Project meetings

Meeting Info

RIC project meetings are open to the public and held on Tuesdays at 2pm UTC (winter) and 1pm UTC (summer). World Time Zone Map

Zoom 1 Info:

- Join from PC, Mac, Linux, iOS, or Android: https://zoom.us/j/9644759813
- Meeting ID for dial-in: **9644759813**

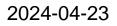| UTC-time	every 2nd Tuesday, check from calendar	https://zoom.us/j/9644759813
New York (EDT / UTC-4 during DST (-5 in the winter))	every 2nd Tuesday, check from calendar	+1 669 900 6833 // +1 646 558 8656 // 855 880 1246 (Toll Free) // 877 369 0926 (Toll Free)
Paris (CEST / UTC+1 in the winter (+2 during DST))	every 2nd Tuesday, check from calendar	+33 7 5678 4048 // +33 1 8288 0188 // 805 082 588 (Toll Free)
Beijing (CST / UTC+8)	every 2nd Tuesday, check from calendar	+86 10 87833177 // +86 10 53876330 // 400 616 8835 (Toll Free) // 400 669 9381 (Toll Free)
Tokyo (JST / UTC+9)	every 2nd Tuesday, check from calendar	+81 524 564 439 // +81 3 4578 1488 // 0 800 100 5040 (Toll Free)
Helsinki (EEST / UTC+2 in the winter (+3 during DST))	every 2nd Tuesday, check from calendar	+358 341092129
Delhi (IST // UTC +5:30	every 2nd Tuesday, check from calendar	TODO
Other international numbers	World Time Zone Map	International numbers available: https://zoom.us/u/acyy3hylQi

2024-05-07

Recording: zoom recording

1. Every time: Check rule RC-4 (link) that all L or XL commits of the last two weeks have also new unit tests. This is our policy. **link-to-reviews** (gerrit filter instructions // gerrit t-shirt-sizing).
    a. Last checked on (end of I release)
        i. TODO
2. every second time: Review **code coverage stats** and **blocker code smells**
    a. We take a look at the two links in the beginning of this page: Code coverage reports..
    b. The list below is only working reports // Anybody volunteering to work with LF on making the code coverage CI to work again (there's still the old JVM version)
    c. Thoralf did this last on 2023-12-14 as part of release notes: we did not do this this time
3. Every time: Check if there are new bug reports in JIRA: link
    a. **RIC-1057** gNB unable to connect during high amount of Subscription Requests
    b. **RIC-1056** Crashing e2mgr after sending high amount of Subscription Requests
    c. **RIC-1055** Unrestricted Registration of RMR Routing Information by xApp
    d. **RIC-1054** Kong pod is in crash loopback due to Ingress controller container is not coming up in 1.28 k8s installation- mostly needs kongversion upgrade. Abhijit provided hints.
    e. **RIC-1051** Problems with deploying xAPPs for the Near-RT RIC - RELEASE H&I - **To be checked by Himanshu**
    f. **RIC-1047** crash in E2T metric increment code - **WIP**

g. **RIC-1045** A1 mediator is in crash loopback state for H-Release And I-Release (HCL team can fix) **DONE** (was a mismatch between ric-dep and image versions)
h. RIC-1044 Potential Missing Array Size Checks Leading to Crashes in e2mgr
i. RIC-1043 Crash in E2T buildPrometheusList Function - **WIP**
j. RIC-1042 Can't register xApp
k. RIC-1031 Data model is not compliant with latest A1 spec Naman (planned to start work in next week)
l. RIC-1032 RIC-1035 - we continue with this under RIC-1035 (discussed with Abhijit in the project meeting) Thoralf needs to take next step here (see also Abhijit's comment in RIC-1035 and in review)
m. RIC-1025 memory leak in routing manager
n. RIC-1017 xapp-frame - xapp-frame may not be able to successfully subscribe to messages
o. RIC-1016 e2t sctp_params structure may not be initialized properly Nokia
p. RIC-1015 e2t too High default message size. Nokia
q. RIC-1014 e2t potential race condition in the `listener` function due to multiple `listener` threads. Nokia
r. RIC-1013 e2t e2term pod does not become ready. Possible stack/heap corruption
s. RIC-1002 (Nokia fixes) Abnormal signaling process cause E2Term crash (this could be a security issue) **DONE**
t. RIC-1001 CVE-2023-41627 RMR service should verify route tables - Alexandre will take a look (note that this related to unimplemented feature RIC-1007)
u. RIC-965 RMR wormhole connections uses stale endpoints to make connections
v. RIC-921 fix UT test case in e2mgr to stub time (leftover from review https://gerrit.o-ran-sc.org/r/c/ric-plt/e2mgr/+/8493)
w. RIC-915 dms_cli for installing xapp not working (raised by James)
x. RIC-905 new (from PW) Issue in reporting the CLEAR ALARM as VES EVENT
y. RIC-901 new (from PW) BUG FIX IN 'Get ALARM INFO' NETCONF COMMAND
z. RIC-896 xapps sending same msg type and sub id fails - details to be clarified
aa. RIC-894 long idle period (days) causes RMR connection breaks
ab. RIC-864 xapp-frame-cpp CI does not use Dockerfile and therefore uses Ubuntu18.04 (not 20.04) in build
ac. RIC-857 sporadically RMR takes multiple minutes before being "ready"
ad. RIC-852 Intermittent Issue with E2T: While setting up E2 setup request and response.
ae. RIC-837 RMR is not forwarding messages from E2T to E2M
af. RIC-835 2021-12-07 no news from Viktor
ag. fixed:
4. James: updates?
   a. 2023-11-21
      i. was at OSC-OAI conference
      ii. could start using team accounts to test beds from Colosseum (NU) and ARA
      iii. discussed with Bimo (Taiwan lab) on pair-wise testing
      iv. discussed with John Keeney (non-rt ric ptl) and discussed A1 pairwise testing. Asked from Sunil what's best A1-policy using xApp. None exists on open-src side. Naman commented that for Policy the hello-world xApp (C++ likely) could be used (just requires RMR route for policy type (must match the policy type that is created via curl)). James to contact Naman if help needed.
   b. 2024-01-16: TM-500 in Taiwan lab is again available (discussions with Intel on bringing up L1 and L2). RIC probably not one of the very next steps.
   c. 2023-01-30: O-RAN f-2-f: James asked if any demo planned. not planned.
   d. 2024-02-13: thinking about demos for f-2-f (in discussion with Bimu)
   e. 2024-03-12: No updates. Willing to give demo on ORAN-SC Near RT RIC Demo. Details to be worked on the technical and demo content.
   f. 2024-03-26: Unavailable today.
   g. 2024-04-23:
   h. 2024-05-07: Updated on ORANSC summit. It was well received.
5. Prashant's work in near-RT RIC(subteam-p)
   a. 2023-08-22, 2023-09-26. 2023-11-07: could not participate
   b. 2024-02-13,2024-03-12,2024-03-26,2024-04-09,2024-04-23,2024-05-07: no news
6. Sunil updates (subteam-h)?
   a. 2023-09-12: can give update next time. Maybe 2 or 3 items to work on.
   b. 2023-11-07: Not in the call today
   c. 2023-11-21: no updates. Difficult to find engineers working on this.
   d. 2024-01-16: demo of xApp project additions in I release Next time
   e. 2024-01-16: re-evaluating RIC platform Jira items
   f. 2024-01-30: went through old Jira ticket, initial plan for release J: RIC-950, RIC-926, RIC-878 and RIC-860
   g. 2024-02-13: working on RIC subscription delete testing
   h. 2024-03-12: Implementation completed, facing issues in code submission.
   i. 2024-03-26: Working on **RIC-1049**, documentation will also be made - Done
   j. 2024-03-09: Absent
   k. 2024-04-23: Not much updates.
   l. 2024-05-07: RIC-1045/RIC-1049 /RIC-1052/RIC-837 are completed. RIC-829 needs code commit.
7. Subhash/Naman updates (subteam-s) ?
   a. 2023-12-05: Naman gave an update on status of Samsung items
   b. 2024-01-16: Naman updated readme (still to merged) on how to deploy RIC using operators.
   c. 2024-01-30, 2024-02-13: no news, but still needs to work on RIC-1031
   d. 2024-03-12: RIC-1031 - Needs more time to complete, To start working on A1 mediator integration with Non RealTime RIC
   e. 2024-03-26: Continuing on RIC-1031, Working on RIC-1048 (analysis on RMR scaling, design to be worked upon)
   f. 2024-03-09,2024-04-23,2024-05-07: Not available
8. Abhijit updates (subteam-ag) ?
   a. 2023-10-24:
      i. Abhijit and James release new base image: docker pull nexus3.o-ran-sc.org:10002/o-ran-sc/bldr-ubuntu22-c-go:0.1.0 still to be made 1.0.0 Reminder Abhijit Gadgil
      ii. no progress in review on the plain helm chart based deployment in https://gerrit.o-ran-sc.org/r/c/ric-plt/ric-dep/+/11743 to be merged by Thoralf Czichy
      iii. 1 and 2 of **RIC-1004** still be finailized this week. Rest to be moved to a new item.

