G Release

Welcome to the G release page for the O-RAN Software community.

The G release has been released

- Non-Real-time RIC (NONRTRIC)
- Near-Real-time RIC X-APPs (RICAPP)
- Near-Real-time RAN Intelligent Controller Platform (E2 Interface) (RICPLT)
- Operation and Maintenance (OAM)
- O-RAN Central Unit (OCU)
- O-DU High
- O-DU Low
- Simulators (SIM)
- Service Management and Orchestration Layer (SMO)
- Infrastructure (INF)
- Integration and Test (INT)
- AIML Framework (AIMLFW)

Non-Real-time RIC (NONRTRIC)

Primary Goals:

- The primary goal of Non-RT RIC is to support intelligent RAN optimization by providing policy-based guidance, ML model management and enrichment information to the near-RT RIC function so that the RAN can optimize, e.g., RRM under certain conditions.
- It can also perform intelligent radio resource management function in non-real-time interval (i.e., greater than 1 second).
- Non-RT RIC can use data analytics and AI/ML training/inference to determine the RAN optimization actions for which it can leverage SMO services such as data collection and provisioning services of the O-RAN nodes.
- Non-RT-RIC will define and coordinate rApps (Non-RT-RIC applications) to perform Non-RT-RIC tasks.
- Non-RT-RIC will host the A1 interface (between NONRTRIC & near-RT RICs)
- Non-RT-RIC will also host the new R1 interface (between rApps and SMO/NONRTRIC services)

G Release - Highlights:

Count of Epics (20 issues), User Stories, Tasks, and Issues: (455 issues)

- R1 Service Exposure & Management
  - Continued work of Service execution platform extensions (K8s, Istio, Keycloak, OPA, Gateway) to enable and enforce service isolation & exposure
  - Released first version of 3GPP CAPIF-aligned Service Registration & Discovery service
  - Demonstration: "Enforcing Service Exposure for rApps"
- R1 Data Management & Exposure
  - Aligned with emerging proposals for R1-DME where possible
  - R1 DME Data Catalog support in NONRTRIC ICS
  - R1 Data delivery & filtering (kafka & REST)
  - Demonstration: "PM Collection & Delivery to rApps"
- rApp Manager
  - Built on ONAP “Automation Composition” model & platform to implement rApp use cases
  - Demonstrate controlled on-boarding & LCM rApps with & without µService
  - Overlap with Service Exposure work to examine role of an rApp Manager to support controlled exposure & LCM of µService and non-µService parts of an rApp
  - Partly demonstrated: "Deploying & Running NONRTRIC platform and rApps"
- Continued A1-Policy & A1-Enrichment-Information evolution (& R1-A1)
  - A1 Spec evolution
  - Southbound: A1 Interface
  - Northbound: R1-A1(P) & R1-DME Interfaces
- Sample use cases (rApps)
  - Requirements Drivers for rApp/R1 development
  - High degree of cross-project integration activity
  - Partly demonstrated: "Deploying & Running NONRTRIC platform and rApps"
- Testing, Maintenance & Housekeeping
  - Function Test & Integration Test environment,
  - Support integration, deployment & configuration of SMO/Non-RT-RIC related functions & usecases in OSC Integration env.
    - Partly demonstrated: "Deploying & Running NONRTRIC platform and rApps"
  - Project coordination, Documentation, Delivery, Reporting, Cross-project alignment, Community demos, O-RAN Standardization support, etc.

PTL: John Keeney

Wiki: https://wiki.o-ran-sc.org/display/RICNR

Tasks / Backlog: https://jira.o-ran-sc.org/projects/NONRTRIC/issues

Gerrit / Code:

- nonrtric : https://gerrit.o-ran-sc.org/r/admin/repos/nonrtric
- portal/nonrtric-controlpanel : https://gerrit.o-ran-sc.org/r/admin/repos/portal/nonrtric-controlpanel
- sim/a1-interface : https://gerrit.o-ran-sc.org/r/admin/repos/sim/a1-interface
- nonrtric-plt-a1policymanagementservice: https://gerrit.o-ran-sc.org/r/admin/repos/nonrtric/plt/a1policymanagementservice
- nonrtric-plt-dmaapadapter: https://gerrit.o-ran-sc.org/r/admin/repos/nonrtric/plt/dmaapadapter
- nonrtric-plt-helmmanager: https://gerrit.o-ran-sc.org/r/admin/repos/nonrtric/plt/helmmanager
- nonrtric-plt-informationcoordinatorservice: https://gerrit.o-ran-sc.org/r/admin/repos/nonrtric/plt/informationcoordinatorservice
- nonrtric-plt-rappcatalogue: https://gerrit.o-ran-sc.org/r/admin/repos/nonrtric/plt/rappcatalogue
- nonrtric-plt-dmaapmediatorproducer: https://gerrit.o-ran-sc.org/r/admin/repos/nonrtric/plt/dmaapmediatorproducer
- nonrtric-plt-sme: https://gerrit.o-ran-sc.org/r/admin/repos/nonrtric/plt/sme
- nonrtric-rapp-healthcheck: https://gerrit.o-ran-sc.org/r/admin/repos/nonrtric/rapp/healthcheck
- nonrtric-rapp-orufhrecovery: https://gerrit.o-ran-sc.org/r/admin/repos/nonrtric/rapp/orufhrecovery
- nonrtric-rapp-ransliceassurance: https://gerrit.o-ran-sc.org/r/admin/repos/nonrtric/rapp/ransliceassurance

Sonar / Test Coverage Reports

- portal/nonrtric-controlpanel: https://sonarcloud.io/project/overview?id=o-ran-sc_portal-nonrtric-controlpanel
- sim/a1-interface: https://sonarcloud.io/project/overview?id=o-ran-sc_sim-a1-interface
- nonrtric-plt-dmaapadapter: https://sonarcloud.io/project/overview?id=o-ran-sc_nonrtric-plt-dmaapadapter
- nonrtric-plt-dmaapmediatorproducer: https://sonarcloud.io/project/overview?id=o-ran-sc_nonrtric-plt-dmaapmediatorproducer
- nonrtric-plt-informationcoordinatorservice: https://sonarcloud.io/project/overview?id=o-ran-sc_nonrtric-plt-informationcoordinatorservice
- nonrtric-plt-rappcatalogue: https://sonarcloud.io/project/overview?id=o-ran-sc_nonrtric-plt-rappcatalogue
- nonrtric-plt-auth-token-fetch: https://sonarcloud.io/project/overview?id=o-ran-sc_nonrtric-auth-token-fetch
- nonrtric-plt-sme: https://sonarcloud.io/project/overview?id=o-ran-sc_nonrtric-plt-sme
- nonrtric-plt-capifcore: https://sonarcloud.io/project/overview?id=o-ran-sc_o-ran-sc_nonrtric-plt-sme-capifcore
- nonrtric use cases: https://sonarcloud.io/organizations/o-ran-sc/projects?search=nonrtric&sort=name
  - nonrtric-rapp-orufhrecovery-consumer: https://sonarcloud.io/project/overview?id=nonrtric-rapp-orufhrecovery-consumer
  - nonrtric-rapp-ransliceassurance: https://sonarcloud.io/project/overview?id=nonrtric-rapp-ransliceassurance

