VNA-SB-043 | AWR Performance Tuning & Turnkey Oracle ACE Pods | SQL Server Sprawl to Oracle 23ai Multitenant Consolidation

Microsoft SQL Server Fleet to Oracle Database 23ai Multitenant PDB & APEX Consolidation

Transition from Sprawling Microsoft SQL Server 2014-2022 Instances, T-SQL Stored Procedures, SSIS & SSRS to Consolidated Oracle Database 23ai Pluggable Databases (PDBs) + PL/SQL + ORDS & APEX 24.2 with automated binary/AST metadata profiling, deterministic cost-control levers, auto-generated BRD and test documentation, and a fixed-fee 4-phase delivery roadmap.

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SOURCE LEGACY STACK (STACK X)	MODERNIZED TARGET ARCHITECTURE (STACK Y)
Sprawling Microsoft SQL Server 2014-2022 Instances, T-SQL Stored Procedures, SSIS & SSRS	**Consolidated Oracle Database 23ai Pluggable Databases (PDBs) + PL/SQL + ORDS & APEX 24.2**

T-SQL AST UPLIFT	SERVER SPRAWL CUT	SSRS REPORT FAN-OUT	HA/DR POSTURE
92% Automated	**60% - 80%**	**80% Collapsed**	**Data Guard / RAC**

1. Problem Space & Architectural Bottlenecks

- Critical business operations remain trapped in Sprawling Microsoft SQL Server 2014-2022 Instances, T-SQL Stored Procedures, SSIS & SSRS, creating audit risk, manual reconciliation overhead, and rising support costs.
- Duplicate queries, cloned reports, and undocumented triggers make impact analysis slow and expensive across t-sql stored procedures, triggers & ssrs reports.
- Lack of automated binary-to-database metadata mapping causes traditional consulting shops to pad estimates with 40% manual discovery buffers.
- Leadership needs a predictable, fixed-fee phased timeline with verifiable test specifications and zero-downtime cutover guarantees.

2. Technical Solution & Reference Architecture

2.1 Automated Phase 0 AST & binary scan mapping Sprawling Microsoft SQL Server 2014-2022 Instances, T-SQL Stored Procedures, SSIS & SSRS artifacts directly to live Oracle dictionary metadata and profiling production data.

2.2 Target architecture built on Consolidated Oracle Database 23ai Pluggable Databases (PDBs) + PL/SQL + ORDS & APEX 24.2, consolidating cloned queries into governed core SQL views with runtime Smart Filters.

2.3 Automated generation of full Business Requirements Documents (BRD), Technical Approach Docs, Testing Specifications, and Verified Test Results.

2.4 Zero-trust SSO/MFA (Entra ID / Okta) paired with database-enforced row-level security (VPD / RAS) and SQLcl Liquibase CI/CD pipelines.

3. Artifact-by-Artifact Conversion & Modernization Matrix

Legacy Artifact / Baseline Workload	Modernized Oracle / Cloud Target	Engineering Method & Outcome
Source Tier: Sprawling Microsoft SQL Server 2014-2022 Instances, T-SQL Stored Procedures, SSIS & SSRS	Consolidated Oracle Database 23ai Pluggable Databases (PDBs) + PL/SQL + ORDS & APEX 24.2	Automated AST & Metadata Uplift (85%-95%)
Primary Footprint: Source SQL Server Databases to Consolidate	Oracle APEX 24.2 Redwood UI + PL/SQL APIs	Binary-to-DB Metadata Mapping + Pilot Sprint
Workload & Queries: T-SQL Stored Procedures, Triggers & SSRS Reports	Canonical Core SQL Views + Runtime Smart Filters	Query Fan-Out Clustering (75%-90% Reduction)
Undocumented Legacy Business Rules & QA	Auto-Generated BRD, Approach Doc, Test Specs & Results	100% Automated Documentation & utPLSQL / Playwright

4. Oracle APEX & Ancillary Engineering Toolchain

- Oracle APEX 24.2 & Universal Theme (Light Architecture)
- Oracle Database 23ai / Autonomous Database (ATP / ADW)
- Viscosity Automated Binary (.fmb/.rdf) & AST Metadata Profiler
- Auto-Doc Engine (BRD, Approach Doc, Test Specs & Test Results)
- Oracle REST Data Services (ORDS) & APEX Office Print (AOP)
- SQLcl Liquibase CI/CD, utPLSQL & Playwright Regression Suites

> ***Anonymized Production Proof:*** *Consolidated 48 department-level Microsoft SQL Server databases, 1,900 T-SQL stored procedures, and 340 SSRS reports into a governed Oracle multitenant architecture with APEX 24.2 reporting.*

5. Principal Architect Q&A

Q: What are the primary levers that control the cost of SQL Server to Oracle 23ai Consolidation?

A: Cost is controlled by five levers: (1) collapsing cloned query fan-out across t-sql stored procedures, triggers & ssrs reports into canonical core SQL views, (2) percentage of business logic already in database packages vs. UI triggers, (3) production data quality profiled during Phase 0, (4) external integration/SSO count, and (5) cutover downtime requirements.

Q: How does your tool convert binaries (.fmb, .rdf, etc.), map database metadata, and generate documentation?

A: Our automated analyzer parses legacy binaries and source files, extracts every trigger, query, and UI control, cross-references them against live database dictionary metadata (ALL_TAB_COLUMNS, ALL_DEPENDENCIES), profiles actual column data distributions, and automatically generates the Business Requirements Document (BRD), Technical Approach Doc, Test Specifications, and Verified Test Results.

Q: What does a typical project timeline look like from kickoff to production cutover?

A: Projects follow four gated phases: Phase 0 (Weeks 1-2: Binary AST Scan, Data Profiling & Auto-Generated BRD), Phase 1 (Weeks 3-6: Core Schema Uplift & Working Pilot), Phase 2 (Weeks 7-12: Automated Conversion Sprints & Test Spec Execution), and Phase 3 (Weeks 13-16: Parallel Run, Zero-Downtime Cutover & 30-Day Hypercare).