



PUBLIC NOTICE

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DA 26-1047

Released: September 29, 2026

GUIDANCE FOR FILING IN THE NETWORK OUTAGE REPORTING SYSTEM (NORS)

PS Docket No. 15-80; ET Docket No. 04-35

The Public Safety and Homeland Security Bureau (Bureau) of the Federal Communications Commission (Commission) issues this Public Notice to remind communications service providers to submit accurate and complete Network Outage Reporting System (NORS) reports. NORS filings are a critical tool that provides the Commission, as well as federal, state, Tribal, and territorial public-safety agencies, with situational awareness during outages, supports analysis of outage causes and trends, and enables the Bureau to promote implementation of network reliability best practices.

I. BACKGROUND

The Commission plays an essential role in “ensuring that the communications network promotes public safety, including matters involving the national security and emergency preparedness of the United States.”¹ To perform these duties effectively, the Commission needs “timely, accurate and longitudinal information about the nation’s communications infrastructure.”² Cable communications providers, satellite operators, satellite communications providers, wireless service providers, wireline service providers, Signaling System 7 (SS7) providers, and submarine cable licensees must submit a Notification, Initial Report, and Final Report in NORS about outages that exceed certain thresholds.³ Interconnected Voice over Internet Protocol (VoIP) providers must submit a Notification and a Final Report about reportable outages.⁴

II. GUIDANCE ON RECURRING NORS REPORTING ISSUES

A. Describe the Incident Clearly and in Detail

The web-based NORS reporting form includes a freeform text “Description of Incident” field. Providers must enter information in that field sufficient to enable a reader who is unfamiliar with the provider’s internal systems to understand what happened.⁵ The content of the “Description of Incident”

¹ *The Proposed Extension of Part 4 of the Commission’s Rules Regarding Outage Reporting to Interconnected Voice Over Internet Protocol Service Providers and Broadband Internet Service Providers*, PS Docket No. 11-82, Report and Order, 27 FCC Rcd 2650, 2656, para. 10 (2012) (*2012 VoIP Outage Reporting Order*).

² *Id.* at 2656, para. 11.

³ 47 CFR § 4.9(a), (c), (d), (e), (f); *cf.* 47 CFR § 4.15(b) (describing submarine cable licensees as submitting an “Interim Report,” rather than an “Initial Report” for reportable outages they experience); *see also New Part 4 of the Commission’s Rules Concerning Disruptions to Communications*, ET Docket No. 04-35, Report and Order and Further Notice of Proposed Rulemaking, 19 FCC Rcd 16830 (2004) (*2004 Outage Reporting Order*).

⁴ 47 CFR § 4.9(g).

⁵ *See* FCC, Network Outage Reporting System User Manual Version 3 at 49 (2021) (NORS Manual). *See also* 47 CFR § 4.11 (requiring that Notifications include a “brief description of the problem”); *2012 VoIP Outage Reporting Order*, 27 FCC Rcd at 2656-57, para. 12 (describing the three-phase outage reporting process where, following the

field should include “the sequence of events leading up to the incident, the steps taken to try and resolve the incident once it . . . occurred, and the action(s) that finally resolved the incident,” as well as any contributing factors.⁶ Providers should also “[i]nclude any factors that may have contributed to the duration of the event, ‘quick fix’ actions that may have resolved or at least mitigated the immediate problem but were not the final, long-term solution, and any other contributing factors.”⁷ The Commission expects that the Initial Report will contain as much of this information as is available at the time of filing,⁸ and that complete information will be available by the time the Final Report is filed.⁹ Providers should complete this field using clear, plain language. Descriptions that merely contain technical terminology or codes, unintelligible notes from internal ticketing systems, or bare, generic statements that the matter remains “under investigation,” are not helpful and fail to satisfy the requirement of our rules.¹⁰

B. Provide a Reasonable Estimate of the Number of “Users Affected”

Providers should use the best estimate reasonably available at each filing stage to identify the number of users potentially affected by an outage,¹¹ by using the metric applicable to the service type under section 4.7.¹² For telephony and certain paging services, that metric is based on assigned or working telephone numbers;¹³ for other services, it is generally based on the number of “end users” potentially affected, subject to any service-specific calculation.¹⁴ When determining the number of end users potentially affected by an outage, a provider should base its assessment on the number of individual *users* affected by the outage rather than the number of individual *customer accounts*.¹⁵ As the Commission explained in 2004, reporting an outage affecting a business or government entity as affecting a single user, where the relevant customer account might include tens of thousands of telephone lines, may grossly underestimate the outage’s impact.¹⁶

Notification, the Initial Report has “additional information” and the Final Report contains “a more detailed description of the outage and cause(s)”.

⁶ NORS Manual at 44.

⁷ *Id.*

⁸ *2004 Outage Reporting Order*, 19 FCC Rcd at 16871-72, para. 75 (explaining the “expect[ation] that reporting providers will exercise good faith in filling out the [I]nitial [R]eport as completely as possible.”).

