

KUWAIBA

Open-Source OSS Telecom Inventory



The first enterprise-grade open-source network inventory designed specifically for telecommunications operators.

PRODUCT OVERVIEW

Kuwaiba is an open-source OSS telecom inventory platform designed to model complex telecommunications networks. It enables operators to represent relationships between services, logical resources, network equipment, and physical infrastructure in a single operational system.

By providing a unified and extensible data model, Kuwaiba becomes the central source of truth for network planning, operations, and automation.

THE OPERATIONAL CHALLENGE

Telecommunications networks are no longer collections of isolated devices.

They are complex ecosystems composed of:

- Physical infrastructure
- Network equipment
- Logical resources
- Commercial services

Yet many operators still rely on fragmented systems, spreadsheets, or rigid inventory platforms that fail to represent how networks actually operate.

This leads to persistent operational problems:



Hidden Dependencies: Failures propagate across layers without clear visibility of the services affected.

Slow Service Activation: Engineering and operations teams rely on disconnected systems and manual processes.

Inventory Drift: Physical changes in the network are not reflected in operational inventory systems.

Vendor Lock-In: Traditional OSS platforms impose expensive licensing models and long-term dependency.

Operators need a reliable and connected representation of their network.

THE KUWAIBA APPROACH

Kuwaiba was designed specifically to address the complexity of telecommunications networks.

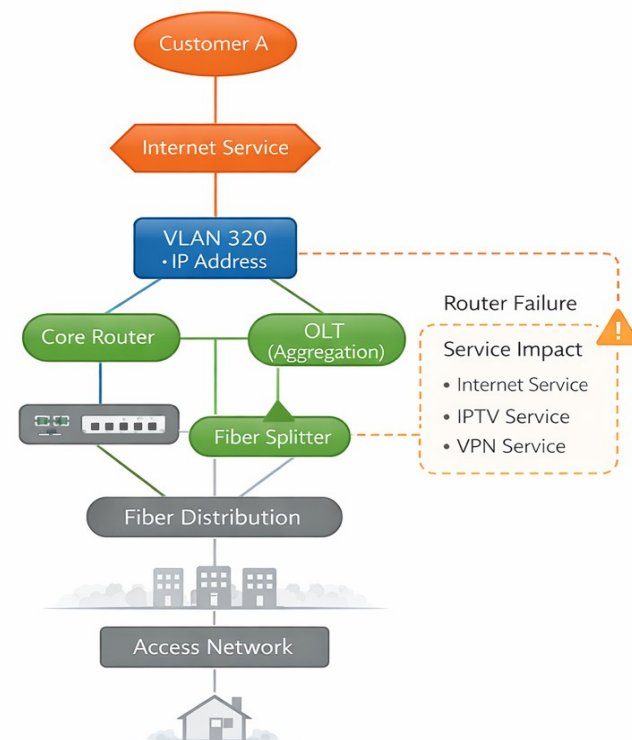
Instead of treating inventory as isolated records, Kuwaiba models the **relationships between network elements**, allowing operators to understand how infrastructure, logical resources, and services interact.

This relationship-driven approach enables Kuwaiba to represent the network as an operational system rather than a static database.

Key architectural principles include:

- **Relationship-Oriented Network Modeling**
Infrastructure, logical resources, and services are connected in a single model.

- **Extensible Data Model**
Operators can adapt the data model to match their technologies and operational processes.
- **Integration-Ready Architecture**
Kuwaiba integrates with OSS, BSS, monitoring platforms, and enterprise systems.



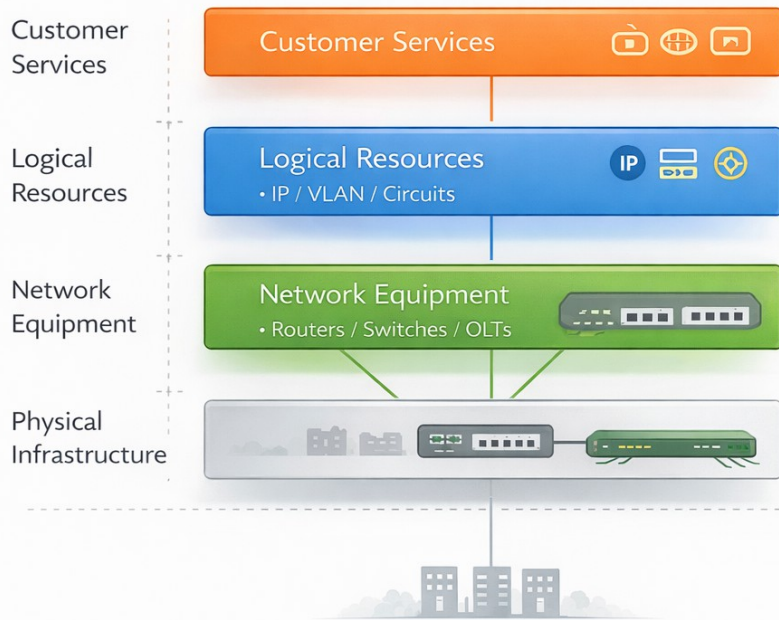
Relationship-driven network modeling

Kuwaiba represents telecommunications networks as connected systems of infrastructure, logical resources, and services.



CORE CAPABILITIES

Kuwaiba provides a unified environment for managing multiple layers of network information.



