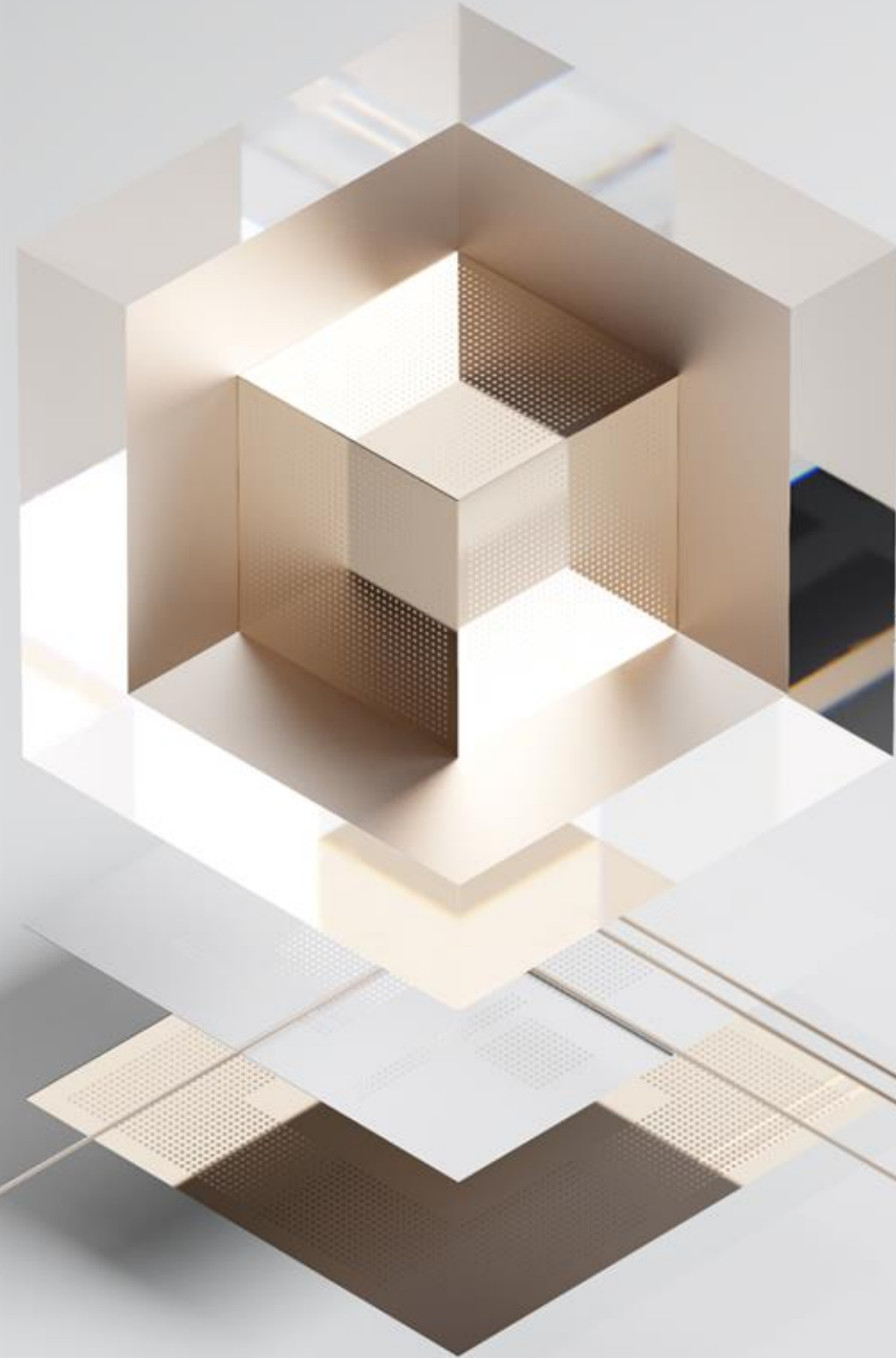


April 27, 2026

Root Cause Analysis and Mitigation Plan



Agenda

Incident summary

Incident impact

Root cause analysis

Incident timeline

Piano solutions

Summary

Incident date

April 27, 2026

Affected software modules

Activation: Composer experience priority (server-type)

