

WHITEPAPER

# SAP Same-Release System Migration:

Understanding Table Exclusions and the Rationale for  
Target-System Sovereignty

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# 1. Executive Summary

During a same-release SAP system migration — where source and target share an identical SAP ECC or SAP S/4HANA release, enhancement package, and support package level — a significant subset of database tables is deliberately excluded from the migration payload. This is not an oversight or a tooling limitation; it is a principled, SAP-aligned approach rooted in the architectural distinction between application (business) data and system/configuration data.

This whitepaper explains the technical and functional basis for table exclusions, the SAP delivery class framework that governs them, the categories of tables most commonly excluded, and the implications for migration project scoping, quality assurance, and go-live readiness.

**KEY POINT**

*Tables that describe, configure, or operate the SAP system itself must reflect the target environment — not the source. Migrating them would overwrite valid target-system settings and introduce instability, security risk, and operational errors.*

## 2. Background and Context

### 2.1 What Is a Same-Release SAP System Migration?

A same-release migration (also referred to as a system copy with selective data transfer, a client copy variant, or a Selective Data Transition in Nativion terminology) involves moving data between two SAP systems that are, from a software perspective, functionally equivalent. Common drivers include:

- Carve-out transactions — separating a legal entity, business unit, or company code from a larger system landscape into a standalone system
- Consolidation — merging data from multiple source systems into a single target
- Data centre migration — physically relocating an SAP system while preserving business data integrity
- Compliance and data minimisation — moving a defined subset of historical data to a new client or system

In all of these scenarios, the target SAP system is independently installed, configured, and tested before migration commences. It has its own system ID (SID), client settings, RFC destinations, transport landscape, user master data, number ranges, and operational parameters.

### 2.2 The Core Principle: Target-System Sovereignty

SAP's architecture distinguishes between two fundamental categories of system content:

- Business (application) data: the records generated and maintained by business operations — financial postings, sales orders, purchase orders, material master records, HR infotypes, plant maintenance objects, and so forth.
- System and configuration data: the parameters, settings, and runtime artefacts that define how the SAP system itself operates — its identity, connectivity, security model, number range state, workflow engine, and technical infrastructure.

The first category belongs to the business and must follow it in a migration. The second category belongs to the target environment and must remain under the control of the system administrators and functional consultants who have configured that environment. Overwriting it with source-

system values would be equivalent to replacing the plumbing of a new building with the plumbing diagrams from the old one — regardless of whether both buildings are architecturally identical.

### 3. The SAP Delivery Class Framework

The most authoritative basis for understanding table exclusions is SAP's own Delivery Class (Auslieferungsklasse) attribute, which is defined for every database table in the ABAP Data Dictionary (transaction SE11 or SE16N, field CONTFLAG in table DD02L).

The delivery class governs two things: (1) how SAP ships and upgrades the table's content, and (2) how client copy and transport mechanisms treat the table's data. It is therefore the primary reference for migration scoping decisions.

Table 1: SAP Delivery Class Reference (Source: SAP ABAP Dictionary documentation, SAP Note 2857)

Delivery Class	SAP Definition	Typical Migration Treatment
A	Application data (business objects, postings)	Migrated in full
C	Customising – maintained by customer in client	Selectively migrated or re-applied
E	System table, maintained by SAP & customer	SAP baseline retained, delta reviewed
G	Customising, cross-client	Usually excluded; target config applied
L	Temporary/interim data	Excluded
S	System table, SAP-owned (no customer changes)	Excluded – SAP installs in target
W	SAP system tables in own namespace	Excluded – SAP-managed

These profiles form the logical basis for migration scoping in SAP-supported migration tools.

Delivery class is the primary heuristic used for migration scoping, but final treatment can be project-specific and depends on architecture, business requirements, and operational considerations. The inclusion or exclusion of tables must be clarified and confirmed prior to final migration during the multiple iterations of a project's timeline.

## 4. Categories of Tables Excluded from Same-Release Migrations

The following sections describe the principal categories of tables that are routinely excluded from same-release migrations, with their technical justification and reference to SAP documentation where available.

### 4.1 System Identity and Client Configuration

Tables such as T000 (client directory) and associated client-level configuration tables define the operational identity of the SAP system — its client number, client name, city, currency, and system change options. These values are set during target system build and are specific to the new landscape. Overwriting T000 from the source would corrupt the target client definition.