Docs:

- nonrtric : https://docs.o-ran-sc.org/projects/o-ran-sc-nonrtric
- portal/nonrtric-controlpanel : https://docs.o-ran-sc.org/projects/o-ran-sc-portal-nonrtric-controlpanel
- sim/a1-interface : https://docs.o-ran-sc.org/projects/o-ran-sc-sim-a1-interface
- nonrtric-plt-a1policymanagementservice: https://docs.o-ran-sc.org/projects/o-ran-sc-nonrtric-plt-a1policymanagementservice
- nonrtric-plt-dmaapadapter: https://docs.o-ran-sc.org/projects/o-ran-sc-nonrtric-plt-dmaapadapter
- nonrtric-plt-informationcoordinatorservice: https://docs.o-ran-sc.org/projects/o-ran-sc-nonrtric-plt-informationcoordinatorservice
- nonrtric-plt-rappcatalogue: https://docs.o-ran-sc.org/projects/o-ran-sc-nonrtric-plt-rappcatalogue
- nonrtric-plt-dmaapmediatorproducer: https://docs.o-ran-sc.org/projects/o-ran-sc-nonrtric-plt-dmaapmediatorproducer

Testing:

- Function Tests

Weekly Meetings:

- Meetings

Demos:

- G-Release: Demonstration: "Enforcing Service Exposure for rApps"
- G-Release: Demonstration: "PM Collection & Delivery to rApps"
- G-Release: Demonstration: "Deploying & Running NONRTRIC platform and rApps"

G release source code, container images and deployment instructions

- Release G
  - Release G - Technical spikes
  - Release G - Build
  - Release G - Run in Docker
    - Docker Images
    - Helm Charts

Near-Real-time RIC X-APPs (RICAPP)

Primary Goals: Expand the community working on open source xApps for O-RAN SC.

Enhance the set of open source xApps in support of the RSAC use cases (traffic steering, network slicing) as well new use cases.

Update and enhance existing xApps

G release plan (<date>):

- ~~New HW-Rust xApp to support RUST framework~~ not ready for G-release --Johannes Becker
- HW(python) - RIC Subscription using python xApp framework
- RC xApp - GRPC interface support on RC xApp
- Bouncer xApp - RIC Benchmarking new features addition
- KPIMON-GO xApp – Version 2.0
- AD & QP xApp – InfluxDB database integration to fetch data.

PTL: SUNIL SINGH

Jira: Count of Epics, User Stories, Tasks, and Issues: 165 issues

Completed Epics:

RICAPP-204 - Anomaly Detection xApp (G-Release)

RICAPP-207 QP xApp (G-Release)

RICAPP-201 -KPIMON xApp (G Release)

RICAPP-200 - RC xApp (G-Release)

RICAPP-202 - upgrading protofile and modified NodebHandler to build CELL-RAN map (cell_map)

G release highlights/accomplishments (16-Dec-2022):

AD xApp :-

- Removal of pushing data into influxdb when xApp starts.

1. Either UE's KPIs should be continuously stored into influxDB from KPIMON **OR**
2. We will need to run script manually to populate influxDB from .csv separately

- changes in AD xApp to read live data from influxDB for inference
- Addition of Python script to read static data and keep pushing into RICPLT lnfluxDB
- Addition of exception module to handle errors and exceptions
- Addition of configuration module to update
  - InfluxDB configuration (near RT RIC instance or external)
  - KPIs
- parameter tuning and functionality addition for improvements

QP xApp :-

- Removal of pushing data into influxdb when xApp starts.

1. Either UE's KPIs should be continuously stored into influxDB from KPIMON **OR**
2. We will need to run script manually to populate influxDB from .csv separately

- changes in QP xApp to read live data from influxDB for inference
- Addition of Python script to read static data from .csv and keep pushing into RICPLT lnfluxDB
- Addition of exception module to handle errors and exceptions
- Addition of configuration module to update
  - InfluxDB configuration (near RT RIC instance or external)
  - KPIs
- Model validation, parameter tuning and functionality addition for improvements

Gerrit Reviews

KPIMON-GO xApp :-

- E2SM KPM version upgraded to 2.0
- Added a feature to build a RAN cell map.

RC xApp:

- Upgrading the RC service model to 1.0.3.

Bugs fixes:

- The E2SM RC control request structure was not properly set. (Ran parameter id 3 is missing in final Rc control structure)
- values in control request header and control request message are incorrectly set.

TS xApp:

- upgraded proto file in order to match with the proto file of latest RC xApp.
- modified - NodebHandler to build CELL-RAN map (cell_map) properly.

G release source code, container images and deployment instructions

The list of container images for the G release (link)

Code Coverage Reports : Latest reports can be found at the following Link: Projects - O-RAN Software Community (sonarcloud.io).

Near-Real-time RAN Intelligent Controller Platform (E2 Interface) (RICPLT)

Original primary goals:

- E2T improvements: Support in simulator in in internal E2mgr model source code for E2 Reset procedure (from E2 node to RIC (RIC-386)) - ~~full E2 reset procedure from RAN only in RIC 946 in H release~~; ~~Correct handling of E2 node reconnects and multiple E2 Setups (RIC 932)~~, ~~Support split architecture (CU/DU) in E2T/E2M (RIC 933)~~, test cases of remaining interface types in config update (RIC-911), ~~MDC dynamic log level change in E2T and E2M (RIC 814, RIC 813), check existence of SCTP stack during startup (RIC 931)~~
- A1: finalize re-implementation of A1 in golang (from python) (RIC-849, RIC-914)
- Support for E2 subscriptions via REST from the xapp framwork for c++ (RIC-641)
- ~~Remove support for RMR in E2 subscription interface and only continue with E2 REST subscription interface towards xApps (RIC 375)~~
  - We will do this only as first step in the next release because the last missing xapp-framework changes were done very late in the G release (xapp-frame-cpp) supports REST (RIC-641, RIC-705) . Go and python already support E2 REST subscriptions
- ~~Subscription delete callback to xApps and subscription cleanup after xApp removal (RIC 928, RIC 929)~~
- Support for DMS via REST in addition to command line tool DMSCLI (RIC-714)
- First version of the xApp framework for Rust (RIC-924)
- ~~missing test cases for xapp-frame-py (RIC 917),~~
- ~~xapp-frame (go) support readiness and liveness state with appmgr/rtmgr (RIC 930)~~
- ~~First version of a RIC CLI (RIC 445)~~
- ~~ric-dep-cleanup (RIC 918)~~
- E2 check, validate and define how various overload and disconnect case are handled (RIC-704)
- ~~Enhancments in A1 mediator testing and in E2 subscription testing via nanobot (RIC 878, RIC 860)~~
- Update of influxDB from 1.82.2, incl. adaptations in stslgo module (RIC-919)
- Take go version 1.18 into use in base image (RIC-937)
- bug fixes: RIC-945 e2term crashes occasionally when gNB is disconnected,RIC-944 PlmnId to mnc conversion wrong, RIC-943 alarm-go rmr routing table init failure, RIC-936 reference to gcr -> ghcr, RIC-935 kube-flannel changed namespace, RIC-934 Upgrade sdlgo Golang version to fix CVE-2022-32189 vulnerability,RIC-920 fix translation of 21/22/23 bit gnb ids to hex in E2T, RIC-939 race condition and out of bounds check in RMR