iv. Sunil asked about the Rust xApp ready with basic hello world scenario. Documentation is best placed into readme *and* confluence.
   b. 2024-01-16, 2024-01-30: No news.
   c. 2024-02-13: continues work on xapp framework rust, incl. metric support
   d. 2024-03-12: No news.
   e. 2024-03-26: Implementation done , testing pending for **xapp framework rust, incl. metric** support
   f. 2024-03-09: Not available.
   g. 2024-03-23: Interested to work on 1056,1057 in coming weeks, after rust framework is tested. **RIC-1006** done, **RIC-1007** move to K, **RIC-1028**- will be taken up next. To give demo on rust-framework 07-05-2024.
   h. 2024-05-07: RIC-1041 is done. Demo was given for metrics support in xapp-frame-rust that has default RMR Rx/Tx counters.
   i. Video for the demo added.
9. Cap Gemini updates (subteam-cg)?
   a. We agreed to come back to repo creation for phase 2 (ricapp part) of conflict manager in 1H2024
   b. 2024-01-16: Ashish presented the design of conflict manager, first phase: link to slideset
   c. 2024-03-26,2024-03-09,2024-04-23,2024-05-07: unavailable.
10. Himanshu (subteam-gs) would like to work on RIC-963
    a. 2023-12-05: RIC-963 seems to be ready. Himanshu still wants to test this with unordered IEs. Requires a minor addition in ric-dep repo for new config parameter.
    b. 2024-01-16: RIC-963 ready and merged. New review for RIC-1030 for final changes on checking (or not checking) IE order in additional messages.
    c. 2024-03-12: Interested work in open issues that are already assigned. To check RIC-1047, if Dhiraj is not working, length of IE > 1024 in RIC_ACTION_DEFINITION causing some issue. Sandeep is working in it. Issue in submgr. Good to raise JIRA.
    d. 2024-03-26: Assigned **RIC-1043,1044,1047**. Will provide updates next week. length of IE > 1024 in RIC_ACTION_DEFINITION causing issue in submgr - Sandeep to check if Jira needs to be raised. RIC-1051- Himanshu looking into it.
    e. 2024-03-09: No updates on **RIC-1043,1044,1047**. Amit will contribute to this project.
    f. 2024-04-23: Not present
    g. 2024-05-07: RIC-1044 code committed, to be merged.RIC-1047 WIP, issue not reproducible. Possible issue identified, but need to reproduce. e2sim has some dependency on ubuntu 18.04 version(gcc) Issue to be raised for this also. Another Issue : Himanshu to raise issue related to RIC-1052.
11. Dhiraj (subteam-r)
    a. 2023-12-05: moved the IPv6 item to J release
    b. 2024-01-16: approval for changes to be committed now obtained. IPv6-related commits expected over the next weeks.
    c. 2024-01-26, 2024-04-09,2024-04-23: no news.
    d. 2024-05-07: Dhiraj not representing Rakuten anymore.
12. Alexandre (subteam-utfpr)
    a. 2023-08-29: Alexandre working on RIC-989 and RIC-991. Will also take a look at RIC-1001
    b. 2023-09-26: subscription message issue with encoding E2SM parts. A. will send e-mail to Thoralf
    c. 2024-03-12: RIC-989 and RIC-991 closed. RIC-1001 would need support from ric-plt/rtmgr, will send email to Abdulwahid. xapp-frame (C++) changes for xapp registration locally completed. Jira will be raised
    d. 2024-03-26,2024-04-09,2024-04-23: No news.
    e. 2024-05-07: Via mail responded to working on bug fixes in xapp-frame's. xapp-frame-cpp working well, still to make it work on xapp-frame(go) and xapp-frame-py
13. Nokia (subteam-n)
    a. RIC-997 postponed to J
    b. 2024-02-13: Thoralf leaving Nokia/PTL role. Role is open for applications. Nokia nominated Abdulwahid.
14. ORAN-SC half day workshop, San Jose, CA on April 29th - Any volunteers to make on-site demo of NEAR RT RIC - James will take it up.
    a. 2024-03-26: New nomination awaited from TOC.
    b. 2024-04-09: The presentation of NEAR RT RIC would be handled by someone else(not James)
    c. "Analysis of Opensource Near-RT RICs – A comparative study". Mainly, Intern will take the Specs, and analyse the available opensources of Near-RT RICs and prepare a report. I wanted to know your thoughts and interest in mentoring this activity.
15. J release
    a. 2024-02-13: Naman's input
       i. no Jira tickets yet, but woudl like to focus on
          1. K8S operator for day 2 operations, like scale-in and scale-out (but requires some thoughts on messaging) : RIC-1048
    b. I release theme for near-rt RIC was "RIC Platform Enhancements". What's it going to be for J?
       i. Thoralf's proposal based on current Jira list: **"Make the platform more robust in handling E2AP, conflicts and A1"**
    c. We mark items that you are >90% sure (="committed") to work on during 1H2024 with your label, like subteam-n (Nokia), subteam-s (Samsung) and so on. Items that are proposed for J release but not "committed" we mark with subteam-n-proposal, subteam-s-proposal and so on. To ease usage I created a couple of filters for follow up. See §7.3 from Jira usage conventions.
       i. committed (90% sure) and tentative (90...30% sure) items: subteam-n, subteam-h, subteam-p, subteam-s, subteam-utfpr, subteam-ag, subteam-cg, subteam-r, subteam-gs
       ii. committed items only: all teams (committed) and all teams (committed + tentative).
       iii. items that are known to require work, but are currently not in J release: link, to include k8s version upgrade, ubuntu OS version, clean up of pending issues.
    a. input for release candidates: leftovers and generally open items, RSAC
    b. Sprint dates
       i. Sprint J release dev sprint 1: Feb-19 to Mar-10
       ii. Sprint J release dev sprint 2: Mar-11 to Mar-31
       iii. Sprint J release dev sprint 3: Apr-1 to Apr-21
       iv. Sprint J release dev sprint 4: Apr-22 to May-12 (last planned development sprint)
       v. Sprint J release dev sprint 5: May-13 to Jun-2 (only for unplanned last-minute development items)
16. RICAPP agenda: RICAPP Meetings.