⁹ At the Final Report stage, “complete information will, in almost all cases, be available and the [F]inal [R]eport must contain this information. . . .” *2004 Outage Reporting Order*, 19 FCC Rcd at 16913, para. 167.

¹⁰ These types of responses are not understandable and, therefore, would not satisfy the filer’s obligation to provide a “brief description of the problem” at the Notification stage pursuant to section 4.11, 47 CFR § 4.11, and to provide additional information in subsequent filings as available. *See infra* n.5.

¹¹ *See 2004 Outage Reporting Order*, 19 FCC Rcd at 16861-62, para. 55 (stating “[t]he number of customers potentially affected by an outage should, therefore, represent the most accurate estimate of the number that might actually have been affected[.]”). For Notifications, the number of users potentially affected by an outage is part of the “service effects” that are required to be reported under section 4.11. *See* 47 CFR § 4.11. Initial Reports “shall contain all pertinent information then available on the outage[.]” and, similarly, Final Reports “shall contain all pertinent information on the outage, including any information that was not contained in, or that has changed from that provided in the Initial [R]eport.” 47 CFR § 4.11.

¹² 47 CFR § 4.7.

¹³ *See id.* § 4.7(c), (e)(1).

¹⁴ *See, e.g.*, 47 CFR §§ 4.7(e)(2), 4.9(e)(2).

¹⁵ *See 2004 Outage Reporting Order*, 19 FCC Rcd at 16857, para. 49; *see also id.* at 16861-62, para. 55.

¹⁶ *See id.* at 16857, para. 49.

Similarly, a provider must not use a figure representing its entire subscriber base as a nominal placeholder for the true number of users potentially affected when information actually available to the provider supports a different figure.¹⁷ The number of potentially affected users in an outage is essential to help the Commission assess the outage's scope and scale.¹⁸ At the Initial Report and Final Report stages, presenting accurate information about an outage's scope is part of a provider's obligation to include "all pertinent information then available on the outage. . . ."¹⁹ If the exact number of users potentially affected is not yet known, the provider must provide the best estimate reasonably available at each filing stage by using the metric applicable to the service type under section 4.7, identify the figure as an estimate where appropriate, and update the figure as more accurate information becomes available.²⁰

C. Submit NORS Reports for Outages Arising on Facilities that Are Leased or Otherwise Utilized

The Commission's rules require cable communications providers, satellite operators, SS7 providers, wireless service providers, wireline service providers, and interconnected VoIP providers to report outages that they have "experienced on any facilities that they own, operate, lease, or otherwise utilize."²¹ Thus, these providers must submit outage reports for outages that arise not only in their own call origination networks but also in other network locations and platforms, such as the "middle mile" or transport network facilities.²² This requirement applies to the extent the reporting provider "leases or otherwise utilizes" the affected facilities and the outage otherwise meets the applicable reporting criteria in section 4.9.²³

D. Non-Facilities-Based Providers Must Report in NORS

We remind non-facilities-based resellers, including mobile virtual network operators (MVNOs), of their NORS outage reporting obligations.²⁴ A review of NORS data shows that very few MVNOs submit outage reports.²⁵ Non-facilities-based resellers, including MVNOs, must submit NORS reports

¹⁷ See *infra* n.11. Further, using such a placeholder when the filer has actual information available that supports a different figure would be inconsistent with its attestation in the Final Report that the information contained therein is true, correct, and accurate to the best of his/her knowledge. See 47 CFR § 4.11.

¹⁸ In rejecting use of "blocked calls" as a threshold outage reporting criterion, the Commission emphasized that blocked calls "wholly fails to address how many end users would potentially be affected by the outage—the key issue that the Commission has always stressed from the adoption of the original outage reporting rule in 1992." See *2004 Outage Reporting Order*, 19 FCC Rcd at 16861-62, para. 55.

¹⁹ 47 CFR § 4.11.

²⁰ See *infra* n.11.

²¹ See 47 CFR § 4.9(a), (c)(1), (d), (e)(1), (f), (g)(1)(i), and (g)(1)(ii).

²² See *Amendments to Part 4 of the Commission's Rules Concerning Disruptions to Communications; Improving 911 Reliability; New Part 4 of Commission's Rules Concerning Disruptions to Communications*, PS Docket No. 15-80 and 13-75, ET Docket No. 04-35, Second Report and Order, 37 FCC Rcd 13847, 13848, para. 2 n.5 (2022).

²³ See 47 CFR § 4.9(a), (c)(1), (d), (e)(1), (f), (g)(1)(i), and (g)(1)(ii).

²⁴ See *Amendments to Part 4 of the Commission's Rules Concerning Disruptions to Communications; New Part 4 of the Commission's Rules Concerning Disruptions to Communications*, PS Docket No. 15-80, ET Docket No. 04-35, Notice of Proposed Rulemaking, Second Report and Order, and Order on Reconsideration, 30 FCC Rcd 3206, 3227, paras. 62-63 (2015).

