

VNA-SB-035 | Orphaned Oracle Stack Rescue (Discoverer, Workflow & EBS CEMLI) | Oracle Workflow (.wft) & SOA Suite Exit | Painted Desert

# Oracle Workflow (.wft) & Legacy SOA Suite / BPEL to Native APEX 24.2 Workflows & ORDS

Transition from Oracle Workflow Builder (.wft / WF\_ENGINE) & Heavy WebLogic SOA Suite 11g/12c BPEL to Native Oracle APEX 24.2 Workflows & Unified Task Lists + ORDS REST Microservices with automated binary/AST metadata profiling, deterministic cost-control levers, auto-generated BRD and test documentation, and a fixed-fee 4-phase delivery roadmap.

**Search Queries & Scope Covered:** oracle workflow wft to apex 24.2 workflow | migrate wf\_engine plsql to apex approvals | retire oracle soa suite bpel weblogic | ords rest orchestration

| SOURCE LEGACY STACK (STACK X)                                                      |                | MODERNIZED TARGET ARCHITECTURE (STACK Y)                                         |                    |
|------------------------------------------------------------------------------------|----------------|----------------------------------------------------------------------------------|--------------------|
| Oracle Workflow Builder (.wft / WF_ENGINE) & Heavy WebLogic SOA Suite 11g/12c BPEL |                | Native Oracle APEX 24.2 Workflows & Unified Task Lists + ORDS REST Microservices |                    |
| WEBLOGIC SOA EXIT                                                                  | APPROVAL UX    | PL/SQL REUSE                                                                     | AUDIT TRACEABILITY |
| 100% Retired                                                                       | Mobile + Email | 90%+ Preserved                                                                   | 100% Native        |

## 1. Problem Space & Architectural Bottlenecks

- Critical business operations remain trapped in Oracle Workflow Builder (.wft / WF\_ENGINE) & Heavy WebLogic SOA Suite 11g/12c BPEL, creating audit risk, manual reconciliation overhead, and rising support costs.
- Duplicate queries, cloned reports, and undocumented triggers make impact analysis slow and expensive across pl/sql notification & activity packages.
- 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 Oracle Workflow Builder (.wft / WF\_ENGINE) & Heavy WebLogic SOA Suite 11g/12c BPEL artifacts directly to live Oracle dictionary metadata and profiling production data.
- 2.2 Target architecture built on Native Oracle APEX 24.2 Workflows & Unified Task Lists + ORDS REST Microservices, 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: Oracle Workflow Builder (.wft / WF_ENGINE) & Heavy WebLogic SOA Suite 11g/12c BPEL | Native Oracle APEX 24.2 Workflows & Unified Task Lists + ORDS REST Microservices | Automated AST & Metadata Uplift (85%-95%)           |
| Primary Footprint: Legacy .wft Processes & BPEL Flows                                           | Oracle APEX 24.2 Redwood UI + PL/SQL APIs                                        | Binary-to-DB Metadata Mapping + Pilot Sprint        |
| Workload & Queries: PL/SQL Notification & Activity Packages                                     | 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 (Redwood Light Flavors)
- 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:** Converted 85 complex Oracle Workflow (.wft) approval hierarchies and SOA Suite BPEL integrations into native Oracle APEX 24.2 Workflows and ORDS REST services, retiring four WebLogic SOA servers.

5. Principal Architect Q&A

**Q: What are the primary levers that control the cost of Oracle Workflow & SOA Suite to APEX 24.2?**

A: Cost is controlled by five levers: (1) collapsing cloned query fan-out across pl/sql notification & activity packages 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).