Case Study | Aerospace and defence | OpsHub x SPK and Associates

History-preserving, zero disruption migration from IBM RTC to PTC Codebeamer

Zero disruption, zero data loss, and full traceability.

Lynx is a global provider of safety-critical avionics software and hardware solutions. As the firm scaled its engineering operations, the organization required a modernized ALM platform to handle the growing complexity of its compliance-driven development workflows.
OpsHub Migration Manager and SPK and Associates merged capabilities to make this migration a non-disruptive, successful endeavor for Lynx.

24k+	40+	100%	4X	100%
Entities migrated	Entity types migrated	History and audit trail preserved	ROI on migration investment	Business continuity maintained

01 The challenge

Data complexity · Compliance · Business continuity

01
Migrating a deep IBM RTC ecosystem

Lynx had years of engineering history locked inside IBM RTC's on-premise instance, including rich work item hierarchies, audit trails, and cross-entity relationships critical for DO-178C compliance.

02
40+ entity types requiring precise mapping

From change requests and SCIAP reviews to Plan for Software Aspects of Certification (PSAC) checklists, each RTC entity type needed to be accurately translated to its Codebeamer counterpart without loss of field values or relationships.

03
Full audit trail and transaction history

Every field revision, original transaction username, and timestamp needed to survive the migration, not just current state. Lynx required this to maintain traceability for regulatory audits and certification reviews.

04
Hotlinks and cross-entity references

Discussion hotlinks from RTC needed to remain functional in Codebeamer. Broken links in a safety-critical ALM environment can disrupt verification chains and invalidate certification artifacts.

05
Four parallel projects, one coherent migration

Each project required a 1:1 project migration with independent configurations and field mappings, while maintaining consistent governance across all four streams.

06
Remote ID linking and soft delete handling

Work items required remote ID and link references between source and target. Additionally, handling of source item deletions in a compliant, non-destructive manner was essential to preserve data integrity.

02 The OMM solution

Intelligent, non-disruptive data migration

Full history migration

OMM captured every historical revision from RTC, preserving original transaction usernames and timestamps, and replayed them faithfully in Codebeamer, maintaining a complete audit trail.

Hotlink continuity

Discussion hotlinks existing in RTC were translated into valid, functional Codebeamer links, ensuring no certification reference or discussion thread was silently broken during the migration.

Precision entity mapping

A detailed configuration spreadsheet governed exact entity type translations, from change requests to PSAC checklists, with field-level rules for every entity across all four projects.

1:1 project migration

Each of the four Lynx projects was migrated to a corresponding Codebeamer project, preserving project boundaries and internal hierarchy.

Criteria-based filtering

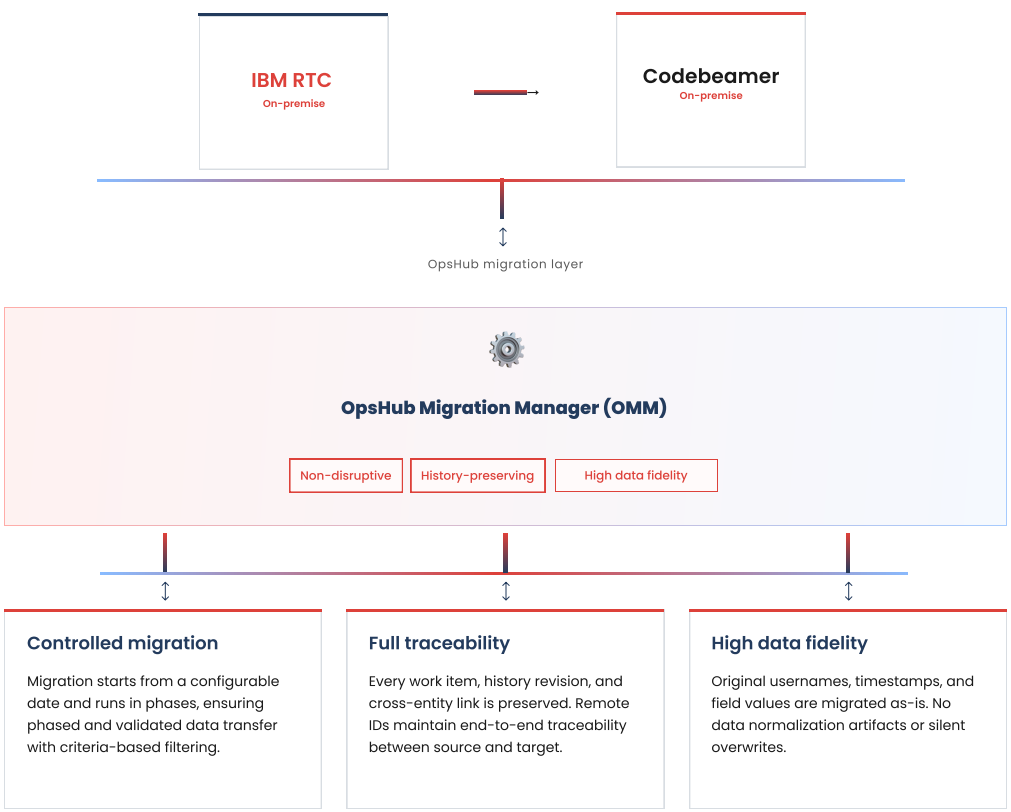
Configurable filters ensured only the right work items were migrated in each pass, enabling phased and selective data transfer aligned with Lynx's delivery model.

