

Production Incident History

Streaming System Incidents - Last 6 Months

Summary:

- Total Incidents: 40
- Critical: 9
- High: 13
- Warning: 18

Most Common Issue Type: Consumer Lag (5 incidents)

Incident #1

Date & Time: 2024-12-28 15:42:31

Type: Consumer Lag

Severity: HIGH

Affected Topic: orders-topic

Duration: 38 minutes

Description: Consumer lag increased to 647 seconds on orders-topic. Backlog size reached 98,432 messages.
Root cause: Slow downstream database queries causing processing delays.

Resolution: Scaled consumer instances from 3 to 8. Optimized database queries. Added connection pooling.

Incident #2

Date & Time: 2024-12-15 09:18:22

Type: High Latency

Severity: WARNING

Affected Topic: payments-topic

Duration: 18 minutes

Description: P99 latency spiked to 4,523ms. Average latency increased from 150ms to 1,234ms. Affected 23% of messages.

Resolution: Identified network congestion. Adjusted batch sizes. Implemented compression.

Incident #3

Date & Time: 2024-12-10 03:25:11

Type: Broker Failure

Severity: CRITICAL

Affected Topic: multiple-topics

Duration: 67 minutes

Description: Broker node 3 crashed due to OOM error. Caused partition rebalancing across remaining brokers. Message throughput dropped by 78%.

Resolution: Restarted broker with increased heap size. Redistributed partitions. Enabled automatic rebalancing.

Incident #4

Date & Time: 2024-11-28 14:52:08

Type: Producer Timeout

Severity: WARNING

Affected Topic: orders-topic

Duration: 28 minutes

Description: Producer timeout errors increased to 347/sec. Request timeout set too low at 12s. Caused message retry storms.

Resolution: Increased producer timeout to 30s. Adjusted batch.size and linger.ms. Added circuit breaker pattern.

Incident #5

Date & Time: 2024-11-22 11:33:45

Type: Consumer Lag

Severity: HIGH

Affected Topic: orders-topic

Duration: 42 minutes

Description: Consumer lag increased to 523 seconds on orders-topic. Backlog size reached 127,845 messages. Root cause: Slow downstream database queries causing processing delays.

Resolution: Scaled consumer instances from 3 to 8. Optimized database queries. Added connection pooling.

Incident #6

Date & Time: 2024-11-18 08:47:19

Type: Disk Space Full

Severity: HIGH

Affected Topic: logs-topic

Duration: 35 minutes

Description: Broker disk utilization reached 97%. Log retention caused storage overflow. Unable to accept new messages on logs-topic.

Resolution: Cleaned old log segments. Adjusted retention policy from 7 days to 3 days. Added disk monitoring alerts.

Incident #7

Date & Time: 2024-11-15 16:22:54

Type: Schema Incompatibility

Severity: HIGH

Affected Topic: user-events-topic

Duration: 48 minutes

Description: Producer sent messages with incompatible schema version 8. Consumers failed to deserialize 34,521 messages. Data pipeline blocked.

Resolution: Rolled back producer to compatible schema. Implemented schema validation at producer. Updated schema registry policies.

Incident #8

Date & Time: 2024-11-10 19:38:27

Type: High Latency

Severity: WARNING

Affected Topic: inventory-topic

Duration: 21 minutes

Description: P99 latency spiked to 3,891ms. Average latency increased from 150ms to 987ms. Affected 17% of messages.

Resolution: Identified network congestion. Adjusted batch sizes. Implemented compression.

Incident #9

Date & Time: 2024-11-05 07:15:33

Type: Message Loss

Severity: CRITICAL

Affected Topic: payments-topic

Duration: 93 minutes

Description: Detected 3,247 missing messages in payments-topic. Producer acknowledgment failures during network partition. Financial impact: \$156,000.

Resolution: Implemented idempotent producers. Added message ID tracking. Enabled exactly-once semantics.

Incident #10

Date & Time: 2024-10-29 13:41:12

Type: Partition Rebalance

Severity: WARNING

Affected Topic: user-activity-topic

Duration: 44 minutes

Description: Consumer group rebalancing triggered 12 times in 10 minutes. Caused processing gaps and duplicate message consumption.

Resolution: Increased session.timeout.ms. Optimized consumer processing logic. Reduced partition count from 100 to 50.