²⁵ According to Commission estimates, there are an average of 82 MVNOs providing service per county in the United States. See *Resilient Networks; Amendments to Part 4 of the Commission's Rules Concerning Disruptions to Communications; New Part 4 of the Commission's Rules Concerning Disruptions to Communications*, PS Docket Nos. 21-346 and 15-80; ET Docket No. 04-35, Third Further Notice of Proposed Rulemaking and Order on

when they fall within a provider category covered by section 4.9 and “lease or otherwise utilize” facilities to provide communications services to their customers.²⁶ Such resellers are uniquely equipped to provide information to the Commission about how outages affect their customers.²⁷

E. Select the Most Precise Root Cause Supported by the Information Available

NORS enables providers to identify an outage’s root cause by selecting from among a dropdown menu of root causes. A provider should select the most specific root cause supported by the information available before the Final Report deadline.²⁸ The fact that an outage began on another provider’s network does not obviate the requirement that the reporting provider conduct a reasonable investigation of the outage to determine its root cause.²⁹ Providers should only select “Insufficient Data” in rare instances when, after a reasonable investigation, they cannot identify the root cause.³⁰ The Commission has explained that, by the Final Report deadline, “complete information will, in almost all cases, be available and the [F]inal [R]eport must contain this information,”³¹ including the root causes and any contributing factors.³² Moreover, the fact that an outage investigation may continue after the 30-day Final Report deadline does not, standing alone, justify selecting “Insufficient Data” when the available evidence supports a more specific cause.³³ Section 4.11 requires providers to submit “all pertinent information” about an outage.³⁴ Even where a provider must select the “Insufficient Data” root cause, it should explain what is known about the outage, why a more specific cause cannot be identified, and any known contributing factors. In addition, providers should only select “Other” as the root cause when the cause is known but no listed root cause accurately describes it.³⁵ When selecting “Other,” providers should

Reconsideration, 40 FCC Rcd 6325-26 n.55 (2025). However, we estimate that fewer than 82 MVNOs are registered to file outage reports in NORS.

²⁶ See 30 FCC Rcd at 3227, para. 62.

²⁷ See *id.* at 3227, para. 63.

²⁸ See *2004 Outage Reporting Order*, 19 FCC Rcd at 16875, para. 80 (stating that “reporting entities will be required to reveal in the [Final Report] the root cause of the outage and several contributing factors (if any) to the outage”). See also NORS Manual at 50 (instructing filers to “choose the root cause that best fits”).

²⁹ The Commission requires cable communications providers, satellite operators, satellite communications providers, wireless service providers, wireline service providers, Signaling System 7 (SS7) providers, and interconnected VoIP providers to submit outage reports for reportable outages that occur on facilities they “own, operate, lease, or otherwise utilize. . . .” 47 CFR § 4.9(a), (c)(1), (c)(2), (d), (e), (f), (g). See also *2004 Outage Reporting Order*, 19 FCC Rcd at 16905-06, para. 151 n.423 (asserting that “[t]he Commission expect[s] communications firms will track, investigate, and correct all of their service disruptions as an ordinary part of conducting their business operations”).

³⁰ See NORS Manual at 60 (describing use of “Insufficient Data” when “[t]here is not enough information from the failure report (and subsequent investigation, if any) to determine cause(s) of failure”).

³¹ *2004 Outage Reporting Order*, 19 FCC Rcd at 16913, para. 167.

³² See *id.* at 16875, para. 80 (“In addition, we have been persuaded by those comments that assert that each outage has only a single root cause but may have many contributing factors. Accordingly, reporting entities will be required to reveal in the final outage report the root cause of the outage and several contributing factors (if any) to the outage.” (citation omitted)).

³³ See NORS Manual at 60 (instructing filers to “choose the root cause that best fits”).

³⁴ See *2004 Outage Reporting Order*, 19 FCC Rcd at 16875, para. 80 (stating that “reporting entities will be required to reveal in the [Final Report] the root cause of the outage and several contributing factors (if any) to the outage”).

³⁵ See NORS Manual at 60 (instructing filers that “[w]hen classifications provided do not match the cause, the approximate match is preferred to be ‘Other.’”).

provide a plain-language explanation of the specific cause in their report, including any known contributing factors.³⁶

III. ADDITIONAL INFORMATION

We expect NORS filers' submissions to provide informative incident descriptions, specific root cause information, and the best estimate of impacted users. Consistent with the Commission's rules, we also expect that non-facilities-based providers will submit NORS reports concerning reportable outages, and we expect that outages that arise from facilities that the NORS filer leases or otherwise utilizes in its provision of service will be reported as well. These measures will help ensure the Commission and its public-safety partners have visibility into the impacts, causes, and resolution of all outages that must be reported in NORS.

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³⁶ See *2004 Outage Reporting Order*, 19 FCC Rcd at 16875, para. 80.