

NeuralMesh™ Secures Classified Workloads & Accelerates Federal, Sovereign AI at Scale

WEKA's NeuralMesh™ delivers sub-millisecond data access and continuous CPU, GPU, and network saturation to accelerate real-time workloads, maintain compliance across classified environments, and scale federal HPC, AI and mission-critical infrastructure without performance degradation.

Key Benefits of NeuralMesh

Maximize GPU Utilization

- Cut idle GPU time
- Feed compute efficiently via zero-copy I/O
- Improve workload efficiency

Power Mission-Critical AI

- Process real-time intel faster
- Accelerate real-time AI decision making
- Speed AI training iterations

Scale Datasets Linearly

- Use exabyte-sized datasets
- Support thousands of compute nodes
- Add nodes without downtime

Sustain Low Latency at Scale

- Deliver millions of IOPS
- Handle thousands of concurrent clients
- Keep sub-ms latency at scale

Secure Data Across Classified Environments

- Encrypt data end-to-end
- Restrict operator data access
- Meet regulatory mandates

Enable Hybrid and Multi-Cloud Access

- Access on-prem and cloud
- Transfer data without lock-in
- Standardize outputs globally

Reduce Total Infrastructure Footprint

- Deploy more storage per rack
- Lower energy, cooling needs
- Shrink operational complexity

Streamline End-to-End AI Data Pipelines

- Unify ingest to deployment
- Burst compute and storage
- Index and vectorize data

<0.5ms

With millions of IOPS across 140 GPU clients

60%

Less infrastructure, cutting power and cooling needs

500+

Petabytes of imagery in a single database

70+

Million people nationwide on one sovereign network

100M

Tokens processed daily on WEKA NeuralMesh Axon™

Government Agency Uses Cases

Real-time Data Analysis and Processing

NeuralMesh processes and validates real-time sensor and IoT data instantly, cutting the time to actionable intelligence

Federal Research

NeuralMesh delivers high bandwidth, IOPS, and metadata throughput for HPC, AI training, and agentic workloads at national laboratory scale

Security & Surveillance

NeuralMesh ingests and processes persistent video, sensor, and ISR streams in real time, enabling sustained AI inference on classified data

Sovereign AI

NeuralMesh enables nations to build and operate full-stack AI within their borders, with training data, models, and checkpoints under sovereign control

