

Oracle → PostgreSQL Migration Pack

Every Oracle type and feature, its PostgreSQL target, and the honest effort.

Pack	Oracle → PostgreSQL Migration Pack
Document	Compatibility matrix (types + features)
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HOW TO READ THIS

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Effort: Low = mechanical conversion. Medium = review and test. High = manual redesign — these rows become backlog items with owners. Pay special attention to DATE and empty-string semantics.

MAPPINGS

Mappings

Oracle	PostgreSQL target	Effort	Notes
NUMBER(p,s)	numeric(p,s)	Low	Precision preserved; verify scale in arithmetic.
NUMBER (no precision)	numeric	Low	Unconstrained numeric; check application expectations.
NUMBER(1) as flag	boolean (manual)	Medium	Convention-based; convert explicitly, don't guess.
BINARY_FLOAT	real	Low	Same IEEE-754 binary.
BINARY_DOUBLE	double precision	Low	Same IEEE-754 binary.
VARCHAR2(n)	varchar(n)	Low	Direct mapping.
NVARCHAR2(n)	varchar(n)	Low	PostgreSQL text is Unicode by default; verify collation.
CHAR(n)	char(n)	Low	Blank-padding semantics match.
CLOB / NCLOB	text	Low	Consolidate to text; check LOB APIs in app code.
BLOB	bytea	Medium	DBMS_LOB calls need rewrite; check client handling.
LONG / LONG RAW	text / bytea (manual)	High	Deprecated types; convert explicitly.
RAW(n)	bytea	Medium	Hex representation differs; check clients.
DATE	timestamp	High	Oracle DATE includes time; review every DATE column's actual usage.
TIMESTAMP	timestamp	Low	Direct mapping.
TIMESTAMP WITH TIME ZONE	timestamptz	Medium	Test DST boundaries and session-timezone behavior.
TIMESTAMP WITH LOCAL TIME ZONE	timestamptz	Medium	Semantics differ; normalize to UTC explicitly.

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INTERVAL DAY TO SECOND	interval	Low	Direct mapping.
ROWID	— (redesign)	High	No stable equivalent; use primary keys (ctid is not stable).
XMLTYPE	xml	Medium	Type exists; XPath/XQuery function names differ.
SDO_GEOMETRY	PostGIS (manual) geometry	High	Requires PostGIS; spatial operators differ.
ANYDATA / ANYTYPE	— (redesign)	High	No equivalent; redesign per usage.
Empty string = NULL	Application rule	High	PostgreSQL distinguishes " from NULL; audit every comparison and constraint.
PL/SQL packages	Schemas + functions (manual)	High	Package state, %TYPE/%ROWTYPE, and overloading need redesign.
Autonomous transactions	— (redesign)	High	No equivalent; use dblink or redesign the pattern.
DBMS_SCHEDULER jobs	pg_cron / pgAgent (manual)	Medium	Rebuild schedules; credential handling differs.
DB links	postgres_fdw / dblink	Medium	Works PG-to-PG; heterogeneous sources need redesign.
Materialized views	Materialized views	Medium	No query rewrite or fast refresh on commit; schedule REFRESH.
Synonyms	search_path / views	Low	No synonym object; use schema search_path.
Sequences	Sequences / identity	Low	CACHE and ORDER semantics differ; check gap tolerance.
VPD (FGAC)	Row-level security	Medium	Re-implement policies; test per role.
Flashback	PITR / audit (manual)	High	No flashback query; use PITR and history tables.

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CONNECT BY	Recursive CTE	Medium	Mechanical for simple hierarchies; START WITH becomes the anchor.
(+) outer joins	ANSI joins	Low	Mechanical rewrite; verify semantics.
ROWNUM	LIMIT	Low	Mechanical; check pagination with ties.
MERGE	INSERT ... ON CONFLICT	Medium	Covers matched cases; complex MERGE needs procedural rewrite.
Hints	— (review)	Medium	Ignored or invalid; verify plans after removal.
DUAL	— (omit)	Low	SELECT without FROM works in PostgreSQL.
NVL / NVL2	COALESCE / CASE	Low	Mechanical.
DECODE	CASE	Low	Mechanical.
SYSDATE SYSTIMESTAMP	/ now() / clock_timestamp()	Low	Pick transaction-start vs statement time deliberately.
RAC	Patroni / managed HA (manual)	High	Shared-everything clustering has no equivalent; redesign HA.
Data Guard	Streaming replication	Medium	Physical standby concepts transfer; tooling differs.
RMAN	pgBackRest / Barman	Medium	Rebuild backup strategy; rehearse PITR.
TDE	Filesystem / pgcrypto	Medium	Key custody redesigned.
Partitioning	Declarative partitioning	Medium	Interval partitioning patterns need pg_partman or PG 17+ features; verify.
APEX	— (rewrite)	High	No equivalent; re-platform the application.
Forms / Reports	— (rewrite)	High	No equivalent; re-platform.