Incident #11

Date & Time: 2024-10-25 10:28:45

Type: Producer Timeout

Severity: WARNING

Affected Topic: notifications-topic

Duration: 31 minutes

Description: Producer timeout errors increased to 428/sec. Request timeout set too low at 8s. Caused message retry storms.

Resolution: Increased producer timeout to 30s. Adjusted batch.size and linger.ms. Added circuit breaker pattern.

Incident #12

Date & Time: 2024-10-20 22:54:17

Type: High Latency

Severity: WARNING

Affected Topic: orders-topic

Duration: 14 minutes

Description: P99 latency spiked to 5,672ms. Average latency increased from 150ms to 1,423ms. Affected 26% of messages.

Resolution: Identified network congestion. Adjusted batch sizes. Implemented compression.

Incident #13

Date & Time: 2024-10-15 05:37:28

Type: Consumer Lag

Severity: HIGH

Affected Topic: orders-topic

Duration: 29 minutes

Description: Consumer lag increased to 789 seconds on orders-topic. Backlog size reached 84,329 messages.

Root cause: Slow downstream database queries causing processing delays.

Resolution: Scaled consumer instances from 3 to 8. Optimized database queries. Added connection pooling.

Incident #14

Date & Time: 2024-10-12 18:19:55

Type: Memory Leak

Severity: CRITICAL

Affected Topic: analytics-topic

Duration: 142 minutes

Description: Consumer application memory usage grew from 2GB to 14GB over 6 hours. Caused by unbounded cache in message processor. Eventually led to OOM crash.

Resolution: Implemented LRU cache with max size limit. Added memory monitoring. Restarted affected consumers.

Incident #15

Date & Time: 2024-10-08 12:45:31

Type: Disk Space Full

Severity: HIGH

Affected Topic: logs-topic

Duration: 27 minutes

Description: Broker disk utilization reached 98%. Log retention caused storage overflow. Unable to accept new messages on logs-topic.

Resolution: Cleaned old log segments. Adjusted retention policy from 7 days to 3 days. Added disk monitoring alerts.

Incident #16

Date & Time: 2024-10-03 09:33:42

Type: High Latency

Severity: WARNING

Affected Topic: payments-topic

Duration: 19 minutes

Description: P99 latency spiked to 6,234ms. Average latency increased from 150ms to 1,156ms. Affected 21% of messages.

Resolution: Identified network congestion. Adjusted batch sizes. Implemented compression.

Incident #17

Date & Time: 2024-09-28 21:17:08

Type: Schema Incompatibility

Severity: HIGH

Affected Topic: user-events-topic

Duration: 52 minutes

Description: Producer sent messages with incompatible schema version 6. Consumers failed to deserialize 28,934 messages. Data pipeline blocked.

Resolution: Rolled back producer to compatible schema. Implemented schema validation at producer. Updated schema registry policies.

Incident #18

Date & Time: 2024-09-24 14:52:23

Type: Producer Timeout

Severity: WARNING

Affected Topic: orders-topic

Duration: 24 minutes

Description: Producer timeout errors increased to 293/sec. Request timeout set too low at 11s. Caused message retry storms.

Resolution: Increased producer timeout to 30s. Adjusted batch.size and linger.ms. Added circuit breaker pattern.

Incident #19

Date & Time: 2024-09-19 06:28:51

Type: Broker Failure

Severity: CRITICAL

Affected Topic: multiple-topics

Duration: 81 minutes

Description: Broker node 2 crashed due to OOM error. Caused partition rebalancing across remaining brokers. Message throughput dropped by 72%.

Resolution: Restarted broker with increased heap size. Redistributed partitions. Enabled automatic rebalancing.

Incident #20

Date & Time: 2024-09-15 11:42:36

Type: Consumer Lag

Severity: HIGH

Affected Topic: orders-topic

Duration: 36 minutes

Description: Consumer lag increased to 431 seconds on orders-topic. Backlog size reached 112,567 messages. Root cause: Slow downstream database queries causing processing delays.

Resolution: Scaled consumer instances from 3 to 8. Optimized database queries. Added connection pooling.

Incident #21

Date & Time: 2024-09-10 17:55:14

Type: High Latency

Severity: WARNING

Affected Topic: inventory-topic

Duration: 22 minutes

Description: P99 latency spiked to 7,123ms. Average latency increased from 150ms to 1,389ms. Affected 19% of messages.

