[[2]](#footnote-2)

1. Internet outages can have implications for homeland security, public health or safety, and the economic well-being of the nation. However, there currently is no requirement that Internet service outages be reported to the FCC. Therefore, the Bureau provides the information in this Incident Report based on its own investigation. [↑](#footnote-ref-1)
2. *See Public Safety and Homeland Security Bureau Encourages Communications Service Providers to Implement Important Network Reliability Practices*, PS Docket Nos. 11-60, 20-183, Public Notice, DA 20-1406 at 2 (PSHSB Nov. 25, 2020); FCC, *June 15, 2020 T-Mobile Network Outage Report*, PS Docket No. 20-183, 17, para. 45 (PSHSB Oct. 2020), <https://docs.fcc.gov/public/attachments/DOC-367699A1.pdf>. [↑](#footnote-ref-2)