

## Incident Reporting Form - RCA

<b>1. Letter/ Report Subject -</b>	Reporting of technical glitch to the exchange (NSE)
<b>Name of the Member-- Member Code -</b>	Zerodha Broking Limited NSE: 13906
<b>2. Designated Officer (Reporting Officer details)</b>	
<b>Name:</b> Venu Madhav	
<b>3. Date &amp; Time of Incident &amp; Incident duration</b>	03-10-2022, 09:00 AM, 31 minutes
<b>4. Incident Description &amp; chronology of events (please use additional sheets)</b>	Annexure 1
<b>5. Business Impact</b>	Annexure 2
<b>6. Immediate action taken (please give full details)(please use additional sheets if necessary)</b>	Annexure 3
<b>7. Date &amp; Time of Recovery</b>	03-10-2022, 09:31 AM
<b>8. Root Cause Summary (PI attach the detailed Report separately)</b>	Annexure 4
<b>9. Back up measures available</b>	<p>We have spread our customers across multiple physically independent data centres, OMS installations, and many leased lines with backup lines. Hence only a fraction of users will be impacted in such scenarios.</p> <p>We do have the option to switch the affected adapter servers and the affected CTCL IDs(exchange IDs) manually in</p>

	case of issues, as all the IDs are multi locked.
<b>10. Details of long-term action (please give full details) (please use additional sheets if necessary)</b>	Annexure 5

**Annexure 1:**

1. Order placement on our trading platform was impacted intermittently from 09:00 AM to 09:31 AM owing to OS corruption triggered inadvertently by a scheduled reboot on the primary server of exchange at Refinitiv (our OMS exchange approved vendor).
2. At 08:50 AM the services were shifted to another adapter server. The configuration change on the new adapter server was completed, but it was not working and we had to switch the CTCL IDs (exchange IDs) to resolve the issue.
3. Equity cash market orders were impacted from 09:00 AM to 09:31 AM
4. Equity derivative AMO orders were also impacted.
5. The issue was fixed by the Refinitiv team.

