AccuKnox 5G Security

Zero Trust Security for 5G Networks

ACCUKNOX Secure Code to Cognition™

Key Value Proposition

End-to-End 5G Protection
O-RAN, 5GC, Private 5G coverage

Zero Trust Runtime-First
Runtime enforcement & verification

Multi-Layer Defense
Infra, Network, App, Identity protection

Comprehensive Compliance
3GPP, MITRE FiGHT, NIST, NSA

What is 5G Security?

AccuKnox 5G Security continuously monitors, enforces, and hardens 5G RAN, Core, and Edge workloads to prevent RCE, lateral movement, and misconfigurations. It operationalizes Zero Trust in 5G by ensuring no workload is inherently trusted and enforcing runtime verification.
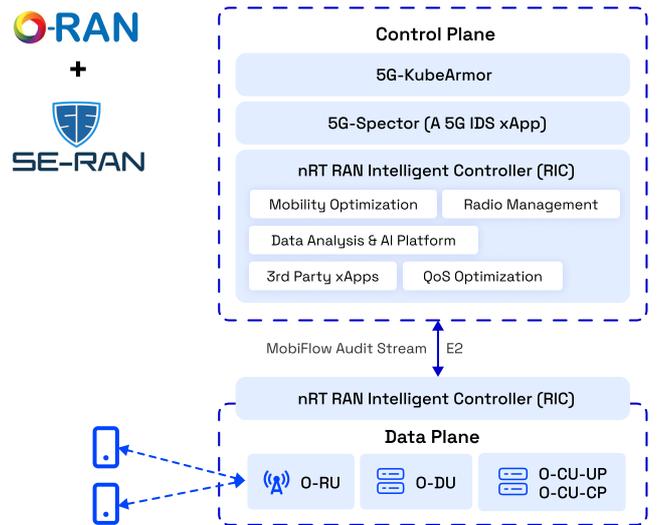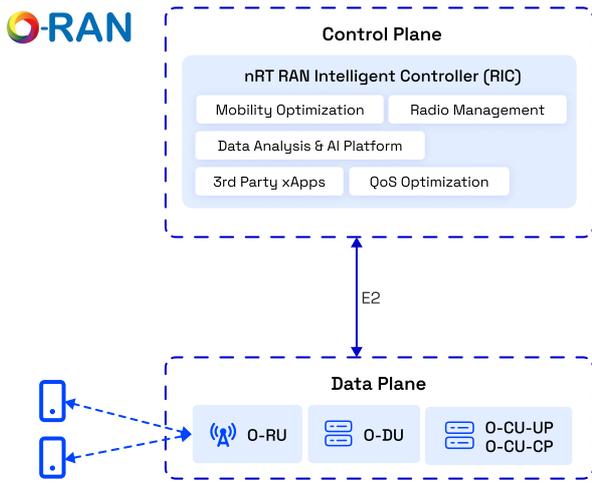
AccuKnox in 5G Ecosystem

- LF Nephio TSC member, SIG-Security chair
- 5GSec.com contributor (with Stanford, Ohio University)
- RedHat Telco Partner
- Intel Smart Edge Partner
- NSF DoD 5G Security Awards

Use Cases

1. Secure O-RAN control plane (RIC, xApps, rApps)
2. Enforce Zero Trust in network slicing
3. Protect MEC and local UPF workloads
4. Risk assessment & compliance automation
5. Supply chain assurance with provenance & runtime checks

ACCUKNOX
5G SERAN Edge & Core Security Demo

Zero Trust Security Across 5G RAN, Core, and Edge

O-RAN

Control Plane
nRT RAN Intelligent Controller (RIC)
- Mobility Optimization
- Radio Management
- Data Analysis & AI Platform
- 3rd Party xApps
- QoS Optimization

E2

Data Plane
- O-RU
- O-DU
- O-CU-UP O-CU-CP

O-RAN + SE-RAN

Control Plane
- 5G-KubeArmor
- 5G-Spector (A 5G IDS xApp)
- nRT RAN Intelligent Controller (RIC)
  - Mobility Optimization
  - Radio Management
  - Data Analysis & AI Platform
  - 3rd Party xApps
  - QoS Optimization

MobiFlow Audit Stream   E2

nRT RAN Intelligent Controller (RIC)

Data Plane
- O-RU
- O-DU
- O-CU-UP O-CU-CP

Why AccuKnox 5G Security?

Security Capabilities

1. Mitigates RCE, auth bypass, lateral movement
2. Hardening for Open5GS, Free5GC, OAI components
3. Complete observability: Network, process, file, syscall visibility

Proven Platform

1. Integrated tooling: KubeArmor, Nimbus, K8TLS
2. Proven deployments with industry leaders:

TATA ELXSI   Rakuten   aws

Technical Requirements

Deployment Models
VM, Bare Metal, Containerized, Hybrid

Enforcement
5G-KubeArmor, Zero Trust policies

Confidentiality
Nimbus confidential containers

TLS Security
K8TLS for FIPS/NIST compliance

Monitoring
Real-time workload alerts

Risk Assessment
NSA K8s Hardening, MITRE Caldera

How It Works

Onboard Workloads
ORAN, 5GC, Private 5G

Apply Zero Trust Policies
Deny-by-default enforcement

Observe & Monitor
Network, process, file, syscall visibility

Remediate & Harden
Policy templates, runtime enforcement

Certify & Comply
Continuous alignment with 3GPP / MITRE FiGHT

Customer Testimonials

privado

Being part of the founding architecture layer of KubeArmor (1.2+ Million downloads), I can safely vouch for any Kubernetes, DevSecOps and Container security practitioner to leverage intelligence provided by AccuKnox CNAPP. One stop shop for the requirements in compliance and tracking adverse vulnerabilities.

Dr Suchakra Sharma, Chief Scientist

TATA ELXSI

In the 5G and Cloud security partnership with AccuKnox, we want to offer Telcos a solution that simplifies the complexity of deployment while also being secure and resilient. This strategic partnership helps operators roll out secure 5G networks with inline mitigation and makes the network future-ready for 6G.

Rajagopalan Rajappa, CTO, Communications

O-RAN, 5GC, Private 5G

Contact AccuKnox today to see 5G Security in action and learn how Zero Trust runtime enforcement protects RAN, Core, and Edge workloads in real time

✓ Compliance-ready   ✓ Proven in production

About AccuKnox
AccuKnox is a Zero Trust CNAPP provider protecting multi-cloud environments, Kubernetes, VMs, and edge infrastructure.