Achieved G release highlights = high-level release notes (2022-12-14) below (note that the release image list is here: link)

- We finalized work on a new functionally-equivalent A1 mediator implementation in Golang that now replaces the previous python based implementation. The optional usage of stslgo (shared timeseries layer) and InfluxDB got a major version upgrade (1.82.2). A new REST interface for the DMS (deployment management service) provides similar functionality as the existing DMS command line tool, but via a REST interface.
- We implemented the first version of the xApp framework in Rust.
- We implemented support for E2 subscriptions via REST in the xapp framework for C++. This allows us to deprecated the old RMR based interface early in the next release.

- bug fixes: RIC-945 e2term crashes occasionally when gNB is disconnected,RIC-944 PlmnId to mnc conversion wrong, RIC-943 alarm-go rmr routing table init failure, RIC-936 reference to gcr -> ghcr, RIC-935 kube-flannel changed namespace, RIC-934 Upgrade sdlgo Golang version to fix CVE-2022-32189 vulnerability,RIC-920 fix translation of 21/22/23 bit gnb ids to hex in E2T, RIC-939 race condition and out of bounds check in RMR
- security-related bug fixes: RIC-942

For the G release of the near-RT RIC we do only limited integration testing: only the use cases: deploy RIC, deploy xApp, make E2 connection, get list of A1 policies has been tested.

Filled in end-of-release checklist: Release criteria checklist

PTL: Thoralf Czichy

Status 2022-12-14: From the 28 epics planned (link) we implemented 10 (link). 18 items have been moved out of the G release, e.g, because of implementation delays (link). Incomplete items: 0 (link). Additionally we fixed 7 bugs and small implementation tasks (link)

G release source code, container images and deployment instructions

The list of container images for the G release (link). A demo video for the F release still applies to the G release (but with updated references). It shows

- how to deploy the near-RT RIC platform,
- compile connect the E2 (e2 node) simulator from the OSC simulator project and
- compile the hw-go xapp from the xapp project and use the dms_cli to deploy it.

Code coverage: Code coverage reports (current coverage and list of components that need to set up Jenkins job for auto-generation of the reports as part of CI)

Operation and Maintenance (OAM)

Primary Goals:

According to the O-RAN-SC-OAM-Architecture document, all ManagedElements (near-real-time-RIC, O-CU-CP, O-CU-UP, O-DU and O-RU) implement the O1-interface.

G release Feature Scope:

- support of O-RAN WG10 VES message bodies
- update of OAM-Controller to ODL version Sulfur
  - Note: team decided to go with Java11 - Java 17 would be possible but is pushed out to next release.
- update to keycloak version 18
- even more secure keycloak configuration
- there is a request for a "bare-metal" deployment which is not in scope of O-RAN, but still useful - also for development and module test
- support of AI/ML based on RSAC and other input.
- support of Tacker team

Please see also project wiki for further details: G-Release

Sprint Demos:

- Sprint #1 (at ht-cloud)
- Sprint #2 (at ht-cloud)

PTL: Martin Skorupski

G release highlights/accomplishments (<date>):

G release source code, container images and deployment instructions (and status)

Jira: Count of Epics (15 issues), User Stories, Tasks, and Issues: 166 issues

Source Code:

- OAM master
- OAM Controller features master
- ONAP VES Collector master

Integration:

- helm charts

O-RAN Central Unit (OCU)

Primary Goals:

- In the absence of O-CU, Radisys commercial CU image to be used for E2E testing

G release Feature Scope:

G Release Feature Scope:

- Radisys Commercial CU is being used as a test fixture for E2E testing
- This is containerized CU image with following
  - Release version 2.5.3
  - NG interface with SOCKET mode and veth type
  - F1 interface with SOCKET mode and veth type
  - E2 interface support
  - Software Crypto

PTL:

G release source code, container images and deployment instructions (and status)

O-DU High

Primary Goals:

O-DU New Feature Development

1. Implementation of Discontinuous Reception (DRX)

2. Aligning all modules and interfaces to the latest specification

3. Mobility mode Support (Inter-CU handover)

Feature verification

1. Closed-Loop Automation

2.16QAM and 64 QAM (Spillover from D release)

End to End Integration support

1.TDD/Mu1/100MHz

2.FDD/Mu0/20MHz * (Spillover from D/E release)

G release Feature Scope:

- DRX support
- Mobility (Inter-CU handover) support
- code clean-up and coverage
- latest specification support for all modules and interfaces (AAD WG8)
- End to end integration support

PTL: Ankit Barve

Status on 15 Dec 2022

Implementation of Discontinuous Reception (DRX)

Status: Completed

https://jira.o-ran-sc.org/browse/ODUHIGH-462

Alignment to latest ORAN WG8 AAD specification

Status: Completed

https://jira.o-ran-sc.org/browse/ODUHIGH-464

Testing of odu-high along with intel l1 in different labs

Status: Completed till Broadcast message till odu-low (To be continued in next release)

https://jira.o-ran-sc.org/browse/ODUHIGH-475

Code clean up

Status: Completed

https://jira.o-ran-sc.org/browse/ODUHIGH-461

G release highlights/accomplishments (15 Dec 2022):

- Added support for Discontinuous Reception
- Aligning to the latest AAD WG8 specification for existing messages (above 80% complaint)
- End-to-end integration support
  - WLS memory management update aligned with latest odu-low (FlexRAN 21.11 intel L1)
  - Upgrade to the latest FAPI Interface and vendor-specific messages
  - OTA setup for both TDD and FDD
  - Successfully tested broadcast message reception at L1
- Code cleanup
  - At the beginning of the ODU-High project, Radisys pushed seed code with many files and functions which could have been used later for enhancing features
  - This activity targets deleting unused files and functions without any feature impact
  - In the future, if any functionality from deleted code is needed then the previous release code base could be used to retrieve it

G release source code, container images, and deployment instructions (and status)

source code: https://gerrit.o-ran-sc.org/r/gitweb?p=o-du%2Fl2.git;a=shortlog;h=refs%2Fheads%2Fg-release
Release notes: https://docs.o-ran-sc.org/projects/o-ran-sc-o-du-l2/en/latest/release-notes.html#g-release
Document: https://docs.o-ran-sc.org/projects/o-ran-sc-o-du-l2/en/latest/
Code coverage: To be planned as UT framework is not available to provide code coverage.

