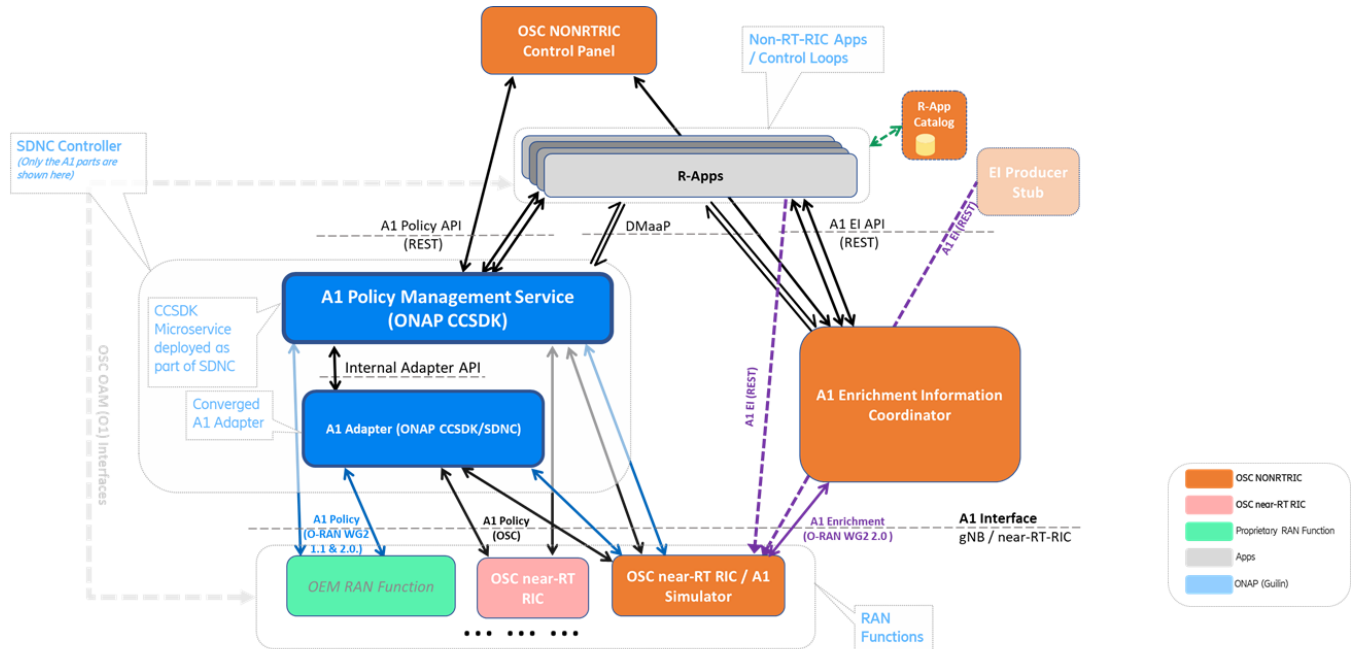


# Release C

Information regarding Release C for Non-Realtime RIC will be in this page.

## Architecture for Release C:



## NONRT RIC components:

1. Non-RT RIC Control Panel/ NONRT RIC Dashboard
2. Policy agent / A1 Policy Management Service
3. Enrichment Information Coordinator
4. R-app Catalogue
5. SDNC A1 Controller
6. Near-RT RIC Simulator

The code base for "Cherry" Release is in the [NONRT RIC](#), [NONRT RIC-ControlPanel](#), and [A1-Simulator](#), source repositories (Gerrit) - Cherry Branch

## Non-RT RIC Control Panel / NONRT RIC Dashboard

### Graphical user interface

- View and Manage A1 policies in the RAN (near-RT-RICs)
- Interacts with the Policy agent's NBI (REST API)
- Graphical A1 policy creation/editing is model-driven, based on policy type's JSON schema
- View and manage producers and jobs for the Enrichment coordinator service
- Implementation:
  - Frontend: Angular framework
  - Backend Java Springboot application
  - Repo: portal/nonrt-ric-controlpanel

Please refer [this](#) developer guide to set up in your local environment. More information about Non-RT Ric control panel can be found [here](#).

## A1 Policy Management Service (from ONAP CCSDK – Guilin)

The A1 Policy Management Service is a microservice which maintains a transient repository of:

- All configured A1 policies instances in the network.
- All NearRT RICs in the network.

- All Policy types for all Near-RT-RICs
- All configured Policy instances in the network
- (Optionally deploy without A1 Adaptor to connect direct to near-RT-RIC)

It provides :

- Unified REST & DMAAP APIs for managing A1 Policies in all near-RT-RICs
- Synchronized view of policy instances for each R-APP (*soon*)
- Synchronized view of policy instances in all near-RT-RICs
- Synchronized view of policy types in all near-RT-RICs
- Policy Query API (e.g. per near-RT-RIC, per R-APP (*soon*), per policy type)
- Unified nearRTRIC-ID to nearRTRIC-address mapping (e.g. can include mapping to A&A1, CMDBs etc to “find” near-RT-RICs - *soon*)
- Placeholder “O1 *ManagedElement*” mapping database interface to find appropriate near-RT-RIC to address A1 operations for required RAN elements (e.g. connection to A&A1, RuntimeDB, other CMDBs etc - *soon*)
- Monitors all near-RT-RICs and recovers from inconsistencies (*multiple strategies* - *soon*) – e.g. near-RT-RIC restarts
- Support for different Southbound connectors per near-RT-RIC – e.g. different A1 versions, different near-RT-RIC version, different A1 adapter / controllers supports different or proprietary A1 controllers/EMSs

<https://docs.o-ran-sc.org/projects/o-ran-sc-nonrtic/en/cherry/>

## A1 Enrichment Information Job Coordination Service

*Coordinate/Register A1-EI Types, Producers, Consumers, and Jobs.*

- Maintains a registry of:
  - A1-EI Data Types / schemas
  - A1-EI Producers
  - A1-EI Consumers
  - A1-EI Jobs
- A1-EI Query API (e.g. per producer, per consumer, per types)
- Query status of A1-EI jobs
- Monitors all near-RT-RICs and recovers from inconsistencies

After EI-type/Producer/Consumer/Job is successfully registered delivery/flow can happen directly between A1-EI Producers (in SMO/NONRTRIC domain) and A1-EI consumers (near-RT-RICs in RAN domain)

<https://docs.o-ran-sc.org/projects/o-ran-sc-nonrtic/en/cherry/>

## (Initial) R-APP catalog

*Register for R-APPs*

- First step towards R-APP management in NONRTRIC
- R-APPs can be registered / queried

*More work required in coming releases as the R-APP concept matures*

<https://docs.o-ran-sc.org/projects/o-ran-sc-nonrtic/en/cherry/>

## Controller / OSC A1 Adaptor (*from ONAP CCSDK – Guilin*):

*Mediation point for A1 interface termination in SMO/NONRTRIC*

- Implemented as OSGI Feature/Bundles
- A1 Rest southbound
- NETCONF YANG Northbound
- RESTCONF > NETCONF adapter
- Mapping logic / Provider
- Can be included in an any SDNC/CCSDK persona

<https://docs.o-ran-sc.org/projects/o-ran-sc-nonrtic/en/cherry/>

## Near-RT-RIC Simulator:

*Stateful A1 test stub*

- Used to create multiple stateful A1 providers (simulated near-RT-RICs)
- Implemented as a Java Springboot application
- Swagger-based northbound interface, so easy to change the A1 profile exposed

<https://docs.o-ran-sc.org/projects/o-ran-sc-sim-a1-interface/en/latest/index.html>