Model your network across multiple operational layers

Kuwaiba represents telecommunications networks as connected systems of infrastructure, logical resources, and services.

- **Multi-Layer Network Modeling**
Manage infrastructure, logical resources, and services within a single connected model.
- **Inside and Outside Plant Management**
Model central offices, racks, equipment, ports, fiber infrastructure, ducts, poles, and geographic assets.

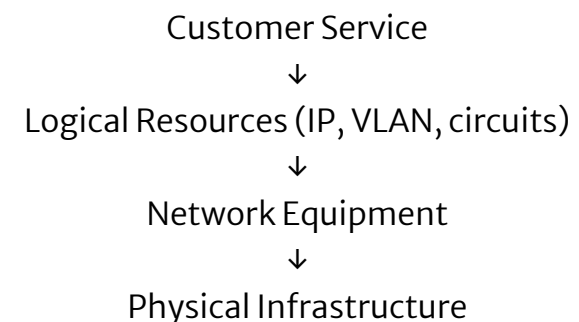
- **Logical Resource Management**
Manage IP addresses, VLANs, tunnels, virtual circuits, and routing-related resources.
- **Service Association**
Link services directly to the resources that support them.
- **Integration and Automation**
Integrate Kuwaiba with OSS/BSS systems and automate operational workflows.

Many of these capabilities build on Kuwaiba's flexible object-oriented data model and modular architecture.

FROM INFRASTRUCTURE TO SERVICES

One of the most critical capabilities of Kuwaiba is the ability to connect services with the infrastructure that supports them.

Every service can be traced across multiple layers of the network:



This visibility enables operators to:

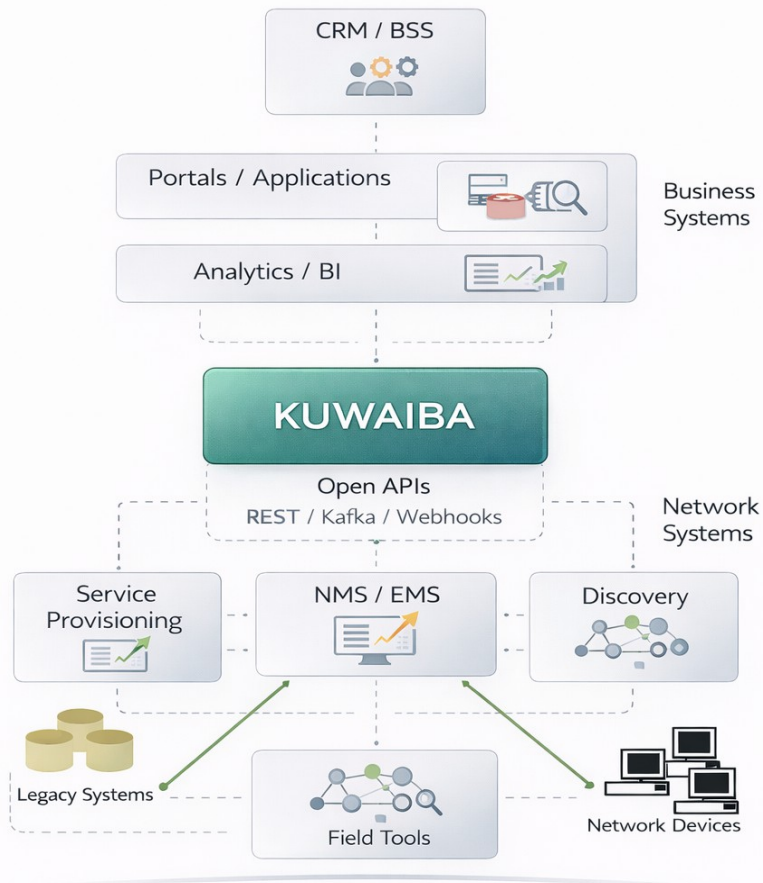
- understand service dependencies



- perform impact analysis during failures
- improve network planning
- accelerate service provisioning

A NEW ECONOMIC MODEL FOR OSS

Traditional OSS platforms often impose licensing models



Seamless integration within existing OSS/BSS ecosystems

Kuwaiba provides seamless integration with external OSS and BSS systems through flexible, open APIs.

based on:

- number of users
- number of network elements
- system capacity or modules

These models can significantly increase operational costs as networks grow.

Kuwaiba follows a different approach.

As Free and Open-Source Software, Kuwaiba eliminates licensing costs while allowing operators to maintain full control over their infrastructure data and deployment architecture.

Operators can deploy Kuwaiba:

- on-premise
- in private cloud environments
- within existing OSS architectures

Neotropic provides consulting, integration, customization, training, and support services tailored to each deployment.

PROVEN EXPERIENCE

Neotropic has over a decade of experience delivering OSS solutions for telecommunications operators and infrastructure providers worldwide.

Kuwaiba has been used in projects including:

- legacy OSS migrations
- FTTx and GPON network modeling



- infrastructure standardization
- inventory reconciliation and optimization

Neotropic supports operators across multiple regions with implementation, integration, and operational support.

Modern telecommunications networks require accurate, connected, and reliable operational data.

Kuwaiba provides operators with an open, extensible, and relationship-driven platform to model network infrastructure, logical resources, and services within a single operational system.

As an open-source solution, Kuwaiba gives operators the flexibility to build their OSS architecture without the constraints of proprietary licensing models.

Explore Kuwaiba today

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