

VNA-SB-011 | Database X to Database Y | SQL Server Consolidation & Autonomous Uplift | Redwood Stone

Microsoft SQL Server, SSIS & SSRS Migration to Oracle Autonomous Database 23ai & OCI

Enterprises post-M&A often inherit dozens of fragmented Microsoft SQL Server instances (2008 R2 through 2022), fragile SSIS ETL packages, and SSRS report servers. Whether you want to replatform SQL Server schemas into Oracle Autonomous Database 23ai with APEX, or consolidate SQL Server Enterprise workloads onto high-IOPS OCI Compute / Azure Interconnect at 45% lower TCO, we deliver a turnkey migration.

Search Queries & Scope Covered: migrate SQL Server to Oracle Autonomous Database 23ai | convert SSIS DTSX packages to OCI Data Integration | migrate SSRS RDL reports to Oracle APEX and OAC | SQL Server Enterprise licensing consolidation on OCI | convert SQL Server T-SQL to Oracle 23ai PL/SQL

SOURCE LEGACY STACK (STACK X)		MODERNIZED TARGET ARCHITECTURE (STACK Y)	
Microsoft SQL Server (2008 R2 - 2022), T-SQL, SSIS & SSRS		Oracle Database 23ai / Autonomous Database on OCI (or SQL Server on OCI)	
INFRASTRUCTURE & LICENSE TCO	SSIS TO OCI DATA INTEGRATION	SSRS TO APEX / OAC	MULTI-CLOUD LATENCY (OCI-AZURE)
35-55% Lower	Serverless Pipelines	Zero Per-User Fees	< 2ms Interconnect

1. Problem Space & Architectural Bottlenecks

- SQL Server Enterprise Edition per-core licensing combined with Windows Server Datacenter and Software Assurance renewals makes running sprawling 4-to-16 core SQL Server VMs prohibitively expensive.
- Hundreds of undocumented SQL Server Integration Services (`.dtsx` SSIS) packages and SQL Server Reporting Services (`.rdl` SSRS) reports keep legacy servers alive years past End-of-Support.
- Running SQL Server on generic AWS or Azure VMs hits storage IOPS throttling limits unless you provision oversized compute shapes.

2. Technical Solution & Reference Architecture

- 2.1** Two Proven Target Lanes Based on Application Coupling: Lane 1 (Full Replatform to Oracle 23ai + APEX) converts custom SQL Server databases, T-SQL procedures, and SSRS reports into Oracle Autonomous Database 23ai and Oracle APEX. Lane 2 (SQL Server Consolidation on OCI / OCVS) consolidates third-party COTS SQL Server databases onto OCI DenseIO NVMe / Block Volume Ultra High Performance with Microsoft license mobility or BYOL.
- 2.2** Automated T-SQL, SSIS (`.dtsx`), and SSRS (`.rdl`) Conversion: Our XML parser extracts SQL queries and transformations from `.dtsx` and `.rdl` files, converting SSIS dataflows into OCI Data Integration / PL/SQL pipelines and SSRS reports into APEX Interactive Reports and AOP.
- 2.3** Oracle Database@Azure & OCI-Azure Interconnect: For hybrid estates where .NET apps remain in Azure, we deploy over the sub-2ms private OCI-Azure Interconnect or Oracle Database@Azure with zero cross-cloud egress fees.
- 2.4** Query Fan-Out Rationalization & Runtime/Inference Filtering: Instead of migrating cloned reports and DataWindows 1-for-1, our AST SQL parser clusters queries by their canonical core JOIN graph, builds governed Oracle 23ai views only for those core queries, and generates dynamic WHERE clauses, faceted filters, and ad-hoc report variations at

runtime and via AI inference (APEX 24.2 Smart Filters & Select AI).

3. Artifact-by-Artifact Conversion & Modernization Matrix

Legacy Artifact / Baseline Workload	Modernized Oracle / Cloud Target	Engineering Method & Outcome
SQL Server Databases & Schemas (`dbo.*`)	Oracle 23ai Pluggable Databases (PDBs) / Autonomous DB	SQLcl / GoldenGate Schema & Data Migration
T-SQL Stored Procedures, Views & Functions	Oracle 23ai PL/SQL Packages & SQL Macros	AST Transpilation (with native 23ai Boolean & IF EXISTS)
SSIS Packages (`.dtsx`) & SQL Agent Jobs	OCI Data Integration / `DBMS_SCHEDULER` & PL/SQL	XML Dataflow Extraction & Serverless Orchestration
SSRS Reports (`.rdl` Paginated & Tabular)	Oracle APEX 24.2 Reports + APEX Office Print / OAC	RDL Query Harvester & Template Rebinding
SQL Server Linked Servers (`OPENQUERY`)	Oracle Database Links / ORDS REST Data Sources	Federated Query Optimization
Cloned Reports / Queries Differing Only by WHERE Clause or Group-By (Query Fan-Out)	Canonical Core SQL View + APEX 24.2 Runtime / AI Inference Filters	AST Join-Graph Clustering (75-90% Report Count Reduction)

4. Oracle APEX & Ancillary Engineering Toolchain

- Oracle Autonomous Database 23ai & Oracle Base Database Service on OCI
- Oracle GoldenGate for SQL Server (heterogeneous real-time CDC)
- OCI Data Integration & Oracle Data Integrator (ODI) for SSIS replacement
- Oracle APEX 24.2 & Oracle Analytics Cloud (OAC) for SSRS replacement

Anonymized Production Proof: For a major title insurance and real estate services enterprise as well as multi-branch retail and fitness platforms, we consolidated legacy SQL Server CRM and operational databases, automated ETL pipelines, and eliminated recurring SSRS/Windows Server licensing bottlenecks.

5. Principal Architect Q&A

Q: How do Oracle 23ai new features simplify migrating from SQL Server?

A: Oracle Database 23ai introduced native SQL `BOOLEAN` data types, `SELECT` without `FROM DUAL`, `CREATE TABLE IF NOT EXISTS`, multi-row `VALUES` constructors, `UPDATE/DELETE` with direct `FROM` joins, and `DBMS\_SQL.RETURN\_RESULT`, removing 90% of historical T-SQL-to-Oracle friction.

Q: What if a third-party vendor application only supports Microsoft SQL Server?

A: We host and consolidate those COTS SQL Server instances on OCI Compute with Flexible OCPU shapes and high-IOPS Block Volumes (or via OCI-Azure Interconnect), typically cutting infrastructure and storage costs by 40%+ compared to AWS/Azure.

Q: What is included in the downloadable PDF Solution Brief?

A: The PDF Solution Brief includes the SQL Server-to-Oracle 23ai feature parity guide, our SSIS/SSRS XML extraction workflow, and a 4-cloud SQL Server hosting cost comparison.