**SAP  
REF**

*In selective migration scenarios involving independently built target environments, T000 should generally remain under target-system administrative control and is therefore normally excluded from migration scope*

## 4.2 Number Range Objects (NRIV, NRSEG)

Number range intervals (stored in NRIV and managed via transaction SNRO) control the assignment of primary document numbers: FI document numbers, material numbers, vendor numbers, customer numbers, sales order numbers, and so forth. Each SAP system maintains its own number range state, buffered in memory for performance.

Migrating NRIV from a source system would either create gaps (source current number > target current number) or, more dangerously, cause duplicate document number assignment if the target system has already issued numbers beyond the source state.

## 4.3 Transport and Change Management Infrastructure

Tables in the transport namespace (E070, E071, E07T, TRBAT, TRJOB) track the state of the ABAP Change and Transport System (CTS) in the source landscape. These records have no validity in the target system, which operates in a different transport domain with a different Transport Management System (TMS) configuration (stored in TMSCONF and the file system).

- Migrating these tables would falsely represent source-system change history in the target
- It could interfere with the target system's own change management if transport IDs collide
- As a standard operational practice, transport tables are generally not migrated between independent landscapes.

## 4.4 Spool, Print, and Output Management Configuration

Spool and output management tables (TSP0A, TSP01, TSPOPTIONS, RSPOPNAME) reference physical or logical printers, output devices, and spool server assignments that are specific to the source system's data centre and network topology. The target system will have different output device definitions appropriate to its own infrastructure.

**SAP  
REF**

*SAP Help: Output Management — Spool and Output Devices (transaction SPAD). Device definitions are infrastructure-specific and must be configured in the target independently of any data migration.*

## 4.5 Background Job Definitions (TBTCO, TBTCS, TBTCP, TBTCT)

Background processing tables store scheduled job definitions, job steps, variants, and execution logs. While it may be appropriate to recreate equivalent job schedules in the target system, direct migration of these tables is problematic for several reasons:

- Job schedules reference server names (application server host names) that differ in the target
- Variant data may reference source-specific organisational units or file paths
- Runtime logs (TBTCT) represent source-system history with no relevance in the target
- Migrating job definitions could trigger unintended immediate job execution in the target

SAP recommends that background job schedules be independently reviewed, adapted, and scheduled in the target system using transaction SM37 / JOBREPO, or managed through SAP Solution Manager / SAP Cloud ALM job scheduling capabilities.

#### 4.6 RFC and Interface Connectivity (RFCDES, RFCDOC, RFCSYSACL)

Remote Function Call (RFC) destination tables define the technical connections from an SAP system to external systems, other SAP systems, and external services. In a target system built for a new landscape (e.g., a carved-out entity or a consolidated system), all RFC destinations must be defined to reflect the new topology:

- Target URLs, IP addresses, and logical system names differ from the source
- Credentials stored in RFC destinations are environment-specific
- RFCSYSACL governs trusted system relationships in the source landscape, which have no validity in the target

#### 4.7 User Master Data and Authorisation Objects (USR\*, AGR\_\*)

User master tables (USR01 through USR41) and role/profile tables (AGR\_USERS, AGR\_1251, AGR\_TCODES, and related) define who can access the system and what they can do. These must be provisioned in the target independently, typically through:

- A formal identity provisioning and access management (IAM) process
- Role re-import from the source system's transport landscape (roles as transport objects, not table migration)
- Integration with an enterprise identity directory (Active Directory, SAP Identity Authentication Service)

Migrating user master data directly risks carrying over source-system security configurations, inactive users, emergency accounts, and potentially non-compliant access assignments into the target system without the required governance review.

**SAP  
REF**

*SAP Security Guide: "User and Role Administration" — user master records and authorisation assignments are considered client-specific configuration and must be subject to the target system's access governance framework.*

#### 4.8 Workflow Runtime State (SWW\*, SWWLOGHIST)

SAP Business Workflow runtime tables store the state of active and historical workflow instances. Open workflow items in the source system (e.g., approval workflows in mid-execution) cannot simply be transferred to the target, because:

- Workflow instances reference source-specific user IDs, organisational model assignments, and business objects
- The target system's workflow event queue and work item manager must initialise in a clean state
- Historical workflow logs represent source-system audit history and should be archived, not migrated

Migration projects typically address open workflow items through a business cutover process — either completing or rejecting open work items before migration cutover — rather than through data migration.