O-DU Low

Primary Goals:

Implementation of the O-DU Low Physical Layer functions for a 5G Open Access Radio Network allowing the flexibility of a software implementation coupled with the ability of incorporating hardware accelerators on a selective basis and meets the O-RAN architecture goals of scalablity, mix and match multi-vendor modules that are interoperable and that can be upgraded as the standards evolve by software updates.

The O-DU Low physical layer functions follow the 3GPP TS 38 series recommendations for 5G and the 3GPP TS 36 series recommendations for LTE with the 3GPP 7.2 functional split between O-DU Low and O-RU. In 3GPP terms the O-DU Low is referred to HIGH-PHY in the functional split for 5G.

Implementation of the Open Front Haul interface to the O-RU per O-RAN WG4 CUS specifications.

Integration of this component with multi-vendor implementations of O-DU High and O-RU modules for end to end interoperability and compatibility verification.

G release Feature Scope:

The O-DU Low G release is the same as the F Release that added support for Massive MIMO, URLLC and it is based on the commercial FlexRan 21.11 release.

The O-DU Low G and F Release code is an Intel contribution in collaboration with Tieto Poland for the source code releases in the O-RAN gerrit and for the binary blobs contributed via GitHub.

For the documentation preparation of the F and G release Intel worked with collaboration from Fransiscus Bimo and Professor Ray-Guang Cheng from National Taiwan University of Science and Technology (NTUST).

The G and F release are being used for end to end testing and it is based on the E maintenance release that was used for the 2021 November US O-RAN Plugfest and tested in conjuction with 2 stack partners and 2 different Test equipment vendors. The Front Haul Interface was also tested for compliance using Keysight's Front Haul Test equipment.

Container images and deployment instructions are to be provided later

PTL: Luis Farias , Alternate: @Chenxi Yue

G release highlights/accomplishments (15 Dec 2022):

The G/F Release has been integrated at NTUST and LTTS with the ODU-High and other O-RAN components with O-RU emulators and Commercial Radio Units. For more details of the current status see the ODU-High End to End Integration support status

G release source code, container images, and deployment instructions (and status)

source code: https://gerrit.o-ran-sc.org/r/gitweb?p=o-du%2Fphy.git;a=summary
Release notes: https://docs.o-ran-sc.org/projects/o-ran-sc-o-du-phy/en/latest/release-notes.html
Document: https://docs.o-ran-sc.org/en/latest/projects.html#o-ran-distributed-unit-low-layers-odulow
Code coverage: To be planned as UT framework is not available to provide code coverage.

Simulators (SIM)

Primary Goals:

- Keep alignment with latest O-RAN specifications (O1, E2)

G Feature Scope / Achievements:

- keep alignment of the O1 Simulator with latest YANG models
- E2 Simulator improvements (especially to the deployment/build procedures)
- NS3-E2 Simulator integration in Gerrit

Sprint Demos:

- Sprint #2 (at ht-cloud)

PTL: Alex Stancu

Jira: Count of Epics, User Stories, Tasks, and Issues: 5 issues

G release highlights/accomplishments (15 Dec 2022):

- Kept alignment of the O1 Simulator with the latest YANG models
- Implemented stndDefined vesPnfRegistration in the O1 Simulator

G release source code, container images and deployment instructions

Source code:

- O1 Simulator
- E2 Simulator
- NS-3 E2 Plugin

Container images are described here.

Instructions: no specific instructions.

Code coverage: in progress (sonar for C/C++ code in LF repos)

Service Management and Orchestration Layer (SMO)

Primary Goals:

The SMO acts as an uber identity that overlooks the different aspects of the O-RAN deployment. Starting with how solutions are deployed, to how they interact with each other, to how they are managed.

G release Feature Scope:

The focus for the G release in SMO is interoperability. Every sub-project within SMO has at least one item that focuses on interoperating with one other entity outside of SMO. For example,

- On the O1 interface, the focus is on trying to bring-up O-DU using NETCONF and YANG models defined for O-DU.
- On the O1/VES interface, it is ability to generate network slicing PM events in the O-DU, and the ability to receive them in SMO dashboard, and store them in InfluxdB.
- On the O2 interface, it will be the ability to instantiate an instance of a Network Function (NF) like the O-DU in the O-Cloud.

Separate from this, each sub-project within SMO has other features/capabilities it will address as part of the G-release. For details please refer to the minutes of the SMO meeting here.

PTL: Mahesh Jethanandani

G release highlights/accomplishments (December 12, 2022):

- In the G release, the O1 interface has support for configuration of Network Functions (NF) over NETCONF using YANG models.
- The O1/VES interface demonstrated interoperability between SMO and O-DU NF. Network slicing PM events generated by O-DU were captured by the O1/VES collector and displayed on the Grafana dashboard.
- The O2 interface demonstrated TST010 API Conformance, along with aligning with O2 DMS ETSI NFV Profile

G release source code, container images and deployment instructions (and status)

G release source code for SMO can be found in the following repositories

- O1 repository
- O1/VES repository
- O2 repository
  - For the O2 Interface OpenStack Tacker project (External repository)
    - Source code: https://opendev.org/openstack/tacker
    - Code coverage: Coverage report (Latest OpenStack verification results)

The container images for SMO can be found on the Nexus server, where applicable.
The container images for OpenStack Tacker can be found in OpenStack Kolla repository.

- https://quay.io/repository/openstack.kolla/tacker-server
- https://quay.io/repository/openstack.kolla/tacker-conductor

The OpenStack Tacker container can be started with the steps in the following documentation.

- https://docs.openstack.org/tacker/latest/install/kolla.html
- https://docs.openstack.org/kolla-ansible/latest/user/quickstart.html

The installation instructions for SMO can be found in the documentation page here.

Status

The status of the SMO project is tracked using Jira items. For the latest status refer to the items below.