2024-04-23

Recording: zoom link

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   c. **RIC-1055** Unrestricted Registration of RMR Routing Information by xApp
   d. **RIC-1054** Kong pod is in crash loopback due to Ingress controller container is not coming up in 1.28 k8s installation
   e. **RIC-1052** Not able to install k8s and helm with Existing Ric installation shell script in document - **Done, still some issues are seen, to further check and report issue.**
   f. **RIC-1051** Problems with deploying xAPPs for the Near-RT RIC - RELEASE H&I - **To be checked by Himanshu**
   g. **RIC-1049** apt repository no longer supports Kubernetes version 1.16.0 in ubuntu 20.04 - **To be assigned to Sunil, duplicate of 1052 (DONE)**
   h. **RIC-1047** crash in E2T metric increment code - **WIP**
   i. **RIC-1045** A1 mediator is in crash loopback state for H-Release And I-Release (HCL team can fix) **DONE** (was a mismatch between ric-dep and image versions)
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   l. RIC-1042 Can't register xApp
   m. RIC-1041 Frequent Pod Eviction in Near-RT RIC Due to Ephemeral-Storage Resource Limitation - Mostly fixed, To be confirmed by Abhijit.
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9. Cap Gemini updates (subteam-cg)?
   a. We agreed to come back to repo creation for phase 2 (ricapp part) of conflict manager in 1H2024
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    d. 2024-03-26,2024-04-09,2024-04-23: No news.

13. Nokia (subteam-n)
    a. RIC-997 postponed to J
    b. 2024-02-13: Thoralf leaving Nokia/PTL role. Role is open for applications. Nokia nominated Abdulwahid.

14. ORAN-SC half day workshop, San Jose, CA on April 29th - Any volunteers to make on-site demo of NEAR RT RIC - James will take it up.
    a. 2024-03-26: New nomination awaited from TOC.
    b. 2024-04-09: The presentation of NEAR RT RIC would be handled by someone else(not James)

15. J release
    a. 2024-02-13: Naman's input
       i. no Jira tickets yet, but woudl like to focus on
          1. K8S operator for day 2 operations, like scale-in and scale-out (but requires some thoughts on messaging) : RIC-1048
    b. I release theme for near-rt RIC was "RIC Platform Enhancements". What's it going to be for J?
       i. Thoralf's proposal based on current Jira list: **"Make the platform more robust in handling E2AP, conflicts and A1"**
    c. We mark items that you are >90% sure (="committed") to work on during 1H2024 with your label, like subteam-n (Nokia), subteam-s (Samsung) and so on. Items that are proposed for J release but not "committed" we mark with subteam-n-proposal, subteam-s-proposal and so on. To ease usage I created a couple of filters for follow up. See §7.3 from Jira usage conventions.
       i. committed (90% sure) and tentative (90...30% sure) items: subteam-n, subteam-h, subteam-p, subteam-s, subteam-utfpr, subteam-ag, subteam-cg, subteam-r, subteam-gs
       ii. committed items only: all teams (committed) and all teams (committed + tentative).
       iii. items that are known to require work, but are currently not in J release: link, to include k8s version upgrade, clean up of pending issues.
    a. input for release candidates: leftovers and generally open items, RSAC
    b. Sprint dates
       i. Sprint J release dev sprint 1: Feb-19 to Mar-10
       ii. Sprint J release dev sprint 2: Mar-11 to Mar-31
       iii. Sprint J release dev sprint 3: Apr-1 to Apr-21
       iv. Sprint J release dev sprint 4: Apr-22 to May-12 (last planned development sprint)