#### 4.9 CCMS and System Monitoring Configuration

The Computing Centre Management System (CCMS) configuration tables (CCMSCONF, MONI, AL\* tables) store monitoring alert thresholds, log retention policies, and system health parameters that are specific to the source system's hardware and operational baseline. The target system requires its own CCMS configuration calibrated to its infrastructure.

## 5. Consolidated Technical Reference

Table 2 below provides a consolidated reference of table categories, delivery classes, and migration disposition for the most commonly encountered exclusion scenarios in same-release SAP system migrations.

Table 2: Technical Classification of Non-Migrated Tables in Same-Release SAP Migrations

Table Category	Representative Tables	SAP Delivery Class	Migration Disposition
System & Kernel Configuration	T000, CCMSCONF, RFCSYSACL	S (System)	Excluded – target system only
Client-Independent Customising	T001 (Co. Code config), TVARVC	C / G	Excluded or selectively carried
Number Range Objects	NRIV, NRSEG	S	Excluded – reset in target
Transport & Change Management	E070, E071, TRBAT	S	Excluded – target landscape
Spool & Print Configuration	TSP0A, TSP01, TBTC*	S	Excluded – target infra
Batch Job Definitions	TBTCO, TBTCO, TBTCO	S	Excluded – recreated in target
RFC & Interface Destinations	RFCDES, RFCDOC	S	Excluded – target-specific
User & Authorisation Master	USR01–USR41, AGR_*	C / S	Excluded – provisioned separately
Workflow Runtime State	SWW*, SWWLOGHIST	A (Application)	Excluded – open items cleared
Application Business Data	BKPF, VBAK, MARA, LFA1...	A / E	Migrated (core scope)

Note: The above is a representative, non-exhaustive list. Actual migration scope must be determined through analysis of the target system build and a systematic review of tables with delivery classes S, G, and W, as well as delivery class C tables where target system re-configuration has superseded source settings.

## 6. Alignment with SAP Migration Tools and Methodology

## 6.1 SAP System Copy / SAP SWPM

The SAP Software Provisioning Manager (SWPM), used for homogeneous and heterogeneous system copies, applies internal table exclusion logic based on delivery class. When performing a client copy (transaction SCC3, SCC8, SCC9), SAP provides predefined profiles that explicitly control which delivery classes are included or excluded. The SAP\_CUST profile, for example, copies customising data while excluding system tables.

## 6.2 SAP Data Migration Cockpit (LTMC / LTMOM)

SAP's Data Migration Cockpit (transaction LTMC, part of SAP S/4HANA) is designed for the migration of master and transactional data objects using predefined migration objects. It does not operate at raw table level and inherently excludes system and configuration tables by focusing on business object APIs rather than direct table inserts.

## 6.3 Nativion Data Conversion Suite (DCS) and SDT

Nativion's Data Conversion Suite (DCS), and specifically the Selective Data Transition (SDT) capability, implements a structured table scoping methodology that classifies all tables in the source system prior to migration. The scoping engine:

- Reads the ABAP Data Dictionary delivery class for every table in scope
- Applies configurable exclusion rules aligned to the categories described in this document
- Generates a documented migration scope that can be reviewed, audited, and accepted by the customer
- Provides exception handling for edge cases where a normally-excluded table contains application data requiring selective migration

This approach ensures full traceability between the migration scope decision and the SAP architectural principles governing each table category.

## 6.4 SAP Activate Methodology

SAP's Activate methodology, the recommended project approach for SAP S/4HANA migrations and implementations, includes a dedicated "Data Management & Migration" workstream. The methodology's migration planning deliverables explicitly require:

- A Data Migration Strategy document that defines scope inclusions and exclusions
- A Table Scope List (TSL) reviewed against delivery class classification
- Sign-off from both the customer's technical team and the system integrator on excluded tables

SAP Activate documentation (available on SAP Roadmap Viewer at [roadmaps.sap.com](https://roadmaps.sap.com)) references the delivery class framework as the primary input for migration scoping decisions.

# 7. Implications for Migration Project Scoping and Governance

## 7.1 Table Exclusion Is a Feature, Not a Gap

A common concern raised by customers and project stakeholders is that table exclusions represent data loss or migration incompleteness. This framing is incorrect. Tables excluded from migration are not "lost" — they exist in the source system and remain accessible for reference. They are excluded because their content is system-specific and must be independently managed in the target.

