

SQL Server → PostgreSQL Migration Pack

Every SQL Server type, its PostgreSQL target, and the honest effort to get there.

Pack	SQL Server → PostgreSQL Migration Pack
Document	Datatype compatibility matrix (36 types)
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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, not footnotes.

TYPE MAPPINGS

Type mappings

SQL Server type	PostgreSQL target	Effort	Notes
int	integer	Low	Direct mapping.
bigint	bigint	Low	Direct mapping.
smallint	smallint	Low	Direct mapping.
tinyint	smallint	Low	PostgreSQL has no tinyint; range 0-255 fits smallint. Check CHECK constraints.
bit	boolean	Low	Map 0/1 to false/true; review aggregates over bit columns.
decimal / numeric(p,s)	numeric(p,s)	Low	Precision preserved; verify scale in arithmetic.
money / smallmoney	numeric(19,4) numeric(10,4)	/ Medium	No money type semantics; format in the application layer.
float	double precision	Low	Same IEEE-754 binary; watch display formatting.
real	real	Low	Direct mapping.
date	date	Low	Direct mapping.
datetime	timestamp	Low	SQL Server rounds to ~3.33ms; PostgreSQL keeps microseconds.
datetime2	timestamp	Low	Precision preserved up to 6 digits.
smalldatetime	timestamp	Low	Minute precision retained.
datetimeoffset	timestampz	Medium	Review session-timezone behavior; test DST boundaries.
time	time	Low	Direct mapping.
char(n)	char(n)	Low	Blank-padding semantics match.
varchar(n)	varchar(n)	Low	Direct mapping.
varchar(max)	text	Low	No length enforcement; add CHECK constraints where the limit mattered.

SQL Server type	PostgreSQL target	Effort	Notes
nchar / nvarchar(n)	char(n) / varchar(n)	Low	PostgreSQL text is Unicode by default; verify collation.
nvarchar(max) / ntext / text	text	Low	Consolidate legacy LOB types to text.
binary(n) / varbinary(n)	bytea	Medium	Hex vs. escape output formats differ; check client libraries.
varbinary(max) / filestream	/ bytea / large object	High	Filestream has no equivalent; redesign file storage.
uniqueidentifier	uuid (pgcrypto)	Medium	Enable pgcrypto for gen_random_uuid(); NEWID() default becomes gen_random_uuid().
xml	xml	Medium	Type exists; XQuery support differs — review XML method calls.
sql_variant	text (manual)	High	No equivalent; redesign per usage.
hierarchyid	ltree (manual)	High	No equivalent; ltree covers most tree queries after rewrite.
geography / geometry	PostGIS (manual)	High	Requires PostGIS; spatial method names differ.
rowversion / timestamp	— (redesign)	High	Optimistic-concurrency pattern must be rebuilt (e.g., xmin or version column).
cursor type	refcursor (manual)	High	Rewrite cursor-passing procedures.
table (TVP)	— (redesign)	High	Use temp tables, arrays, or JSON parameters instead.
identity(1,1)	GENERATED ... AS Low IDENTITY		Modern PostgreSQL identity; reseed values during load.
computed column	GENERATED ALWAYS AS Medium (...) STORED		Only deterministic, immutable expressions; persisted only.
default constraint	DEFAULT	Low	Direct mapping.

SQL Server type	PostgreSQL target	Effort	Notes
timestamp (deprecated synonym)	— (redesign)	High	See rowversion.