Key	Summary	T	Created	Updated	Due	Assignee	Reporter	P	Status	Resolution
SMO-143	Handle oran-file-management netconf notifications in SDNR		Nov 06, 2023	Nov 06, 2023		Unassigned	bhanu chandra	=	TO DO	Unresolved
SMO-142	Handle oran-software-management netconf notifications in SDNR		Nov 06, 2023	Nov 06, 2023		bhanu chandra	bhanu chandra	=	TO DO	Unresolved
SMO-141	Enable/disable netconf subscriptions while adding a device in SMO GUI		Nov 06, 2023	Nov 06, 2023		bhanu chandra	bhanu chandra	=	TO DO	Unresolved
SMO-138	Support Accelerator framework to deploy vDU		Sep 25, 2023	Nov 22, 2023		Toshiaki Takahashi	Toshiaki Takahashi	=	TO DO	Unresolved
SMO-137	O2dms FM/PM		Sep 25, 2023	Sep 25, 2023		Toshiaki Takahashi	Toshiaki Takahashi	=	TO DO	Unresolved
SMO-136	Integration with other SMO components for automated App Healing		Sep 25, 2023	Sep 25, 2023		Toshiaki Takahashi	Toshiaki Takahashi	=	TO DO	Unresolved
SMO-128	Authenticate InfluxDB API		Mar 08, 2023	Jun 28, 2023		Unassigned	santanu de	=	TO DO	Unresolved
SMO-127	Resolve Sonar violation		Mar 08, 2023	Jun 28, 2023		Unassigned	santanu de	=	TO DO	Unresolved
SMO-126	Upgrade Standard defined validator to support new Standard defined domain		Mar 08, 2023	Jun 28, 2023		Unassigned	santanu de	=	TO DO	Unresolved
SMO-125	Implementation of Kubernetes		Mar 08, 2023	Jun 28, 2023		Unassigned	santanu de	=	TO DO	Unresolved
SMO-119	Automated API Conformance testing		Dec 15, 2022	Sep 25, 2023		Toshiaki Takahashi	Toshiaki Takahashi	=	IN PROGRESS	Unresolved
SMO-103	PNF Registration event should result in O1 initiating connection to the NF		Nov 18, 2022	Nov 18, 2022		santanu de	Mahesh Jethanandani	=	TO DO	Unresolved
SMO-91	Add fault-id and affected-objects to the faults page		Sep 08, 2022	Dec 07, 2022		bhanu chandra	bhanu chandra	=	TO DO	Unresolved
SMO-88	Refresh SDNR image to the latest on SMO O1 project		Aug 29, 2022	Sep 14, 2022		bhanu chandra	bhanu chandra	=	IN PROGRESS	Unresolved
SMO-80	Integration with other SMO components for automated App instantiation		Aug 17, 2022	Sep 25, 2023		Toshiaki Takahashi	Toshiaki Takahashi	=	IN PROGRESS	Unresolved
SMO-71	Documentation for smo-ves project		Jun 30, 2022	Aug 23, 2022		santanu de	Mahesh Jethanandani	=	IN PROGRESS	Unresolved
SMO-10	Convert NETCONF notifications into VES events		Apr 16, 2021	Jul 06, 2021		bhanu chandra	Mahesh Jethanandani	=	TO DO	Unresolved
SMO-3	Create sample configuration for FH interface YANG model		Oct 08, 2020	Nov 16, 2020		santanu de	Mahesh Jethanandani	=	TO DO	Unresolved

18 issues

Infrastructure (INF)

Primary Goals:

- Implement the O-Cloud reference design, provide the real time performance to allow the O-DU and other components running on top of it.
- Provide interaction capabilities with other components.

G release Feature Scope:

- Extend MultiOS support: add Debian as the base OS
- Enable the multiple deployment scenarios for Debian based image:
  - AIO-SX, AIO-DX, AIO-DX + workers, standard, Distributed Cloud
- Align INF O2 implementation to the latest O2 spec.

PTL: Jackie Huang

G release highlights/accomplishments (06 Jan 2023):

- Extend MultiOS support: add Debian as the base OS
- Enable the multiple deployment scenarios for Debian based image
- Update to align with stx 7.0 for CentOS based image
- Align INF O2 implementation to the O-RAN Spec in July 2022
- Integrate O2 app into CentOS and Debian based image
- Support INF O2 integration with SMO(tacker)
- Deployed INF over multiple O-RAN SC Open Labs

Jira: Status of Epics, User Stories, Tasks, and Issues:

Update at 13 Dec 2022

- **EPICs:**

Key	Summary	T	Created	Updated	Due	Assignee	Reporter	P	Status	Resolution
INF-298	[O2] Update o2 service to be compliant to O-RAN Spec in july 2022		Oct 09, 2022	May 30, 2023		Bin Yang	Bin Yang		DONE	Done
INF-291	[MultiOS][Doc] documentation updates for G release		Sep 22, 2022	Dec 01, 2022		Jackie Huang	Jackie Huang		DONE	Done
INF-282	[MultiOS][Debian]INF Enable the multiple deployment scenarios for Debian		Aug 19, 2022	Nov 24, 2022		Jackie Huang	Jackie Huang		DONE	Done
INF-281	[MultiOS][Debian]INF add support for Debian as the base OS		Aug 19, 2022	Nov 24, 2022		Jackie Huang	Jackie Huang		DONE	Done
INF-229	[MultiOS][CentOS]INF fully align with StarlingX 6.0 to support the VM/Openstack platform		Oct 15, 2021	Nov 24, 2022		Jackie Huang	Jackie Huang		DONE	Done

5 issues

- **Stories:**

Key	Summary	T	Created	Updated	Due	Assignee	Reporter	P	Status	Resolution
INF-388	[O2] Investigate the ORAN-O2 IMS service DC deployment Corner Case		Dec 09, 2022	Dec 09, 2022		David Liu	David Liu		DONE	Done
INF-370	[O2] alarm Notification post with wrong objectref		Nov 21, 2022	Nov 23, 2022		David Liu	Bin Yang		DONE	Done
INF-369	[O2] inventory change notification post with wrong objectref		Nov 21, 2022	Nov 22, 2022		David Liu	Bin Yang		DONE	Done
INF-368	[O2] Replace webserver for o2service		Nov 18, 2022	May 23, 2023		Bin Yang	Bin Yang		DONE	Done
INF-367	[O2] Disable debug mode for production deployment of o2service		Nov 18, 2022	May 23, 2023		Bin Yang	Bin Yang		DONE	Done
INF-358	[O2] Refactor accelerator resource to expose more details		Nov 14, 2022	Nov 17, 2022		Bin Yang	Bin Yang		DONE	Done
INF-352	[O2] Refactor ResouceTypes with aggregate resource types		Nov 10, 2022	Nov 17, 2022		Jon Zhang	Bin Yang		DONE	Done
INF-350	[O2] Refactor inventory change Subscription to support duplication check		Nov 09, 2022	Nov 11, 2022		Jon Zhang	Bin Yang		DONE	Done
INF-349	[O2] Refactor alarmSubscription to support duplication check		Nov 09, 2022	Nov 11, 2022		Jon Zhang	Bin Yang		DONE	Done
INF-348	[O2] Validate alarm changes notification with filter		Nov 08, 2022	Nov 30, 2022		Bin Yang	Bin Yang		DONE	Done
INF-347	[O2] Refactor alarmSubscription filter design		Nov 08, 2022	Nov 10, 2022		Jon Zhang	Bin Yang		DONE	Done
INF-346	[O2] Refactor subscription filter design		Nov 08, 2022	Nov 10, 2022		Jon Zhang	Bin Yang		DONE	Done

