

O-RAN Software Community – OSC

Non-RealTime RIC project (NONRTRIC)

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O-RAN SC (O-RAN Open Source Community)

[Presentation by Hank Kafka O-RAN SC, https://o-ran-sc.org/ORAN_SC_presentation.pdf](https://o-ran-sc.org/ORAN_SC_presentation.pdf)

Mission: Manage all software development, code storage, tooling and developer integration testing aligned with the architecture specified by O-RAN Alliance

Project Scope:

- Software development including documentation
- testing and integration of the open source software project
- Coordinate efforts with related open source software projects and standards communities
- Aligned with O-RAN architecture

Licensing:

- Standard Apache 2 license for Open Source
- Various upstream components expect to be leveraged.

O-RAN - Non-RealTime RIC

Primary goal of NONRTRIC - Non-RealTime RIC (RAN Intelligent Controller):

- To support:
 - non-real-time intelligent radio resource management
 - higher layer procedure optimization
 - policy optimization in RAN
- To provide guidance, parameters, policies and AI/ML models to support the operation of near-RealTime RICs to achieve higher-level non-real-time objectives

The NONRTRIC will communicate with near-RealTime RIC elements in the RAN via the A1 interface to:

- facilitate the provision of policies for individual UEs or groups of UEs
- monitor and provide basic feedback on policy state from near-RealTime RICs
- provide enrichment information as required by near-RealTime RICs
- facilitate ML model training, distribution and inference in cooperation with the near-RealTime RICs.

Non-real-time RAN intelligent controller (NONRTRIC) project

The NONRTRIC project provides:

- Concepts
- Specifications
- Architecture
- Reference implementations

...as defined and described by the O-RAN Alliance architecture.

All implementations will be demonstrated in open community labs to prove functionalities and to give feedback to the O-RAN working groups

Coordinates:

- JIRA: <https://jira.o-ran-sc.org/projects/NONRTRIC/issues>
- Gerrit: <https://gerrit.o-ran-sc.org/r/admin/repos/nonrtric>
- Wiki: <https://wiki.o-ran-sc.org/display/RICNR>
- Meetings: <https://wiki.o-ran-sc.org/display/RICNR/Meetings>

NONRTRIC ambitions for OSC Release A ("Amber") (Nov 2019)

We have no concrete requirement to deliver anything for Release A ... but we hope as a stretch goal to have some initial placeholder functionality if at all possible.

- We have more or less settled on the selection of SDNC as the base controller infrastructure for the NONRTRIC function
 - This will require a REST Server and REST Client extension to support the A1 interfaces – with initial plans to implement a subset of the A1 Policy LCM functions.
 - The SDNC extension will also expose a prototype A1 mediation 'shim' interface to allow messages to be sent up/down the A1 interface
- We hope to reuse an existing near-RealTime RIC dashboard that generates simple A1 messages towards a near-RealTime RIC instance.
 - This module is a an ONAP-style dashboard to support manually changing some policy-like values in a near-RealTime RIC
- There is a sample near-RealTime RIC prototype function ("*AdmissionControl xApp*") for rudimentary Admission Control for Dual Connectivity requests that exposes a basic policy that can be manipulated via the near-RealTime RIC's A1 interface
 - We hope to be able to initiate some small change in this policy