Deployment & Security

Managed documentation for Deployment & Security.

Deployment Topology

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Field	Value
Distribution	BSS — OpenC5ISR
Product	OpenC5ISR
Release	0.15.1
Deployment	`openc5isr.bss.dev`
Source	`/srv/bss/releases/OpenC5ISR-v0.15.0-20app`
Evidence	Release and readable host configuration
Source fingerprint	`93926e8c834f1ed79c9017a4096f70c76d73ce4f870f104fbd0cf54b2bed50ee`
Status	Generated baseline — human review required

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Observed services

Service	Working directory	ExecStart	Evidence
opencybersec-agent.service	–	`/opt/opencybersec-agent/opencybersec_agent.py --config /etc/opencybersec-agent.json`	edge/opencybersec/systemd/opencybersec-agent.service
openlvc-ais-bridge.service	`/opt/opensof/edge/openlvc`	`/usr/bin/python3 /opt/opensof/edge/openlvc/ais_nmea_bridge.py --opensof ${OPENSOF_URL} --token [REDACTED] --bind 0.0.0.0 --port 10110`	edge/openlvc/systemd/openlvc-ais-bridge.service

Service	Working directory	ExecStart	Evidence
openlvc-dis-bridge.service	`/opt/opensof/edge/openlvc`	`/usr/bin/python3 /opt/opensof/edge/openlvc/dis_udp_bridge.py --opensof ${OPENSOF_URL} --token [REDACTED] --bind 0.0.0.0 --port 3000`	edge/openlvc/systemd/openlvc-dis-bridge.service
openlvc-flightgear-bridge.service	`/opt/opensof/edge/openlvc`	`/usr/bin/python3 /opt/opensof/edge/openlvc/flightgear_bridge.py --opensof ${OPENSOF_URL} --token [REDACTED] --bind 0.0.0.0 --port 5505`	edge/openlvc/systemd/openlvc-flightgear-bridge.service
openlvc-rti-gateway.service	`/opt/opensof/edge/openlvc`	`/usr/bin/python3 /opt/opensof/edge/openlvc/rti_openbus_gateway.py --opensof ${OPENSOF_URL} --token [REDACTED] --federation ${OPENLVC_FEDERATION} --federate ${OPENLVC_FEDERATE} --sidecar-command ${OPENLVC_RTI_SIDECAR_COMMAND}`	edge/openlvc/systemd/openlvc-rti-gateway.service
openpnt-phc2sys@.service	–	`/opt/openpnt/bin/openpnt-linuxptp run phc2sys --instance /etc/openpnt/linuxptp/instances/%i.json --bin-dir /opt/openpnt/linuxptp/bin`	edge/openpnt-linuxptp/systemd/openpnt-phc2sys@.service
openpnt-ptp4l@.service	–	`/opt/openpnt/bin/openpnt-linuxptp run ptp4l --instance /etc/openpnt/linuxptp/instances/%i.json --bin-dir /opt/openpnt/linuxptp/bin`	edge/openpnt-linuxptp/systemd/openpnt-ptp4l@.service
openpnt-ts2phc@.service	–	`/opt/openpnt/bin/openpnt-linuxptp run ts2phc --instance /etc/openpnt/linuxptp/instances/%i.json --bin-dir /opt/openpnt/linuxptp/bin`	edge/openpnt-linuxptp/systemd/openpnt-ts2phc@.service
openrf-agent.service	`/opt/openrf-agent`	`/usr/local/bin/openrf-agent --config /etc/openrf/openrf-agent.json`	openrf/agent/systemd/openrf-agent.service
openc5isr-bss.service	`/srv/bss/instances/openc5isr/current`	`/usr/local/bin/npm start`	/etc/systemd/system/openc5isr-bss.service

Observed reverse-proxy topology

Source	Server names	Locations	proxy_pass

/etc/nginx/sites-available/openc5isr.bss.dev	openc5isr.bss.dev openc5isr.bss.dev	/ws/raspbot /	http://127.0.0.1:8096/ws/raspbot http://127.0.0.1:3202/

Topology verification

- Confirm which directory or symlink is the authoritative current release.
- Confirm each public hostname terminates TLS and routes to the intended instance/port.
- Document shared backends separately from edition-specific application instances.
- Record network zones and firewall policy for public, management, data and sensor interfaces.