INF-338	[O2] Validate inventory changes notification data comply to spec		Nov 08, 2022	Nov 29, 2022	Bin Yang	Bin Yang	=	DONE	Done
INF-337	[O2] Validate inventory changes notification with filter		Nov 08, 2022	Nov 30, 2022	Bin Yang	Bin Yang	=	DONE	Done
INF-335	[O2] Optimize docker images footprint		Nov 07, 2022	Nov 15, 2022	Bin Yang	Bin Yang	=	DONE	Done
INF-320	[O2] support Attribute-based filter		Oct 24, 2022	Nov 24, 2022	Jon Zhang	Bin Yang	=	DONE	Done
INF-316	[O2] Refactor configuration injection method for oran o2 application		Oct 20, 2022	Nov 09, 2022	Jon Zhang	Bin Yang	=	DONE	Done
INF-315	[O2] Grant default service account higher privileges		Oct 11, 2022	Nov 03, 2022	David Liu	David Liu	^	DONE	Done
INF-312	[O2] Add https/tls for o2service endpoint		Oct 10, 2022	Nov 03, 2022	David Liu	Bin Yang	=	DONE	Done
INF-311	[O2] Update ocloud model		Oct 10, 2022	Nov 24, 2022	Jon Zhang	Bin Yang	=	DONE	Done
INF-310	[O2] Update ResourceType model		Oct 10, 2022	Nov 24, 2022	Jon Zhang	Bin Yang	=	DONE	Done
INF-309	[O2] Update Notification Model		Oct 10, 2022	Nov 24, 2022	Jon Zhang	Bin Yang	=	DONE	Done
INF-308	[O2] Update DeploymentManager model		Oct 09, 2022	Nov 06, 2022	Jon Zhang	Bin Yang	=	DONE	Done
INF-307	[O2] Update ResourceInfo model		Oct 09, 2022	Nov 24, 2022	Jon Zhang	Bin Yang	=	DONE	Done
INF-306	[O2] Update ResourcePool model		Oct 09, 2022	Nov 24, 2022	Jon Zhang	Bin Yang	=	DONE	Done
INF-304	[O2] Add ocloud available notification		Oct 09, 2022	Nov 24, 2022	Jon Zhang	Bin Yang	=	DONE	Done
INF-303	[O2] Add Infrastructure Monitoring Fault Service		Oct 09, 2022	Nov 24, 2022	Jon Zhang	Bin Yang	^	DONE	Done
INF-302	[O2] Update error handling		Oct 09, 2022	Nov 24, 2022	Jon Zhang	Bin Yang	^	DONE	Done
INF-301	[O2] Add api_versions		Oct 09, 2022	Nov 24, 2022	Jon Zhang	Bin Yang	^	DONE	Done
INF-300	[O2]support Attribute-based selector		Oct 09, 2022	Nov 24, 2022	Jon Zhang	Bin Yang	^	DONE	Done

Showing 30 out of 32 issues

- **Tasks:**

Key	Summary	T	Created	Updated	Due	Assignee	Reporter	P	Status	Resolution
INF-387	[O2] Doc: update API references		Dec 06, 2022	Jan 16, 2023		Jon Zhang	Bin Yang		DONE	Done
INF-385	[O2] Release pti-o2imsdms: 2.0.0 image		Nov 30, 2022	Dec 02, 2022		Bin Yang	Bin Yang		DONE	Done
INF-384	[O2] Update o2imsdms package meta		Nov 25, 2022	Nov 25, 2022		Bin Yang	Bin Yang		DONE	Done
INF-383	[O2] Refactor to enrich alarmEventRecord with extension field		Nov 25, 2022	Nov 25, 2022		Jon Zhang	Bin Yang		DONE	Done
INF-376	[O2] Refactor response body from html to json in case of status code 500		Nov 22, 2022	Nov 23, 2022		Bin Yang	Bin Yang		DONE	Done
INF-374	[O2] figure out the what the memory change raise the update_at change in Stx		Nov 22, 2022	May 23, 2023		Jon Zhang	Jon Zhang		DONE	Done
INF-359	[O2] Refactor alarm watcher to retrieve alarms for each subcloud		Nov 14, 2022	Nov 17, 2022		Jon Zhang	Bin Yang		DONE	Done
INF-342	[O2] Refactor deploymentManager profile data		Nov 08, 2022	Nov 11, 2022		Jon Zhang	Bin Yang		DONE	Done
INF-341	[O2] Refactor name of resource pool to region id		Nov 08, 2022	Nov 09, 2022		Jon Zhang	Bin Yang		DONE	Done
INF-336	[O2] add support to download all images from private registry		Nov 07, 2022	Nov 07, 2022		Jackie Huang	Jackie Huang		DONE	Done
INF-328	[O2] The memory resource update frequency is too quick when watching it		Oct 31, 2022	May 23, 2023		Jon Zhang	Jon Zhang		DONE	Done
INF-327	[O2] SMO use https as the register URL and notification URL		Oct 31, 2022	May 23, 2023		David Liu	Jon Zhang		DONE	Done
INF-326	[o2] DMS profile base on the configurations		Oct 31, 2022	May 23, 2023		Jon Zhang	Jon Zhang		DONE	Done
INF-325	[O2] Add resource watch of the Accelerators		Oct 31, 2022	May 23, 2023		Jon Zhang	Jon Zhang		DONE	Done
INF-322	[O2] rename to be consistent with the ones in app-oran-o2 in StarlingX		Oct 26, 2022	Nov 24, 2022		Jackie Huang	Jackie Huang		DONE	Done
INF-318	[O2] Bump up staging version to 2.0.0		Oct 21, 2022	Nov 24, 2022		Bin Yang	Bin Yang		DONE	Done
INF-296	[MultiOS][Doc] release-notes.rst updates for G release		Sep 22, 2022	Nov 25, 2022		Jackie Huang	Jackie Huang		DONE	Done
INF-295	[MultiOS][Doc] installation.rst updates for G release		Sep 22, 2022	Dec 01, 2022		Jackie Huang	Jackie Huang		DONE	Done
INF-294	[MultiOS][Doc] developer-guide.rst updates for G release		Sep 22, 2022	Dec 01, 2022		Jackie Huang	Jackie Huang		DONE	Done
INF-293	[MultiOS][Doc] overview.rst updates for G release		Sep 22, 2022	Dec 01, 2022		Jackie Huang	Jackie Huang		DONE	Done

Showing 20 out of 25 issues

- **Bugs:**

Key	Summary	T	Created	Updated	Due	Assignee	Reporter	P	Status	Resolution
INF-393	[O2] "serviceUri" in the DMS list query and detail query have different response		Dec 29, 2022	May 23, 2023		Jon Zhang	Jon Zhang		DONE	Done
INF-382	[O2] query resource with complex filter failed		Nov 24, 2022	Nov 24, 2022		Jon Zhang	Bin Yang		DONE	Done
INF-381	[O2] alarm watcher failed to audit alarm on debian wrcp		Nov 24, 2022	Nov 24, 2022		Jon Zhang	Bin Yang		DONE	Done