16. RICAPP agenda: RICAPP Meetings.

2024-04-09

Recording: near_rt_ric_09_04-2024.mp4

1. Every time: Check rule RC-4 (link) that all L or XL commits of the last two weeks have also new unit tests. This is our policy. **link-to-reviews** (gerrit filter instructions // gerrit t-shirt-sizing).
    a. Last checked on (end of I release)
        i. TODO
2. every second time: Review **code coverage stats** and **blocker code smells**
    a. We take a look at the two links in the beginning of this page: Code coverage reports..
    b. The list below is only working reports // Anybody volunteering to work with LF on making the code coverage CI to work again (there's still the old JVM version)
    c. Thoralf did this last on 2023-12-14 as part of release notes: we did not do this this time
3. Every time: Check if there are new bug reports in JIRA: link
    a. **RIC-1057** gNB unable to connect during high amount of Subscription Requests
    b. **RIC-1056** Crashing e2mgr after sending high amount of Subscription Requests
    c. **RIC-1055** Unrestricted Registration of RMR Routing Information by xApp
    d. **RIC-1054** Kong pod is in crash loopback due to Ingress controller container is not coming up in 1.28 k8s installation
    e. **RIC-1052** Not able to install k8s and helm with Existing Ric installation shell script in document
    f. **RIC-1051** Problems with deploying xAPPs for the Near-RT RIC - RELEASE H&I - **To be checked by Himanshu**
    g. **RIC-1049** apt repository no longer supports Kubernetes version 1.16.0 in ubuntu 20.04 - **To be assigned to Sunil**
    h. **RIC-1047** crash in E2T metric increment code
    i. **RIC-1045** A1 mediator is in crash loopback state for H-Release And I-Release (HCL team can fix) **DONE** (was a mismatch between ric-dep and image versions)
    j. RIC-1044 Potential Missing Array Size Checks Leading to Crashes in e2mgr
    k. RIC-1043 Crash in E2T buildPrometheusList Function
    l. RIC-1042 Can't register xApp
    m. RIC-1041 Frequent Pod Eviction in Near-RT RIC Due to Ephemeral-Storage Resource Limitation
    n. RIC-1031 Data model is not compliant with latest A1 spec Naman (planned to start work in next week)
    o. RIC-1032 RIC-1035 - we continue with this under RIC-1035 (discussed with Abhijit in the project meeting) Thoralf needs to take next step here (see also Abhijit's comment in RIC-1035 and in review)
    p. RIC-1025 memory leak in routing manager
    q. RIC-1017 xapp-frame - xapp-frame may not be able to successfully subscribe to messages
    r. RIC-1016 e2t sctp_params structure may not be initialized properly Nokia
    s. RIC-1015 e2t too High default message size. Nokia
    t. RIC-1014 e2t potential race condition in the `listener` function due to multiple `listener` threads. Nokia
    u. RIC-1013 e2t e2term pod does not become ready. Possible stack/heap corruption
    v. RIC-1002 (Nokia fixes) Abnormal signaling process cause E2Term crash (this could be a security issue) **DONE**
    w. RIC-1001 CVE-2023-41627 RMR service should verify route tables - Alexandre will take a look (note that this related to unimplemented feature RIC-1007)
    x. RIC-965 RMR wormhole connections uses stale endpoints to make connections
    y. RIC-921 fix UT test case in e2mgr to stub time (leftover from review https://gerrit.o-ran-sc.org/r/c/ric-plt/e2mgr/+/8493)
    z. RIC-915 dms_cli for installing xapp not working (raised by James)
    aa. RIC-905 new (from PW) Issue in reporting the CLEAR ALARM as VES EVENT
    ab. RIC-901 new (from PW) BUG FIX IN 'Get ALARM INFO' NETCONF COMMAND
    ac. RIC-896 xapps sending same msg type and sub id fails - details to be clarified
    ad. RIC-894 long idle period (days) causes RMR connection breaks
    ae. RIC-864 xapp-frame-cpp CI does not use Dockerfile and therefore uses Ubuntu18.04 (not 20.04) in build
    af. RIC-857 sporadically RMR takes multiple minutes before being "ready"
    ag. RIC-852 Intermittent Issue with E2T: While setting up E2 setup request and response.
    ah. RIC-837 RMR is not forwarding messages from E2T to E2M
    ai. RIC-835 2021-12-07 no news from Viktor
    aj. fixed:
4. James: updates?
    a. 2023-11-21
        i. was at OSC-OAI conference
        ii. could start using team accounts to test beds from Colosseum (NU) and ARA
        iii. discussed with Bimo (Taiwan lab) on pair-wise testing
        iv. discussed with John Keeney (non-rt ric ptl) and discussed A1 pairwise testing. Asked from Sunil what's best A1-policy using xApp. None exists on open-src side. Naman commented that for Policy the hello-world xApp (C++ likely) could be used (just requires RMR route for policy type (must match the policy type that is created via curl)). James to contact Naman if help needed.
    b. 2024-01-16: TM-500 in Taiwan lab is again available (discussions with Intel on bringing up L1 and L2). RIC probably not one of the very next steps.
    c. 2023-01-30: O-RAN f-2-f: James asked if any demo planned. not planned.
    d. 2024-02-13: thinking about demos for f-2-f (in discussion with Bimu)
    e. 2024-03-12: No updates. Willing to give demo on ORAN-SC Near RT RIC Demo. Details to be worked on the technical and demo content.
    f. 2024-03-26: Unavailable today.
5. Prashant's work in near-RT RIC(subteam-p)
    a. 2023-08-22, 2023-09-26. 2023-11-07: could not participate
    b. 2024-02-13,2024-03-12,2024-03-26,2024-04-09: no news
6. Sunil updates (subteam-h)?
    a. 2023-09-12: can give update next time. Maybe 2 or 3 items to work on.