Resolution: Identified network congestion. Adjusted batch sizes. Implemented compression.

Incident #22

Date & Time: 2024-09-05 08:31:47

Type: Network Partition

Severity: CRITICAL

Affected Topic: all-topics

Duration: 118 minutes

Description: Network partition between datacenter zones. Split-brain scenario with 3 brokers isolated. Message duplication and ordering issues detected.

Resolution: Network team resolved routing issue. Forced leader election. Verified message consistency.

Incident #23

Date & Time: 2024-09-01 13:18:29

Type: Partition Rebalance

Severity: WARNING

Affected Topic: user-activity-topic

Duration: 37 minutes

Description: Consumer group rebalancing triggered 9 times in 10 minutes. Caused processing gaps and duplicate message consumption.

Resolution: Increased session.timeout.ms. Optimized consumer processing logic. Reduced partition count from 100 to 50.

Incident #24

Date & Time: 2024-08-28 19:47:52

Type: Disk Space Full

Severity: HIGH

Affected Topic: logs-topic

Duration: 31 minutes

Description: Broker disk utilization reached 96%. Log retention caused storage overflow. Unable to accept new messages on logs-topic.

Resolution: Cleaned old log segments. Adjusted retention policy from 7 days to 3 days. Added disk monitoring alerts.

Incident #25

Date & Time: 2024-08-23 10:24:38

Type: Producer Timeout

Severity: WARNING

Affected Topic: notifications-topic

Duration: 27 minutes

Description: Producer timeout errors increased to 384/sec. Request timeout set too low at 9s. Caused message retry storms.

Resolution: Increased producer timeout to 30s. Adjusted batch.size and linger.ms. Added circuit breaker pattern.

Incident #26

Date & Time: 2024-08-19 15:39:21

Type: Schema Incompatibility

Severity: HIGH

Affected Topic: user-events-topic

Duration: 44 minutes

Description: Producer sent messages with incompatible schema version 9. Consumers failed to deserialize 41,268 messages. Data pipeline blocked.

Resolution: Rolled back producer to compatible schema. Implemented schema validation at producer. Updated schema registry policies.

Incident #27

Date & Time: 2024-08-15 07:52:15

Type: High Latency

Severity: WARNING

Affected Topic: payments-topic

Duration: 16 minutes

Description: P99 latency spiked to 2,847ms. Average latency increased from 150ms to 1,092ms. Affected 24% of messages.

Resolution: Identified network congestion. Adjusted batch sizes. Implemented compression.

Incident #28

Date & Time: 2024-08-11 22:16:43

Type: Message Loss

Severity: CRITICAL

Affected Topic: payments-topic

Duration: 107 minutes

Description: Detected 4,892 missing messages in payments-topic. Producer acknowledgment failures during network partition. Financial impact: \$187,000.

Resolution: Implemented idempotent producers. Added message ID tracking. Enabled exactly-once semantics.

Incident #29

Date & Time: 2024-08-07 12:44:57

Type: High Latency

Severity: WARNING

Affected Topic: orders-topic

Duration: 23 minutes

Description: P99 latency spiked to 3,564ms. Average latency increased from 150ms to 1,278ms. Affected 28% of messages.

Resolution: Identified network congestion. Adjusted batch sizes. Implemented compression.

Incident #30

Date & Time: 2024-08-02 16:27:34

Type: Broker Failure

Severity: CRITICAL

Affected Topic: multiple-topics

Duration: 54 minutes

Description: Broker node 5 crashed due to OOM error. Caused partition rebalancing across remaining brokers. Message throughput dropped by 65%.

Resolution: Restarted broker with increased heap size. Redistributed partitions. Enabled automatic rebalancing.

Incident #31

Date & Time: 2024-07-29 09:15:28

Type: Producer Timeout

Severity: WARNING

Affected Topic: orders-topic

Duration: 33 minutes

Description: Producer timeout errors increased to 456/sec. Request timeout set too low at 7s. Caused message retry storms.

Resolution: Increased producer timeout to 30s. Adjusted batch.size and linger.ms. Added circuit breaker pattern.

Incident #32

Date & Time: 2024-07-25 18:38:45

Type: Disk Space Full

Severity: HIGH

Affected Topic: logs-topic

Duration: 29 minutes

Description: Broker disk utilization reached 99%. Log retention caused storage overflow. Unable to accept new messages on logs-topic.