INF-380	[O2] Some alarm not reported /notified to SMO.		Nov 23, 2022	Dec 02, 2022	Jon Zhang	David Liu		DONE	Done
INF-379	[O2] Kill O2 service watcher /pubsub container will cause notification flooding.		Nov 23, 2022	Nov 25, 2022	Jon Zhang	David Liu		DONE	Done
INF-378	[O2] Inventory Subscription filter not take effect as expected		Nov 22, 2022	May 24, 2023	Jon Zhang	David Liu		DONE	Done
INF-377	[O2] Inventory Subscription show filter not expected.		Nov 22, 2022	May 24, 2023	Jon Zhang	David Liu		DONE	Done
INF-375	[O2] failed to query resourceType with selector		Nov 22, 2022	Nov 23, 2022	Jon Zhang	Bin Yang		DONE	Done
INF-373	[O2] The watcher watched the resource change lost some attribute update		Nov 22, 2022	May 23, 2023	Jon Zhang	Jon Zhang		DONE	Done
INF-372	[O2] alarmNotification post data does not comply with spec		Nov 22, 2022	Nov 24, 2022	Jon Zhang	Bin Yang		DONE	Done
INF-371	[O2] inventoryChange notification post data does not comply to spec		Nov 22, 2022	Nov 29, 2022	Jon Zhang	Bin Yang		DONE	Done
INF-366	[O2] logging level provisioning by env var LOGGING_CONFIG_LEVEL is not working		Nov 18, 2022	Nov 18, 2022	Bin Yang	Bin Yang		DONE	Done
INF-365	[O2] attibute based filter does not support value with space inside		Nov 17, 2022	Nov 18, 2022	Bin Yang	Bin Yang		DONE	Done
INF-364	[O2] alarmEventRecord does not comply with spec		Nov 17, 2022	Nov 22, 2022	Jon Zhang	Bin Yang		DONE	Done
INF-363	[O2] Handle resource request with resourcePoolId not correct.		Nov 16, 2022	Nov 17, 2022	David Liu	David Liu		DONE	Done
INF-362	[MultiOS][Yocto][[Build] distributedcloud and fm-mgr do_fetch failed		Nov 16, 2022	Nov 16, 2022	Jackie Huang	Jackie Huang		DONE	Done
INF-361	[O2] Duplicated subscription items created.		Nov 15, 2022	Nov 15, 2022	Jon Zhang	David Liu		DONE	Done
INF-360	[O2] Pubsub container could not resolve 'postgres' db host to IP address after restart		Nov 14, 2022	Nov 15, 2022	Bin Yang	David Liu		DONE	Done
INF-357	[MultiOS][jjb] upload-inf.sh: lftools install failed		Nov 14, 2022	Nov 24, 2022	Jackie Huang	Jackie Huang		DONE	Done
INF-356	[O2] DC client query subcloud retuns 'auth token is invalid'		Nov 12, 2022	Nov 18, 2022	Jon Zhang	Bin Yang		DONE	Done
INF-355	[O2] Authentication failure should return 401 with ProblemDetails		Nov 12, 2022	Nov 15, 2022	David Liu	Bin Yang		DONE	Done
INF-354	[O2] Repeat delete same subscription should return 404 instead of 200.		Nov 11, 2022	Nov 16, 2022	Jon Zhang	David Liu		DONE	Done
INF-353	[O2] Fail to check duplication during creating Inventory change subscription		Nov 11, 2022	Nov 13, 2022	Jon Zhang	Bin Yang		DONE	Done
INF-351	[O2] Ocloud serviceUri is wrong about protocol		Nov 10, 2022	Nov 11, 2022	Jon Zhang	Bin Yang		DONE	Done
INF-345	[MultiOS][Yocto][Build] python-oslo.messaging do_install failed		Nov 08, 2022	Nov 14, 2022	Jackie Huang	Jackie Huang		DONE	Done
INF-344	[O2] resourceType fields issues on alarmDictionarySchemaVersion and alarmDefinition		Nov 08, 2022	Nov 21, 2022	Jon Zhang	Bin Yang		DONE	Done
INF-343	[O2] Ocloud serviceUri should be apiRoot only		Nov 08, 2022	Nov 09, 2022	Jon Zhang	Bin Yang		DONE	Done
INF-340	[O2] ResourcePools list does not match the DC status		Nov 08, 2022	Nov 08, 2022	Jon Zhang	Bin Yang		DONE	Done

INF-339	[O2] ResourcePools list does not match the DC status		Nov 08, 2022	Nov 09, 2022	Jon Zhang	Bin Yang	=	DONE	Done
INF-334	[O2] Resource Type has duplicate "pserver_mem" value		Nov 03, 2022	May 23, 2023	Jon Zhang	Jon Zhang	=	DONE	Done

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Test status:

Code coverage:

- INF platform
  - Code coverage report: o-ran-pti-rtp - (sonarcloud.io)
  - INF is a downstream project of StarlingX and Yocto Project, the above coverage report may not reflect the real code coverage, so we also need to refer to the status from upstream projects.
- O2
  - Total coverage: 54%
  - Detail report: cov-report_20220609.txt

Release Note:

- Release-notes — pti-rtp g-release documentation (o-ran-sc.org)

G release source code, images and deployment instructions

- Each repository has a branch named "g-release" that can be accessed using git:
  - For pti/rtp repo[gitweb]: git clone --branch g-release "https://gerrit.o-ran-sc.org/r/pti/rtp"
  - For pti/o2 repo[gitweb]: git clone --branch g-release "https://gerrit.o-ran-sc.org/r/pti/o2"
- Images for INF project
  - ISO image for INF:
    - Yocto Based image: inf-image-yocto-aio-x86-64.iso
    - CentOS based image: inf-image-centos-all-x86-64.iso
    - Debian Based image: inf-image-debian-all-x86-64.iso
  - Container image for o2:
    - nexus3.o-ran-sc.org:10002/o-ran-sc/pti-o2imsdms:2.0.0
    - nexus3.o-ran-sc.org:10004/o-ran-sc/pti-o2imsdms:2.0.0
- Deployment instruction:
  - INF: INF Installation Guide
  - O2: O-RAN O2 Application

Integration and Test (INT)

Primary Goals: To support OSC project CI pipeline. To test and validate the components and use cases

G Feature Scope / Achievements:

- To set up test automation with the XTesting framework that can run at release time to verify features and integration (an XTesting work flow demo can be found here)
- Work with OSC open labs (US east coast, US west coast, Asia Pacific) to facilitate community testing. Latest status on the 3 labs are available here
- Explore the POWDER testbed for OSC integration test needs: a POWDER account was created that serves as an umbrella project for the OSC community. Multiple profiles were added for automated RIC platform deployment and automated testing.

PTL: James Li

G release highlights/accomplishments (December 14, 2022):

Established and demonstrated a XTesting workflow in RIC platform deployment and can further run test cases against the deployed software module (s). Existing Robot test cases can be re-used in the XTesting framework with minimal work.

Created multiple POWDER profiles for automated RIC platform deployment and XTesting setup.