b. 2023-11-07: Not in the call today
c. 2023-11-21: no updates. Difficult to find engineers working on this.
d. 2024-01-16: demo of xApp project additions in I release Next time
e. 2024-01-16: re-evaluating RIC platform Jira items
f. 2024-01-30: went through old Jira ticket, initial plan for release J: RIC-950, RIC-926, RIC-878 and RIC-860
g. 2024-02-13: working on RIC subscription delete testing
h. 2024-03-12: Implementation completed, facing issues in code submission.
i. 2024-03-26: Working on **RIC-1049**, documentation will also be made.
j. 2024-03-09: Absent
7. Subhash/Naman updates (subteam-s) ?
    a. 2023-12-05: Naman gave an update on status of Samsung items
    b. 2024-01-16: Naman updated readme (still to merged) on how to deploy RIC using operators.
    c. 2024-01-30, 2024-02-13: no news, but still needs to work on RIC-1031
    d. 2024-03-12: RIC-1031 - Needs more time to complete, To start working on A1 mediator integration with Non RealTime RIC
    e. 2024-03-26: Continuing on RIC-1031, Working on RIC-1048 (analysis on RMR scaling, design to be worked upon)
    f. 2024-03-09: Not available
8. Abhijit updates (subteam-ag) ?
    a. 2023-10-24:
        i. Abhijit and James release new base image: docker pull nexus3.o-ran-sc.org:10002/o-ran-sc/bldr-ubuntu22-c-go:0.1.0 still to be made 1.0.0 Reminder Abhijit Gadgil
        ii. no progress in review on the plain helm chart based deployment in https://gerrit.o-ran-sc.org/r/c/ric-plt/ric-dep/+/11743 to be merged by Thoralf Czichy
        iii. 1 and 2 of **RIC-1004** still be finailized this week. Rest to be moved to a new item.
        iv. Sunil asked about the Rust xApp ready with basic hello world scenario. Documentation is best placed into readme *and* confluence.
    b. 2024-01-16, 2024-01-30: No news.
    c. 2024-02-13: continues work on xapp framework rust, incl. metric support
    d. 2024-03-12: No news.
    e. 2024-03-26: Implementation done , testing pending for **xapp framework rust, incl. metric** support
    f. 2024-03-09: Not available.
9. Cap Gemini updates (subteam-cg)?
    a. We agreed to come back to repo creation for phase 2 (ricapp part) of conflict manager in 1H2024
    b. 2024-01-16: Ashish presented the design of conflict manager, first phase: link to slideset
    c. 2024-03-26,2024-03-09: unavailable.
10. Himanshu (subteam-gs) would like to work on RIC-963
    a. 2023-12-05: RIC-963 seems to be ready. Himanshu still wants to test this with unordered IEs. Requires a minor addition in ric-dep repo for new config parameter.
    b. 2024-01-16: RIC-963 ready and merged. New review for RIC-1030 for final changes on checking (or not checking) IE order in additional messages.
    c. 2024-03-12: Interested work in open issues that are already assigned. To check RIC-1047, if Dhiraj is not working,   length of IE > 1024 in RIC_ACTION_DEFINITION causing some issue. Sandeep is working in it. Issue in submgr. Good to raise JIRA.
    d. 2024-03-26: Assigned **RIC-1043,1044,1047**. Will provide updates next week. length of IE > 1024 in RIC_ACTION_DEFINITION causing issue in submgr - Sandeep to check if Jira needs to be raised. RIC-1051- Himanshu looking into it.
    e. 2024-03-09: No updates on **RIC-1043,1044,1047**. Amit will contribute to this project.
11. Dhiraj (subteam-r)
    a. 2023-12-05: moved the IPv6 item to J release
    b. 2024-01-16: approval for changes to be committed now obtained. IPv6-related commits expected over the next weeks.
    c. 2024-01-26, 2024-04-09: no news.
12. Alexandre (subteam-utfpr)
    a. 2023-08-29: Alexandre working on RIC-989 and RIC-991. Will also take a look at RIC-1001
    b. 2023-09-26: subscription message issue with encoding E2SM parts. A. will send e-mail to Thoralf
    c. 2024-03-12: RIC-989 and RIC-991 closed. RIC-1001 would need support from ric-plt/rtmgr, will send email to Abdulwahid. xapp-frame (C++) changes for xapp registration locally completed. Jira will be raised
    d. 2024-03-26,2024-04-09: No news.
13. Nokia (subteam-n)
    a. RIC-997 postponed to J
    b. 2024-02-13: Thoralf leaving Nokia/PTL role. Role is open for applications. Nokia nominated Abdulwahid.
14. ORAN-SC half day workshop, San Jose, CA on April 29th - Any volunteers to make on-site demo of NEAR RT RIC - James will take it up.
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        iv. Sprint J release dev sprint 4: Apr-22 to May-12 (last planned development sprint)

     v. Sprint J release dev sprint 5: May-13 to Jun-2 (only for unplanned last-minute development items)
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2024-03-26

Recording: link to zoom recording

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2024-03-12

Recording: **link to zoom meeting**

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      i. TODO
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   b. **RIC-1047** crash in E2T metric increment code
   c. **RIC-1045** A1 mediator is in crash loopback state for H-Release And I-Release (HCL team can fix) **DONE** (was a mismatch between ric-dep and image versions)
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   f. RIC-1042 Can't register xApp
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   c. 2023-01-30: O-RAN f-2-f: James asked if any demo planned. not planned.
   d. 2024-02-13: thinking about demos for f-2-f (in discussion with Bimu)
   e. 2024-03-12: No updates. Willing to give demo on ORAN-SC Near RT RIC Demo. Details to be worked on the technical and demo content.
5. Prashant's work in near-RT RIC(subteam-p)
   a. 2023-08-22, 2023-09-26. 2023-11-07: could not participate
   b. 2024-02-13,2024-03-12: no news
6. Sunil updates (subteam-h)?
   a. 2023-09-12: can give update next time. Maybe 2 or 3 items to work on.
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   g. 2024-02-13: working on RIC subscription delete testing
   h. 2024-03-12: Implementation completed, facing issues in code submission.
7. Subhash/Naman updates (subteam-s) ?
   a. 2023-12-05: Naman gave an update on status of Samsung items
   b. 2024-01-16: Naman updated readme (still to merged) on how to deploy RIC using operators.
   c. 2024-01-30, 2024-02-13: no news, but still needs to work on RIC-1031
   d. 2024-03-12: RIC-1031 - Needs more time to complete, To start working on A1 mediator integration with Non RealTime RIC
8. Abhijit updates (subteam-ag) ?
   a. 2023-10-24:

      i. Abhijit and James release new base image: docker pull nexus3.o-ran-sc.org:10002/o-ran-sc/bldr-ubuntu22-c-go:0.1.0 still to be made 1.0.0 Reminder Abhijit Gadgil

      ii. no progress in review on the plain helm chart based deployment in https://gerrit.o-ran-sc.org/r/c/ric-plt/ric-dep/+/11743 to be merged by Thoralf Czichy

      iii. 1 and 2 of RIC-1004 still be finailized this week. Rest to be moved to a new item.

      iv. Sunil asked about the Rust xApp ready with basic hello world scenario. Documentation is best placed into readme *and* conflue nce.

    b. 2024-01-16, 2024-01-30: No news.

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  9. Cap Gemini updates (subteam-cg)?

    a. We agreed to come back to repo creation for phase 2 (ricapp part) of conflict manager in 1H2024

    b. 2024-01-16: Ashish presented the design of conflict manager, first phase: link to slideset

  10. Himanshu (subteam-gs) would like to work on RIC-963

    a. 2023-12-05: RIC-963 seems to be ready. Himanshu still wants to test this with unordered IEs. Requires a minor addition in ric-dep repo for new config parameter.

    b. 2024-01-16: RIC-963 ready and merged. New review for RIC-1030 for final changes on checking (or not checking) IE order in additional messages.

    c. 2024-03-12: Interested work in open issues that are already assigned. To check RIC-1047, if Dhiraj is not working, length of IE > 1024 in RIC_ACTION_DEFINITION causing some issue. Sandeep is working in it. Issue in submgr.Good to raise JIRA.