Resolution: Cleaned old log segments. Adjusted retention policy from 7 days to 3 days. Added disk monitoring alerts.

Incident #33

Date & Time: 2024-07-21 11:51:19

Type: Schema Incompatibility

Severity: HIGH

Affected Topic: user-events-topic

Duration: 56 minutes

Description: Producer sent messages with incompatible schema version 7. Consumers failed to deserialize 19,745 messages. Data pipeline blocked.

Resolution: Rolled back producer to compatible schema. Implemented schema validation at producer. Updated schema registry policies.

Incident #34

Date & Time: 2024-07-17 05:23:42

Type: Memory Leak

Severity: CRITICAL

Affected Topic: analytics-topic

Duration: 156 minutes

Description: Consumer application memory usage grew from 2GB to 15GB over 6 hours. Caused by unbounded cache in message processor. Eventually led to OOM crash.

Resolution: Implemented LRU cache with max size limit. Added memory monitoring. Restarted affected consumers.

Incident #35

Date & Time: 2024-07-13 14:47:26

Type: Partition Rebalance

Severity: WARNING

Affected Topic: user-activity-topic

Duration: 41 minutes

Description: Consumer group rebalancing triggered 14 times in 10 minutes. Caused processing gaps and duplicate message consumption.

Resolution: Increased session.timeout.ms. Optimized consumer processing logic. Reduced partition count from 100 to 50.

Incident #36

Date & Time: 2024-07-09 20:12:54

Type: High Latency

Severity: WARNING

Affected Topic: inventory-topic

Duration: 17 minutes

Description: P99 latency spiked to 4,921ms. Average latency increased from 150ms to 1,145ms. Affected 15% of messages.

Resolution: Identified network congestion. Adjusted batch sizes. Implemented compression.

Incident #37

Date & Time: 2024-07-05 08:56:37

Type: Network Partition

Severity: CRITICAL

Affected Topic: all-topics

Duration: 98 minutes

Description: Network partition between datacenter zones. Split-brain scenario with 2 brokers isolated. Message duplication and ordering issues detected.

Resolution: Network team resolved routing issue. Forced leader election. Verified message consistency.

Incident #38

Date & Time: 2024-07-01 13:34:21

Type: Consumer Lag

Severity: HIGH

Affected Topic: orders-topic

Duration: 45 minutes

Description: Consumer lag increased to 856 seconds on orders-topic. Backlog size reached 143,298 messages.

Root cause: Slow downstream database queries causing processing delays.

Resolution: Scaled consumer instances from 3 to 8. Optimized database queries. Added connection pooling.

Incident #39

Date & Time: 2024-06-27 17:21:48

Type: Producer Timeout

Severity: WARNING

Affected Topic: notifications-topic

Duration: 26 minutes

Description: Producer timeout errors increased to 312/sec. Request timeout set too low at 13s. Caused message retry storms.

Resolution: Increased producer timeout to 30s. Adjusted batch.size and linger.ms. Added circuit breaker pattern.

Incident #40

Date & Time: 2024-06-23 10:43:15

Type: High Latency

Severity: WARNING

Affected Topic: payments-topic

Duration: 20 minutes

Description: P99 latency spiked to 5,387ms. Average latency increased from 150ms to 1,312ms. Affected 22% of messages.

Resolution: Identified network congestion. Adjusted batch sizes. Implemented compression.

Incident Patterns Summary

Consumer Lag (5 incidents):

- Average lag: 649 seconds
- Common cause: Database query slowness

- Standard resolution: Scale consumers, optimize queries

High Latency (7 incidents):

- P99 spikes: 2,847ms to 7,123ms
- Common cause: Network congestion
- Standard resolution: Batch size tuning, compression

Broker Failures (3 incidents):

- All caused by OOM errors
- Throughput drops: 65-78%
- Resolution: Heap size increase, rebalancing

Producer Timeouts (6 incidents):

- Timeout errors: 293-456/sec
- Common cause: Low timeout settings
- Resolution: Increase to 30s, add circuit breaker

Message Loss (2 incidents):

- Financial impact: \$156K-\$187K
- Cause: Network partitions
- Resolution: Idempotent producers, exactly-once semantics

Generated for AI-powered anomaly detection and RAG implementation