Affected environment or location

US Production

Incident scope

Partial outage

Incident duration

~19 hours

Impact

Incident severity

High

Impact description

Experience priority (waterfall) configurations for 9 server-type Composer applications were overwritten with incorrect data, disrupting the expected execution order of experiences in production. Affected applications continued to serve experiences, but delivery no longer followed the configured priority order. Clients were temporarily unable to update priority rules, as changes were overwritten by the corrupted state.

Root cause

The Experience Labels feature, released on April 16, 2026, introduced a new API for managing Composer experience priority ordering. This API relied on a unique document identifier (`objectId`) to target the correct priority record during updates. A subset of legacy priority documents — specifically those for server-type and edge-type experiences created prior to the feature release — did not include this identifier field.

On April 27, 2026, a user reordered server-type experience priorities via the new Composer priority management interface — the first use of the new API against a legacy server-type document. Because the target document lacked the `objectId` field, the database matched the update filter against any document also lacking the field, inadvertently writing the update to a different application's priority record each time. Across 15 reorder operations, some applications had their priority configurations overwritten with the source application's full experience list.

As a result, some client applications in the US production environment had their Composer waterfall rules corrupted. The dashboard reflected incorrect priority ordering, and client attempts to reorder experiences were automatically reverted to the corrupted state. No data was lost — all corrupted records were recoverable from database snapshots.

To fix the issue, Piano restored the affected priority documents using verified data from the pre-incident database snapshot taken earlier that day. All experience counts and ordering were confirmed correct following restoration.

To prevent this from happening in the future, Piano will backfill the `objectId` identifier to all legacy priority documents, remove deprecated legacy priority update methods, introduce additional monitoring on execution behalf to catch unexpected priority rules and introduce automated tests verifying that priority updates always target only the intended document.

Incident timeline

Minutes	Date / Time (UTC)	Description
—	Apr 16, 2026	Experience Labels feature released to production; new priority management API activated
—	Apr 21, 09:25 UTC	Database migration adds draft support to the priority collection; data confirmed correct post-migration
—	Apr 21 – Apr 27	Daily database snapshots confirm no priority data corruption across all applications
—	Apr 27, 03:12 UTC	A user begins reordering server-type experience priorities via the new Composer priority management interface — first use of the new API on a legacy document
—	Apr 27, 03:12–03:17 UTC	15 priority reorder operations performed; each operation writes to an unintended application's priority document due to a missing objectId field — 9 applications affected
0	Apr 27, 06:58–06:59 UTC	A second user performs 2 additional priority updates for the same application
503	Apr 27, 15:21 UTC	Client reported the problem, investigation started
518	Apr 27, 15:36 UTC	Issue escalated to developers

Minutes	Date / Time (UTC)	Description
587	Apr 27, 16:45 UTC	Incident formally declared: partial outage — Composer US Production
633	Apr 27, 17:31 UTC	Corruption confirmed: 9 applications had their priority lists overwritten with the source application's full experience list
671	Apr 27, 18:09 UTC	All 9 affected priority documents restored from pre-incident database snapshot; functionality confirmed restored
902	Apr 27, ~22:00 UTC	Priority data verified correct across all priority documents; incident resolved
1139	Apr 28, 01:57 UTC	Action items formalized; incident closed

Piano solutions and corrective measures

Backfill the objectId identifier to all legacy priority documents that are missing it, ensuring consistent document targeting across all Composer priority operations

Status

Done

Delivery date

Apr 28, 2026

Remove deprecated legacy priority update methods from the codebase to eliminate ambiguous update paths

Status

Done

Delivery date

Apr 28, 2026

Add automated tests verifying that priority update operations target only the intended document, including documents that predate the objectId field