  11. Dhiraj (subteam-r)

    a. 2023-12-05: moved the IPv6 item to J release

    b. 2024-01-16: approval for changes to be committed now obtained. IPv6-related commits expected over the next weeks.

  12. Alexandre (subteam-utfpr)

    a. 2023-08-29: Alexandre working on RIC-989 and RIC-991. Will also take a look at RIC-1001

    b. 2023-09-26: subscription message issue with encoding E2SM parts. A. will send e-mail to Thoralf

    c. 2024-03-12: RIC-989 and RIC-991 closed. RIC-1001 would need support from ric-plt/rtmgr, will send email to Abdulwahid. xapp-frame (C++) changes for xapp registration locally completed. Jira will be raised

  13. Nokia (subteam-n)

    a. RIC-997 postponed to J

    b. 2024-02-13: Thoralf leaving Nokia/PTL role. Role is open for applications. Nokia nominated Abdulwahid.

  14. ORAN-SC half day workshop, San Jose, CA on April 29th - Any volunteers to make on-site demo of NEAR RT RIC - James will take it up.

  15. J release

    a. 2024-02-13: Naman's input

      i. no Jira tickets yet, but woudl like to focus on

        1. K8S operator for day 2 operations, like scale-in and scale-out (but requires some thoughts on messaging) : RIC-1048

    b. I release theme for near-rt RIC was "RIC Platform Enhancements". What's it going to be for J?

      i. Thoralf's proposal based on current Jira list: **"Make the platform more robust in handling E2AP, conflicts and A1"**

    c. We mark items that you are >90% sure (="committed") to work on during 1H2024 with your label, like subteam-n (Nokia), subteam-s (Samsung) and so on. Items that are proposed for J release but not "committed" we mark with subteam-n-proposal, subteam-s-proposal and so on. To ease usage I created a couple of filters for follow up. See §7.3 from Jira usage conventions.

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    a. input for release candidates: leftovers and generally open items, RSAC

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      i. Sprint J release dev sprint 1: Feb-19 to Mar-10

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  2. RICAPP agenda: RICAPP Meetings.

2024-02-13

Recording: link to zoom recording

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    a. Last checked on (end of I release)

      i. TODO

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    a. We take a look at the two links in the beginning of this page: Code coverage reports..

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RIC-997 postponed to J

J release
<ol type="a">
I release theme for near-rt RIC was "RIC Platform Enhancements". What's it going to be for J?
We mark items that you are >90% sure (="committed") to work on during 1H2024 with your label, like subteam-n (Nokia), subteam-s (Samsung) and so on. Items that are proposed for J release but not "committed" we mark with subteam-n-proposal, subteam-s-proposal and so on. To ease usage I created a couple of filters for follow up. See §7.3 from Jira usage conventions.
<ol type="i">
committed (90% sure) and tentative (90...30% sure) items: subteam-n, subteam-h, subteam-p, subteam-s, subteam-utfpr, subteam-ag, subteam-cg, subteam-r, subteam-gs
committed items only: all teams (committed) and all teams (committed + tentative).
items that are known to require work, but are currently not in J release: link

<ol type="a" start="1">
input for release candidates: leftovers and generally open items, RSAC
Sprint dates
<ol type="i">
Sprint J release dev sprint 1: Feb-19 to Mar-10
Sprint J release dev sprint 2: Mar-11 to Mar-31
Sprint J release dev sprint 3: Apr-1 to Apr-21
Sprint J release dev sprint 4: Apr-22 to May-12 (last planned development sprint)
Sprint J release dev sprint 5: May-13 to Jun-2 (only for unplanned last-minute development items)

<ol start="2">
RICAPP agenda: RICAPP Meetings.

2024-01-16

Recording: link to zoom recording

Every time: Check rule RC-4 (link) that all L or XL commits of the last two weeks have also new unit tests. This is our policy. link-to-reviews (gerrit filter instructions // gerrit t-shirt-sizing).
<ol type="a">
Last checked on 2023-09-26
<ol type="i">
TODO

every second time: Review code coverage stats and blocker code smells
<ol type="a">
We take a look at the two links in the beginning of this page: Code coverage reports..
The list below is only working reports // Anybody volunteering to work with LF on making the code coverage CI to work again (there's still the old JVM version)