G release source code, container images and deployment instructions

gerrit (look for the latest changes for G release from the following repositories):

https://gerrit.o-ran-sc.org/r/it/dep

https://gerrit.o-ran-sc.org/r/it/dev

https://gerrit.o-ran-sc.org/r/it/test

AIML Framework (AIMLFW)

Primary Goals:

- Stand alone installation (separated from existing platform deployment) and initial AIML workflow modules

G Feature Scope / Achievements:

- Stand alone installation with Kubeflow as a Training host backend and Kserve as a Inference host backend
- Initial Training Job Management (Data extraction / feature management)
- Sample ML pipeline and ML xApp : QoE Prediction model using LSTM with data from ricapp/qp

PTL: hoejoo lee

G release highlights/accomplishments (15 Dec 2022):

- Stand alone installation of AIMLFW with Kubeflow as part of Training host and Kserve as part of Inference host
- Initial Training Job Management with initial Data extraction / feature management
- Sample ML pipeline and ML xApp using AIMLFW : QoE Prediction model using LSTM with data from ric-app/qp repository

G release source code, container images and deployment instructions

Source code: Gerrit links to the repositories are mentioned below

Container images are described here:

- Training manager component: nexus3.o-ran-sc.org:10002/o-ran-sc/aiml-fw-awmf-tm-docker
- Data extraction component: nexus3.o-ran-sc.org:10002/o-ran-sc/aiml-fw-athp-data-extraction-docker
- Kubeflow adapter component: nexus3.o-ran-sc.org:10002/o-ran-sc/aiml-fw-athp-tps-kubeflow-adapter-docker
- AIMLFW dashboard component: nexus3.o-ran-sc.org:10002/o-ran-sc/portal-aiml-dashboard-docker
- AIMLFW notebook component: nexus3.o-ran-sc.org:10002/o-ran-sc/portal-aiml-notebook-docker

Installation Instructions:

https://docs.o-ran-sc.org/projects/o-ran-sc-aiml-fw-aimlfw-dep/en/latest/installation-guide.html

Installation demos:

Installation of AIMLFW: https://wiki.o-ran-sc.org/download/attachments/63143945/oran%20sc%20install_low_res_with_audio_small.mp4?api=v2

AIMLFW Training flow: https://wiki.o-ran-sc.org/download/attachments/63143945/AIMLFW_demo_for_training.mp4?api=v2

Assist and ML xApp demo: https://wiki.o-ran-sc.org/download/attachments/63143945/qp-aimlfw-demo.mp4?api=v2

Code coverage:

https://sonarcloud.io/project/overview?id=o-ran-sc_aiml-fw-athp-tps-kubeflow-adapter

https://sonarcloud.io/project/overview?id=o-ran-sc_aiml-fw-athp-sdk-feature-store

https://sonarcloud.io/project/overview?id=o-ran-sc_aiml-fw-athp-sdk-model-storage

https://sonarcloud.io/project/overview?id=o-ran-sc_aiml-fw-athp-data-extraction

https://sonarcloud.io/project/overview?id=o-ran-sc_aiml-fw-awmf-tm

Wiki: https://wiki.o-ran-sc.org/display/AIMLFEW

Tasks / Backlog: https://jira.o-ran-sc.org/projects/AIMLFW/issues

Gerrit / Code:

aiml-fw/awmf/tm: Training Manager : Training job and model management

aiml-fw/athp/tps/kubeflow-adapter: Adapter for Kubeflow

aiml-fw/athp/sdk/model-storage: Sdk for accessing Model storage

aiml-fw/athp/sdk/feature-store: Sdk for accessing Feature store

aiml-fw/athp/data-extraction: Retrieving features for training from Data lake

aiml-fw/aimlfw-dep: Deployment scripts aiml workflow

portal/aiml-dashboard: GUI for AIML Workflow

ric-app/qp-aimlfw: Sample ML Assist xApp for QoE prediction

JIRA Status

Key	Summary	T	Created	Updated	Due	Assignee	Reporter	P	Status	Resolution
AIMLFW-56	Automated testing of AIMLFW		Aug 08, 2023	Aug 22, 2023		Unassigned	Joseph Thaliath	=	IN PROGRESS	Unresolved
AIMLFW-77	This epic details for the feature in AIMLFW		Feb 20, 2024	Feb 20, 2024		Unassigned	subhash kumar singh	=	TO DO	Unresolved
AIMLFW-37	Integrate SMO Influx DB with AIMLFW		Mar 21, 2023	May 16, 2023		Vishal Varvate	Joseph Thaliath	=	IN PROGRESS	Unresolved
AIMLFW-62	Ansible based installation of AIMLFW in a VM		Aug 22, 2023	Aug 22, 2023		Unassigned	Joseph Thaliath	=	TO DO	Unresolved
AIMLFW-55	AIMLFW optimizations		Aug 08, 2023	Jan 18, 2024		Unassigned	Joseph Thaliath	=	DONE	Done
AIMLFW-63	Handle VM restart where AIMLFW is deployed		Sep 19, 2023	Jan 18, 2024		Joseph Thaliath	Joseph Thaliath	=	DONE	Done
AIMLFW-4	Prepare installation scripts for AIMLFW		Oct 27, 2022	Dec 01, 2022		Unassigned	Joseph Thaliath	^^	DONE	Done
AIMLFW-8	All changes related to G release for AIMLFW		Oct 27, 2022	Dec 20, 2022		Unassigned	Joseph Thaliath	^^	DONE	Done
AIMLFW-5	Create image build jenkins job for required AIMLFW repositories		Oct 27, 2022	Dec 01, 2022		Unassigned	Joseph Thaliath	^^	DONE	Done
AIMLFW-36	Chart museum error		Mar 21, 2023	Apr 04, 2023		Joseph Thaliath	Joseph Thaliath	^	DONE	Done
AIMLFW-48	H release documentation		Jun 13, 2023	Jun 21, 2023		Unassigned	Joseph Thaliath	=	DONE	Done
AIMLFW-10	Creation of QoE assist xapp		Oct 27, 2022	Dec 20, 2022		Unassigned	Joseph Thaliath	^^	DONE	Done
AIMLFW-64	Implement Model management services		Oct 31, 2023	Jan 18, 2024		SANDEEP KUMAR JAISAWAL	Joseph Thaliath	^	DONE	Done
AIMLFW-65	Implement training manager changes to support new model management services		Oct 31, 2023	Jan 18, 2024		Rajdeep Singh	Joseph Thaliath	^	DONE	Done
AIMLFW-7	Creation of repositories		Oct 27, 2022	Nov 15, 2022		Unassigned	Joseph Thaliath	^^	DONE	Done
AIMLFW-32	Preload example usecase pipelines by default		Feb 21, 2023	Mar 28, 2023		Rajdeep Singh	Joseph Thaliath	=	DONE	Done
AIMLFW-14	Define requirements for DME/SMO data source integration phase 1		Jan 05, 2023	Dec 01, 2023		Rizki Alamsyah	hoejoo lee	=	DONE	Done
AIMLFW-34	DME integration phase 1		Mar 21, 2023	Apr 04, 2023		Joseph Thaliath	Joseph Thaliath	=	DONE	Done
AIMLFW-44	KServe Installation Script		Apr 24, 2023	May 16, 2023		Unassigned	Taewan Kim	=	DONE	Done
AIMLFW-74	Essential Python Packages for Unit Tests		Dec 12, 2023	Dec 12, 2023		Taewan Kim	Taewan Kim	v	IN PROGRESS	Unresolved

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AIMLFW-6 - Getting issue details... STATUS