

Notice regarding an issue with URL preview function

2022.10.07

We have discovered an issue with the URL preview function used in LINE chat and other LINE services. If a user or LINE official account sent or posted a URL link, the preview displayed was for a different, incorrect destination page.

Through this notice, we want to provide an overview of the issue and sincerely apologize for any concern or inconvenience caused to our users and related parties. As of the time of this announcement, we have completed preliminary measures to address the issue, and it should no longer occur in new messages or posts.

1. Overview

Many services offered by LINE Corporation, including LINE chat, include a “URL preview” function, which displays a preview of the content at a link sent or posted by a user or LINE official account.

Due to an error in the system responsible for this function, if a user or LINE official account sent or posted a URL, the server would send a preview for a different URL sent or posted by someone else. As a result, users' devices would display a preview for the wrong page.

2. Scale of occurrence (Japan Time)

The duration and scale of the issue, as well as the information affected, are as follows.

Issue duration:

- The servers responsible for this function sent incorrect previews from September 6, 2022 at 12:32 a.m. to September 7, 2022 at 12:24 pm.*¹

*¹ Note that the incorrect preview data supplied during the occurrence period could remain on users' devices even after this period. We are currently taking measures to delete these incorrect previews.

Scale*²:

- An estimated 3.6 million incorrect previews were published.
- During the duration of this issue, incorrect previews occurred to about 0.5% to 0.6% of all URL previews.

*² These values were estimated from an investigation made on September 20, 2022. However, it is impossible to determine the exact number of occurrences of this issue from LINE's logs alone. Instead, these estimates were calculated based on the difference in output between normally functioning servers and the malfunctioning servers. Consequently, we don't have exact numbers for how many users were affected or how many incorrect previews were displayed.

Types of preview data displayed incorrectly:

- Page title
- Page overview
- The page's thumbnail image
- Page URLs (only occasionally)
 - When displaying previews for YouTube or LINE LIVE in a LINE chat^{*3}
 - Only under specific circumstances or with certain other services

^{*3} In these cases, users could watch the videos and share video links from within the LINE app.

3. Occurrence and response (Japan Time)

- September 6, 2022, 12:32 am: An error occurred in a part of the servers responsible for processing preview data, causing the issue.
- September 6, 2022, 10:55 pm: The person in charge of this server reported the issue internally, prompting an investigation.
- September 7, 2022, 12:24 pm: Server was rebooted, stopping new instances of incorrect previews from being generated.
- September 7, 2022, 2:07 pm: Preview function was temporarily suspended to find the source of the issue.
- September 8, 2022, 4:27 pm: Measures were implemented to correct the error and the preview function was resumed.
- September 22, 2022, 6:30 pm: Announcement was released.

4. Cause and prevention of reoccurrence

The error that caused this issue was due to insufficient memory in the segment of the servers responsible for preview data. That lack of memory led to an unexpected failure in data processing, during which time the error occurred.

To prevent this from occurring in the future, we will improve our monitoring of servers that process preview data and work toward preventing similar issues and detecting errors quickly.

5. Notice to users

(1) If a preview still displays incorrectly on your device

We are doing our best to fix incorrect previews from messages and posts made when this issue occurred, but if you still have messages or posts displaying incorrect previews, fixing them may require you to update your LINE app.

We plan to include a fix for this issue in the upcoming LINE app version 12.17.0, so please update your app once the update is available.

To prevent possible damage to privacy or security, we ask that you avoid sharing any screenshots of the incorrect previews.

(2) If you are concerned that a URL preview could have allowed others access to a private or restricted website

With the exception of YouTube and LINE LIVE previews, most of the time the source URL associated with the incorrect preview data would not have been accessible to the person viewing the preview. However, for some services and in specific circumstances, it may have been possible to view the source URL. We are still working on addressing this.

If you shared a restricted-access URL^{*4} on LINE chat or other services, with a preview displayed on either your LINE app or your message recipient's LINE app while this issue was in effect (between September 6, 2022 at 12:32 am and September 7, 2022 at 12:24 pm), and you're concerned that there may be further damage being caused by this issue, we suggest that you reference the information in this announcement and consider regenerating the URL and/or making the page private.

^{*4} Some examples of restricted-access URLs could include those using difficult-to-guess URLs, unlisted YouTube videos, link sharing for online storage services, or invitation links to conference calls.

- Even when this issue was ongoing, not all URLs sent or posted in LINE chats or other services were affected by the issue. At the time of this announcement, our investigation indicates that an estimated 0.5% to 0.6% of preview data was incorrectly displayed.
- The affected URLs were limited to those that were accessible from LINE servers. The file types also had to be supported by LINE's URL preview function.
- Due to the nature of the issue, we estimate that URLs shared to large numbers of users over LINE chat and other services were more likely to be the source of incorrectly displayed information. However, we cannot say for certain whether those affected URLs were intended for the public.

6. Inquiries regarding this matter

For inquiries regarding this matter, please contact us at the below link:

<https://contact-cc.line.me/detailId/14875>

Unfortunately, due to the nature of LINE's logs, we are not able to look into whether specific users or URLs were affected by this issue, and cannot respond to such requests.

- If you have issues with the inquiry form, please try viewing the link from a browser.

Once again, we sincerely apologize for any concern or inconvenience caused to our users and related parties.

We also apologize for the lateness of this announcement, however we needed time to ascertain the risk of further damage and the scale of the issue.