      c. Thoralf did this last on 2023-12-14 as part of release notes: we did not do this this time
3. Every time: Check if there are new bug reports in JIRA: link
      a. **RIC-1041** Frequent Pod Eviction in Near-RT RIC Due to Ephemeral-Storage Resource Limitation
      b. **RIC-1031** Data model is not compliant with latest A1 spec Naman (planned to start work in next week)
      c. RIC-1032 RIC-1035 - we cpontinue with this under RIC-1035 (discussed with Abhijit in the project meeting)
      d. RIC-1025 memory leak in routing manager
      e. RIC-1017 xapp-frame - xapp-frame may not be able to successfully subscribe to messages
      f. RIC-1016 e2t sctp_params structure may not be initialized properly Nokia
      g. RIC-1015 e2t too High default message size. Nokia
      h. RIC-1014 e2t potential race condition in the `listener` function due to multiple `listener` threads. Nokia
      i. RIC-1013 e2t e2term pod does not become ready. Possible stack/heap corruption
      j. RIC-1002 (Nokia fixes) Abnormal signaling process cause E2Term crash (this could be a security issue)
      k. RIC-1001 **CVE-2023-41627** RMR service should verify route tables - Alexandre will take a look
      l. RIC-991 **CVE-2023-40997** RMR related (not a duplicate) - Alexandre will take a look **DONE**
      m. RIC-989 **CVE-2023-40998** RMR (minor) security issue - Alexandre will take a look **DONE**
      n. RIC-965 RMR wormhole connections uses stale endpoints to make connections
      o. RIC-921 fix UT test case in e2mgr to stub time (leftover from review https://gerrit.o-ran-sc.org/r/c/ric-plt/e2mgr/+/8493)
      p. RIC-915 dms_cli for installing xapp not working (raised by James)
      q. RIC-905 new (from PW) Issue in reporting the CLEAR ALARM as VES EVENT
      r. RIC-901 new (from PW) BUG FIX IN 'Get ALARM INFO' NETCONF COMMAND
      s. RIC-896 xapps sending same msg type and sub id fails - details to be clarified
      t. RIC-894 long idle period (days) causes RMR connection breaks
      u. RIC-864 xapp-frame-cpp CI does not use Dockerfile and therefore uses Ubuntu18.04 (not 20.04) in build
      v. RIC-857 sporadically RMR takes multiple minutes before being "ready"
      w. RIC-852 Intermittent Issue with E2T: While setting up E2 setup request and response.
      x. RIC-837 RMR is not forwarding messages from E2T to E2M
      y. RIC-835 2021-12-07 no news from Viktor
      z. fixed: **RIC-991, RIC-989**
4. James: updates?
      a. ~~2023-09-12: requested from PTLs pair-wise testing. From Near-RT RIC point of view we hope for the non-RT RIC project to initiate testing with A1 mediator standalone version.~~
      b. ~~2023-09-26: This was presented in TOC (See link). Cases relevant for near-RT RIC:~~
         i. ~~ODU-high and near-RT RIC (currently using stub).~~
         ii. ~~near-RT RIC and xApp (KPIMON/bouncer or maybe adding CCC xApp)~~
         iii. ~~near-RT RIC and non-RT RIC (A1) - next step on non-RT RIC side (A1 standalone mediator provided)~~
         iv. ~~James will check with Sunil on issues he has with the test cases~~
         v. ~~ArgoCD used by Taiwan lab in some ONAP SMO case and the engineers there where wondering if something similar could be done with OSC.~~
      c. ~~2023-10-24~~
         i. ~~updates from O-RAN f-2-f:~~
            1. ~~nephio and OAI discussion: Nephio team would like to add RAN components (OAI, OSC, and parts of the OSC SMO (via Seshu) into R2 (~Feb2024)~~
            2. ~~OAI had three demos. One of them is about improving QoE with H release of near-RT RIC using some code copied from KPM and hello world xApps.~~
               a. ~~see demo "oai-osc-ric-demo.mp4" in link and the demo session recording on the O-RAN web site (thoralf todo)~~
               b. ~~more discussion coming at the joint OSC/OAI workshop in Boston~~
            3. ~~session on SCCL did make some progress in that WG10/WG6 understanding improved. Additional discussion scheduled under O-RAN umbrella for Oct-31.~~
         ii. ~~OSFG discussed on the super-wireless footprint (matrial available at O-RAN OSFG)~~
      d. ~~2023-11-07~~
         i. ~~James is working with Taiwan lab on making sure we have good coverage~~
      e. 2023-11-21
         i. was at OSC-OAI conference
         ii. could start using team accounts to test beds from Colosseum (NU) and ARA
         iii. discussed with Bimo (Taiwan lab) on pair-wise testing
         iv. discussed with John Keeney (non-rt ric ptl) and discussed A1 pairwise testing. Asked from Sunil what's best A1-policy using xApp. None exists on open-src side. Naman commented that for Policy the hello-world xApp (C++ likely) could be used (just requires RMR route for policy type (must match the policy type that is created via curl)). James to contact Naman if help needed.
      f. 2024-01-16: TM-500 in Taiwan lab is again available (discussions with Intel on bringing up L1 and L2). RIC probably not one of the very next steps.
5. Prashant's work in near-RT RIC(subteam-p)
      a. 2023-08-22, 2023-09-26. 2023-11-07: could not participate
6. Sunil updates (subteam-h)?
      a. 2023-09-12: can give update next time. Maybe 2 or 3 items to work on.
      b. 2023-11-07: Not in the call today
      c. 2023-11-21: no updates. Difficult to find engineers working on this.
      d. 2024-01-16: demo of xApp project additions in I release Next time
      e. 2024-01-16: re-evaluating RIC platform Jira items
7. Subhash/Naman updates (subteam-s) ?
      a. ~~2023-08-29: no news, other than Naman working on the operator implementation.~~
      b. ~~2023-09-12:~~
         i. ~~We had a meeting with John and Denis on non-rt RIC compatibility. Agreed in fixes for URL and policystatusobject type from integerstring (as per standard) Naman.~~
         ii. ~~Thoralf to figure out a way to start A1 mediator standalone for CI testing~~
            1. ~~Thoralf sent instructions to John DONE~~
         iii. ~~current implementation of /data-delivery URL in A1 - need to check if >1 consumer of EI data (sent by non-RT RIC) works on our side.~~

    iv. ~~Naman also works on the operator implementation~~
   c. ~~2023-09-26:~~
    i. ~~kubernetes operator new repo needed or not?~~
     1. ~~xapp deployment - appmgr or ricdms~~
     2. ~~ric platform - ric-dep (still work in progress) - check if operator can use helm chart defined by Abhijit.~~
    ii. ~~What happened to kserve adapter? Subhash can check.~~
   d. ~~2023-11-07~~
    i. ~~Naman presented his k8s operator work. Naman used Kubebuilder~~
    ii. ~~still working on operator to deploy RIC platform~~
   e. ~~2023-11-21:~~
    i. ~~k8s operator commits - needs to be finalized.~~
   f. 2023-12-05: Naman gave an update on status of Samsung items
   g. 2024-01-16: Naman updated readme (still to merged) on how to deploy RIC using operators.
  8. Abhijit updates (subteam-ag) ?
   a. 2023-10-24:
    i. Abhijit and James release new base image: docker pull nexus3.o-ran-sc.org:10002/o-ran-sc/bldr-ubuntu22-c-go:0.1.0 still to be made 1.0.0 Reminder Abhijit Gadgil
    ii. no progress in review on the plain helm chart based deployment in https://gerrit.o-ran-sc.org/r/c/ric-plt/ric-dep/+/11743 to be merged by Thoralf Czichy
    iii. 1 and 2 of RIC-1004 still be finailized this week. Rest to be moved to a new item.
    iv. Sunil asked about the Rust xApp ready with basic hello world scenario. Documentation is best placed into readme *and* confluence.
   b. 2024-01-16 No news.
  9. Cap Gemini updates (subteam-cg)?
   a. 2023-11-07: after discussions on the topic we would like to proceed with
    i. ~~Phase1: Conflict Manager (running as a platform component) without E2SM parsing which means that Conflict Manager feature will work only for Conflict Aware xApps. Interface between Conflict Aware xApp and Conflict Manager will be gRPC.~~
    ii. ~~Phase2: E2SM xApp support so that the Conflict Manager feature works for Conflict Unaware xApps as well.~~
    iii. discuss-with-Sunil-on-when-and-how-in-terms-of-repo-creation we agreed to come back to this in 1H2024
   b. **2024-01-16: Ashish presented the design of conflict manager, first phase: link to slideset**
 10. Himanshu (subteam-gs) would like to work on RIC-963
   a. ~~2023-08-29: ready for merging once the CI problem (gofmt) is fixed. Can be merged together with a change in the helm chart (ric-dep). Default behavior is "strict order" (as currently). But config value can change to "any order".~~
   b. ~~2023-11-07: addressing review comments of https://gerrit.o-ran-sc.org/r/c/ric-plt/submgr/+/11681 tomorrow. Then we should be able to merge this.~~
   c. ~~2023-11-21: as discussed in teh beginning of the meeting. Review comment still being worked on. Once handled, pls. merge. And wer handle commits as piecemeal small items.~~
   d. 2023-12-05: RIC-963 seems to be ready. Himanshu still wants to test this with unordered IEs. Requires a minor addition in ric-dep repo for new config parameter.
   e. **2024-01-16:** RIC-963 ready and merged. New review for RIC-1030 for final changes on checking (or not checking) IE order in additional messages.
 11. Dhiraj (subteam-r)
   a. 2023-12-05: moved the IPv6 item to J release
   b. 2024-01-16: approval for changes to be commited now obtained. IPv6-related commits expected over teh next weeks.
 12. Alexandre (subteam-utfpr)
   a. 2023-08-29: Alexandre working on RIC-989 and RIC-991. Will also take a look at RIC-1001
   b. 2023-09-26: subscription message issue with encoding E2SM parts. A. will send e-mail to Thoralf
 13. Nokia (subteam-n)
   a. RIC-997 postponed to J
 14. J release
   a. We mark items that you are >90% sure (="committed") to work on during 1H2024 with your label, like subteam-n (Nokia), subteam-s (Samsung) and so on. Items that are proposed for J release but not "committed" we mark with subteam-n-proposal, subteam-s-proposal and so on. To ease usage I created a couple of filters for follow up. See §7.3 from Jira usage conventions.
    i. Example Nokia J release: link
   a. input for release candidates: left ovleft oversers and generally open items, RSAC
   b. Sprint dates
    i. TODO - general timeframe: Jan-June 2024