Remote ID and link governance

OMM maintained remote ID references between RTC and Codebeamer entities, ensuring traceability links were preserved and source deletions were handled via soft delete without data loss.

03 Migration architecture

History-preserving · 100% secure · On-premises



04 Migration execution

Tailored strategy · Phased · Zero disruption

MIGRATION DELIVERY PHASES

Discovery Ecosystem audit	• Full infrastructure audit • CB instance assessment • Entity hierarchy and field mapping documented • Migration start date and filter criteria defined
Implementation OMM deployment	• OMM installation complete • History-based migration executed per entity type • Hotlinks and cross-entity references verified end-to-end
Validation Optimization and sign-off	• History preservation and username attribution confirmed • Remote ID and link propagation confirmed • Stakeholder sign-off and post-migration support

05 Migration scope

Full history and audit links preserved

IBM RTC to codebeamer

Sample entity types migrated

RTC entity → Codebeamer tracker	
SCIAP review → SCIAP review	**Full history preserved**
LLR review → LLR checklist	**Original IDs kept intact**
PSAC review → PSAC checklist	**On-Premises**
Complete set test case review → Complete test case checklist	

24K+ entities migrated

Parent child relationships, hotlinks, cross-entity relationships and many more

RTC entity → Codebeamer tracker
SAD review → SAD checklist
HLR review → HLR checklist
Unit test case review → Unit test phase completion review checklist

06 Engagement outcomes

Results at a glance

4	40+	100%	0
Projects migrated to codebeamer	Entity types migrated	Audit history and usernames preserved	Disruption to business continuity

Before migration

- Critical engineering data siloed in legacy IBM RTC
- Risk of broken traceability during platform transition
- No structured approach to preserve entity history
- RTC discussion hotlinks potentially broken on cutover

OpsHub x SPK and Associates

After migration

- All four projects live in Codebeamer with full history intact
- Original usernames, timestamps, and revisions preserved
- End-to-end traceability maintained for certification audits
- Teams operating on modern ALM platform without disruption

07 OMM capabilities leveraged

What made this migration possible

Capability	Description	Migration Role
History-based migration	Full historical revision sync including original transaction usernames and dates	Ensures complete audit trail in Codebeamer for regulatory compliance
Entity type mapping	Configuration-driven translation of 40+ RTC entity types to Codebeamer tracker types	Maintains semantic accuracy of all work item types across platforms
Hotlink translation	RTC discussion hotlinks are resolved and recreated as valid Codebeamer links	Prevents broken reference chains in certification and review artifacts
Remote ID linking	Each migrated item retains a cross-reference to its original RTC source ID	Enables post-migration reconciliation and traceability validation
Criteria-based filtering	Configurable filters control which items are migrated in each pass	Supports phased delivery and selective migration per project requirements
Soft delete handling	Source item deletions are mirrored as soft deletes (not hard deletes) in target	Protects data integrity; deleted items remain accessible for audit purposes

08 Engagement benefits

What was delivered

Engineering team efficiency gain

Across approximately 20 engineering team members, driven by the elimination of legacy system inefficiencies and manual workarounds.

Daily metrics reporting improvement

Gained from streamlined daily metrics reporting workflows, reducing time spent on routine reporting and freeing capacity for engineering work.

Power user productivity boost

Achieved by two power users who previously bore the brunt of legacy system inefficiencies, now operating at significantly higher output on Codebeamer.

Reduction of maintenance overheads

Decommissioning of legacy DOORS and RTC servers. Significant reduction in server maintenance and licensing fees. Engineering and IT staff freed from manual system workarounds.

Faster time to value

The business case showed savings of approximately 4x the initial Codebeamer investment. The decision to migrate was clear and financially validated.

Trusted data for stakeholders

Original usernames, timestamps, and field values were migrated as-is. Each team member and decision maker had visibility to make informed decisions.

09 Migration roadmap

Delivered, live, and next steps

Phase 1: Foundation

Full RTC infrastructure audit (v5.0.2, on-premise)
Entity hierarchy and field mapping documented
OMM deployment plan finalized on Lynx Windows server

Phase 2: Migration

OMM installed on Lynx-hosted Windows infrastructure
History-based migration executed per entity type
Hotlinks and cross-entity references verified end-to-end

Phase 3: Optimization

Entity migration verified across all 4 projects
History preservation and username attribution confirmed
Stakeholder sign-off and post-migration support

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By leveraging the joint capabilities of OpsHub and SPK and Associates, Lynx transformed a complex, compliance-critical legacy migration into a structured, auditable, and zero-disruption transition, preserving every revision and traceability link built over years of avionics engineering.

Let's Talk