

The Enterprise AI Operating System

Architecture Overview

AI has moved beyond pilots. It now runs continuously across **models, agents, workflows, tools, and enterprise systems**. The challenge is no longer building models. It is operating AI safely at runtime with control, auditability, and enterprise ownership.

The **DSW Enterprise AI Operating System** gets deployed inside your environment; that governs AI execution through a **kernel-centric control plane**.

Operate AI as a long-running, governed system

AI is now distributed across models, pipelines, agentic workflows, data platforms, APIs, and enterprise applications.

Without a system layer, AI becomes fragmented, difficult to govern, and operationally risky. DSW delivers a kernel-governed runtime for operating AI and agentic systems at enterprise scale.

What You Get with the AI OS

Governance - as-code enforced at runtime (not static policies)	Non-bypassable control plane for AI and agent execution	Enterprise custody of all AI assets (models, agents, workflows, artifacts, and source code)	Infrastructure independence across on-prem, private cloud, and hybrid	Open ecosystem integration through governed interfaces (no vendor lock-in)
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Core Capabilities

1 Kernel-level governance

- Runtime policy enforcement
- Execution constraints and controls
- Non-bypassable policy enforcement executed in-line at runtime

2 End-to-end auditability

- Trace from **data → model/agent → decision → outcome**
- Automated evidence generation for regulated workflows
- Enterprise sovereignty custody of execution and all AI artifacts stay with the enterprise

3 Operational control

- Controlled rollout, versioning, and rollback
- Human-in-the-loop and override mechanisms
- Infrastructure independence works across environments without stack replacement
- Controlled ecosystem integration external systems connect only via governed contracts

Deployment Model

Deploy entirely inside enterprise-controlled environments

On-prem | private cloud | hybrid | private data centers

No mandatory SaaS dependency. No external data egress.

Architecture: Kernel-Centric Enterprise AI OS

DSW is designed as a system layer that operates above existing infrastructure, governing AI execution as a **first-class runtime**, not a collection of disconnected tools.

AI Fabric (Kernel-Governed Integration Layer)

A governed integration layer for controlled adoption of:

- Foundation models and LLM providers
- Open-source frameworks
- Partner tools and services
- Enterprise APIs, data platforms, and applications

All integrations inherit OS-grade governance guarantees.

Execution Subsystems (Governed Runtimes)

ML Runtime:

- Batch and real-time inference execution
- Model versioning and controlled rollout
- Drift monitoring and performance telemetry

Agentic Runtime:

- Multi-agent orchestration
- Policy-aware autonomy boundaries
- Human-in-the-loop controls
- Agent lifecycle governance

AI OS Kernel (UnifyAI Core)

The authoritative control plane for AI and agentic execution.

The kernel governs:

- Policy enforcement as code
- Execution contracts for integrations
- Lifecycle and lineage management
- Auditability, traceability, and reversibility
- Centralized control across distributed runtimes

All AI execution paths flow through kernel-governed interfaces (internal and external).

Enterprise AI OS (System Layer Above Infrastructure)

DSW Enterprise AI Operating System is the operating layer that sits above existing infrastructure and makes AI operable as a governed system - delivering controlled, auditable, and repeatable AI operations across environments.

Base Infrastructure Layer

DSW operates above this layer without replacing it.

Linux / Windows / Unix / Kubernetes / container runtimes manage compute, memory, and networking.

Built for Production AI in BFSI and More

Designed for highly regulated enterprises where:

- AI execution must be accountable **(audit-ready by default)**
- Autonomy must be constrained **(policy-aware agentic runtime)**
- Outcomes must be traceable **(data-to-decision lineage)**
- Decisions must be reversible **(override, rollback, replay)**

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