**Annexure 2:**

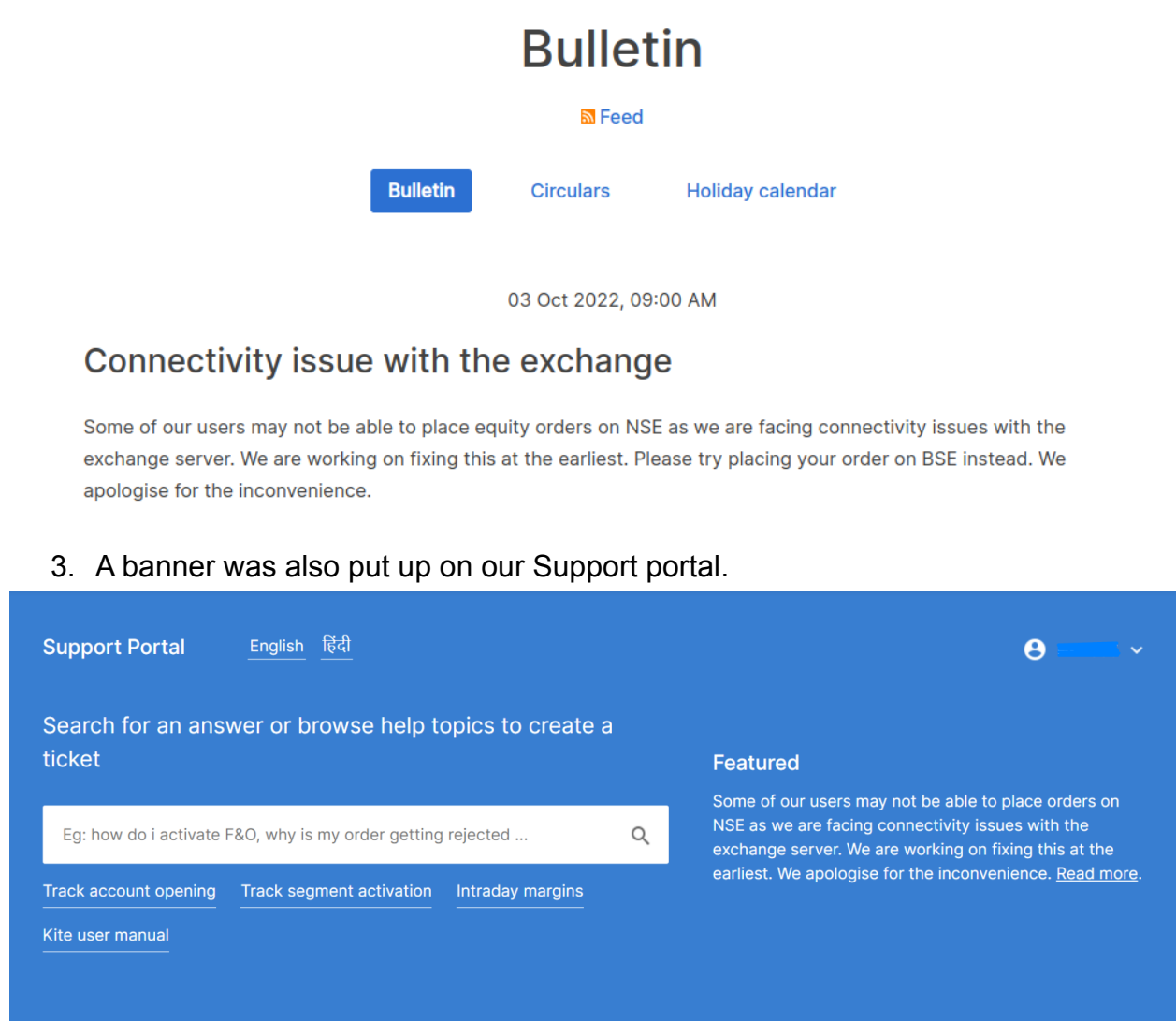
There was an intermittent issue with the Orders placement, order modification and order cancellation temporarily on Kite for some of our users.

1. The issue was Intermittent.
2. The impact was only on the Equity cash and derivative orders placed during this period.
3. A small section of our clients were impacted by the incident.
4. There were very few complaints (607 calls and 224 tickets). We have about 1.5 to 2 million customers logging into our application every day.
5. Customers who had placed AMO equity derivative orders were informed to wait for their orders to lapse.
6. Customers who placed equity cash market orders between 09.00 AM to 09.31 AM were informed to place equity orders on BSE.

**Annexure 3**

1. We immediately notified the Refinitiv team by raising a ticket.

2. A bulletin was put up on our website informing clients about the issue.



The screenshot shows a website bulletin page. At the top, the word "Bulletin" is displayed in a large, bold font. Below it, there is a "Feed" icon and three navigation buttons: "Bulletin" (highlighted in blue), "Circulars", and "Holiday calendar". The date and time "03 Oct 2022, 09:00 AM" are centered below the navigation. The main heading is "Connectivity issue with the exchange". The body text reads: "Some of our users may not be able to place equity orders on NSE as we are facing connectivity issues with the exchange server. We are working on fixing this at the earliest. Please try placing your order on BSE instead. We apologise for the inconvenience." Below the screenshot, there is a "Featured" section with a search bar containing the text "Eg: how do i activate F&O, why is my order getting rejected ..." and a search icon. Below the search bar are links for "Track account opening", "Track segment activation", "Intraday margins", and "Kite user manual".

4. We added a message on IVR for the clients calling us on our support line informing them about the issue.

#### **Annexure 4:**

The root cause of the incident was caused by an OS corruption triggered inadvertently by a scheduled reboot. The OS in question was an older version which is out of support; the new servers which were built to restore service have been upgraded.

#### **Annexure 5:**

1. Zerodha is working with Refinitiv team on identifying and upgrading the OS of the remainder servers which are in lower version so that this issue is not repeated.

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2. Refinitiv's monitoring processes and systems are being reviewed to ensure better monitoring is in place to detect such issues early.