The appropriate analogy is a company moving offices: the business records (contracts, invoices, employee files) move with the company. The building's electrical wiring diagrams, security access codes, and HVAC settings do not — because the new building has its own. Attempting to "migrate" the old building's systems to the new one would be nonsensical and potentially dangerous.

## 7.2 Documentation and Audit Trail

Migration projects should maintain a formal Table Exclusion Register that documents, for each excluded table category:

- The table name(s) and delivery class
- The functional reason for exclusion
- The target system process by which equivalent data is established (e.g., Basis configuration, transport import, IAM provisioning)
- The responsible party (customer Basis team, functional team, or migration partner)
- Sign-off by the relevant workstream lead

This register forms part of the migration governance documentation and supports both internal quality assurance and external audit requirements (e.g., SOX, GDPR data lineage).

## 7.3 Post-Migration Validation

For each excluded table category, the migration test plan should include a corresponding validation activity in the target system confirming that the required configuration or data is present and correct. This validation is typically performed by the target system's functional and Basis teams as part of integration testing and cutover rehearsal.

### BEST PRACTICE

*Natuvion recommends a formal "Target System Readiness" checklist that maps each excluded table category to a validated target-system configuration activity, signed off prior to each cutover rehearsal and the final go-live event.*

## 8. Frequently Asked Questions

### Q: If source and target are the same release, why can't we just copy everything?

A same-release match means the ABAP codebase and data structures are identical — it does not mean the operational parameters, connectivity, and security configurations should be identical. The two systems serve different landscapes, organisations, or purposes. System tables reflect the source environment's infrastructure; the target environment requires its own independently validated configuration.

### Q: What about customising tables (Delivery Class C)?

Delivery Class C tables present the most nuanced scoping decisions. Some contain purely application-generated configuration that should follow the business data (e.g., company code settings in T001 for a carve-out). Others contain baseline configuration that has been re-implemented in the target as part of the system build. Each must be reviewed individually. SAP's standard client copy profiles (SAP\_CUST) provide a useful starting point, but project-specific analysis is required.

### Q: How do we handle number ranges to avoid duplicate document numbers?

Number ranges must be set in the target system to a value higher than the highest document number being migrated, plus a safety buffer. This is a mandatory post-migration configuration

step, typically performed by the FI/CO functional team after migration load and verified through automated number range gap analysis before go-live.

### Q: Can excluded tables be accessed after migration?

System and configuration tables remain intact in the source system, which is typically retained in read-only or archival mode following cutover for a defined retention period. Business users requiring access to source-system configuration history (e.g., for audit purposes) can access the source system directly or through a designated archive viewer solution.

## 9. Key SAP References

The following SAP documentation sources informed this whitepaper:

Reference	Title / Description	Relevance
SAP Note 2857	Client copy and delivery classes — canonical description of all delivery class values and their treatment in standard client copy profiles	Delivery class framework
SAP Help: SE11 / DD02L	ABAP Dictionary table documentation — CONTFLAG field documents the delivery class of every SAP table	Technical reference for scoping
SAP Help: SCC4 / SCC8 / SCC9	Client Administration and Client Copy — SAP's own profiles for controlling data migration between clients/systems	Standard migration profiles
SAP Activate Roadmap Viewer	Data Management & Migration workstream deliverables including Table Scope List (TSL) and Data Migration Strategy	Project methodology alignment
SAP Security Guide	User and Role Administration — authorisation master data governance principles	User master exclusion

## 10. Conclusion

Same-release SAP system migrations are scoped on a deliberate and architecturally sound principle: business data migrates with the business; system and configuration data belongs to the target environment. This principle is not a migration tool constraint — it is a reflection of SAP's own architectural design, documented in the delivery class framework and enforced through SAP's standard client copy and migration tooling.

Understanding this principle is essential for customers, project stakeholders, and auditors to accurately evaluate the completeness of a migration. A migration that correctly excludes system tables is a well-scoped migration. The target system's Basis and functional teams bear responsibility for establishing the corresponding configurations independently, and this responsibility must be formally captured in project governance documentation.

Nativion's SDT and DCS tooling operationalises these principles through automated table scoping, exclusion classification, and audit trail generation — ensuring that every migration delivered by Nativion APJ is both technically rigorous and fully defensible from a governance perspective.

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