Maintainer Notes

Add human-reviewed deployment notes, corrections, decisions, screenshots, and links here. Content outside the generated block is preserved on future runs.

Security Architecture

Security Architecture

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Distribution	BSS — OpenC5ISR
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Release	0.15.1
Deployment	`openc5isr.bss.dev`
Source	`/srv/bss/releases/OpenC5ISR-v0.15.0-20app`
Evidence	Reference controls and static security indicators
Source fingerprint	`93926e8c834f1ed79c9017a4096f70c76d73ce4f870f104fbd0cf54b2bed50ee`
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Security model

Security must be applied across identity, content, interfaces, transport, deployment and evidence—not bolted onto the user interface. Each module should authenticate subjects, authorize actions and data, protect transport, minimize secrets, emit audit events and preserve provenance.

Observed indicators

Indicator	Observed

Secret-designated environment variables	ANTHROPIC_API_KEY, OPENAAR_SIGNING_KEY, OPENAI_API_KEY, OPENBUS_API_TOKEN, OPENCYBERSEC_AGENT_TOKEN, OPENCYBERSEC_OPERATOR_TOKEN, OPENCYBERSEC_READ_TOKEN, OPENKNOWLEDGE_EDITOR_TOKEN, OPENLLM_ANTHROPIC_API_KEY, OPENLLM_OPENAI_API_KEY, OPENLLM_OPENWEBUI_API_KEY, OPENLLM_OPERATOR_TOKEN, OPENPNT_AGENT_TOKEN, OPENPNT_TOKEN, OPENRF_AGENT_TOKEN, OPENRF_OPERATOR_TOKEN, OPENRF_READ_TOKEN, OPENSSA_SENSOR_TOKEN, OPENWEBUI_API_KEY, ROCKETCHAT_AUTH_TOKEN, ROCKETCHAT_OUTGOING_TOKEN, TOKEN
Security term counts	TLS: 1960, authorization/RBAC: 172, audit: 101, authentication: 64, CORS: 19
Potential sensitive file names	—

Required controls

Boundary	Minimum control
User/API identity	Named accounts or service identities, least privilege, revocable tokens and MFA where supported.
Transport	TLS for public and management interfaces; authenticated/encrypted links for operational buses where threat requires.
Content	Handling/release labels, role/attribute policy, object-level authorization and protected exports.
Secrets	No secrets in source, documentation, URLs or logs; use protected environment/secret stores and rotation.
Audit/evidence	Record actor, action, target, result, source time and correlation identifiers with tamper-aware retention.
Supply chain	Pinned dependencies/images, vulnerability review, signed release artifacts and reproducible deployment records.

Immediate review actions

- Rotate any token or password exposed in chat, shell history, logs or documentation.
- Verify BookStack/API credentials are stored only in the protected generator configuration.
- Test authorization for each edition so documentation and operational data do not cross unintended boundaries.

- Document incident response, backup confidentiality and restore authorization.

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Interface Boundaries

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Source	`/srv/bss/releases/OpenC5ISR-v0.15.0-20app`
Evidence	Reference architecture
Source fingerprint	`93926e8c834f1ed79c9017a4096f70c76d73ce4f870f104fbd0cf54b2bed50ee`
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Interface selection

Need	Preferred mechanism	Reason
Manage/query a resource	REST/HTTP	Clear request/response semantics, authorization and idempotency.
Publish asynchronous operational state	OpenBus	Decouples producer and consumers and supports event-driven automation.
Interactive browser/device stream	WebSocket/WebRTC	Low-latency bidirectional session or media delivery.

Need	Preferred mechanism	Reason
Large artifact/evidence	OpenFiles/object storage	Avoids overloading messages while preserving metadata and access control.
Semantic query/constraint	SPARQL/RDF/SHACL	Queries meaning and relationships independently of application schemas.
High-rate radio/sensor samples	Local/edge stream plus derived products	Keeps raw bandwidth near processing and shares actionable results.

Boundary rule

Every integration should define ownership, schema, semantic type, authentication, authorization, time basis, error behavior, retry/idempotency, rate/size limits, retention and observability. A working URL alone is not an integration contract.

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