Status

Done

Delivery date

Apr 28, 2026

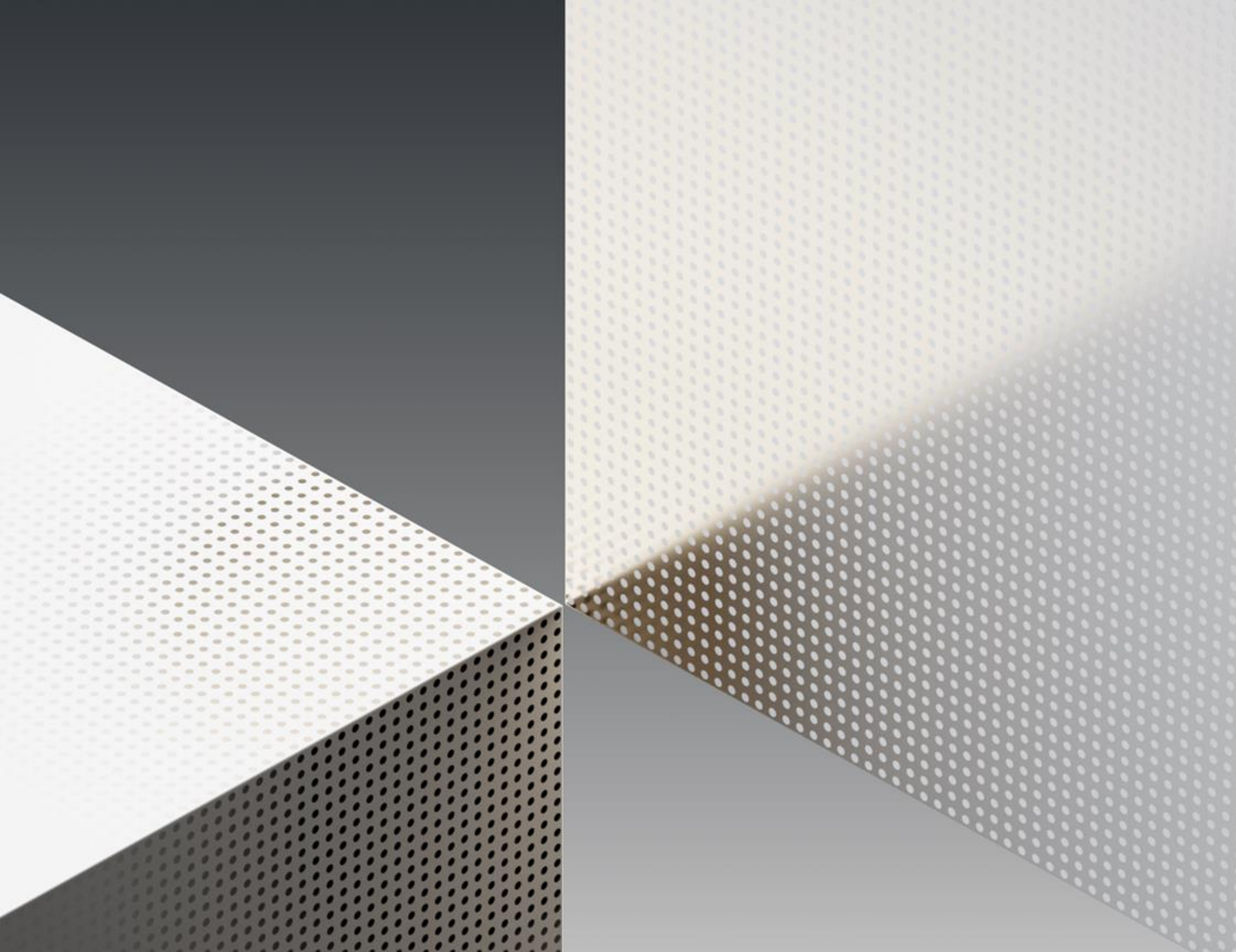
Additional monitoring on Composer execution to catch unexpected priority rule for a given application

Status

In progress

Estimated delivery date

Apr 29, 2026



piano

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