 1. RICAPP agenda: RICAPP Meetings.

2023-12-19 demo meeting instead of the normal project meeting, same time slot

2023-12-05

Recording: link to zoom recording

1. Every time: Check rule RC-4 (link) that all L or XL commits of the last two weeks have also new unit tests. This is our policy. **link-to-reviews** (gerrit filter instructions // gerrit t-shirt-sizing).
 a. Last checked on 2023-09-26

i. https://gerrit.o-ran-sc.org/r/c/ric-plt/xapp-frame-rust/+/11898 OK (simple alarms, but we created RIC-1028 for a more general test mock framework)
ii. https://gerrit.o-ran-sc.org/r/c/ric-plt/ric-dep/+/11743 OK, since deployment acts as test
iii. https://gerrit.o-ran-sc.org/r/c/ric-plt/ricdms/+/12025 ok, lots of code, but very generic. Naman will try to add test case
iv. https://gerrit.o-ran-sc.org/r/c/ric-plt/ricdms/+/12032 OK, only go.sum file
v. https://gerrit.o-ran-sc.org/r/c/ric-plt/xapp-frame-rust/+/11895 OK (simple alarms, but we created RIC-1028 for a more general test mock framework)

2. every second time: Review **code coverage stats** and **blocker code smells**
   a. We take a look at the two links in the beginning of this page: Code coverage reports..
   b. The list below is only working reports // Anybody volunteering to work with LF on making the code coverage CI to work again (there's still the old JVM version)
   c. Thoralf did this last on 2023-05-23: we did not do this this time
3. Every time: Check if there are new bug reports in JIRA: link
   a. RIC-1025 memory leak in routing manager
   b. RIC-1017 xapp-frame - xapp-frame may not be able to successfully subscribe to messages
   c. RIC-1016 e2t sctp_params structure may not be initialized properly Nokia
   d. RIC-1015 e2t too High default message size. Nokia
   e. RIC-1014 e2t potential race condition in the `listener` function due to multiple `listener` threads. Nokia
   f. RIC-1013 e2t e2term pod does not become ready. Possible stack/heap corruption
   g. RIC-1002 (Nokia fixes) Abnormal signaling process cause E2Term crash (this could be a security issue)
   h. RIC-1001 **CVE-2023-41627** RMR service should verify route tables - Alexandre will take a look
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   j. RIC-989 **CVE-2023-40998** RMR (minor) security issue - Alexandre will take a look
   k. ~~RIC-972 (Naman) URL for A1 mediator to align with spec. CLOSED~~
   l. RIC-965 RMR wormhole connections uses stale endpoints to make connections
   m. RIC-921 fix UT test case in e2mgr to stub time (leftover from review https://gerrit.o-ran-sc.org/r/c/ric-plt/e2mgr/+/8493)
   n. RIC-915 dms_cli for installing xapp not working (raised by James)
   o. RIC-905 new (from PW) Issue in reporting the CLEAR ALARM as VES EVENT
   p. RIC-901 new (from PW) BUG FIX IN 'Get ALARM INFO' NETCONF COMMAND
   q. RIC-896 xapps sending same msg type and sub id fails - details to be clarified
   r. RIC-894 long idle period (days) causes RMR connection breaks
   s. RIC-864 xapp-frame-cpp CI does not use Dockerfile and therefore uses Ubuntu18.04 (not 20.04) in build
   t. RIC-857 sporadically RMR takes multiple minutes before being "ready"
   u. RIC-852 Intermittent Issue with E2T: While setting up E2 setup request and response.
      i. 2021-12-21: Trying to get bandwidth for this during F release.
   v. RIC-837 RMR is not forwarding messages from E2T to E2M
   w. RIC-835 2021-12-07 no news from Viktor
   x. fixed:
4. James: updates?
   a. 2023-09-12: requested from PTLs pair-wise testing. From Near-RT RIC point of view we hope for the non-RT RIC project to initiate testing with A1 mediator standalone version.
   b. 2023-09-26: This was presented in TOC (See link). Cases relevant for near-RT RIC:
      i. ODU-high and near-RT RIC (currently using stub).
      ii. near-RT RIC and xApp (KPIMON/bouncer or maybe adding CCC xApp)
      iii. near-RT RIC and non-RT RIC (A1) - next step on non-RT RIC side (A1 standalone mediator provided)
      iv. James will check with Sunil on issues he has with the test cases
      v. ArgoCD used by Taiwan lab in some ONAP SMO case and the engineers there where wondering if something similar could be done with OSC.
   c. 2023-10-24
      i. updates from O-RAN f-2-f:
         1. nephio and OAI discussion: Nephio team would like to add RAN components (OAI, OSC, and parts of the OSC SMO (via Seshu) into R2 (~Feb2024)
         2. OAI had three demos. One of them is about improving QoE with H release of near-RT RIC using some code copied from KPM and hello world xApps.
            a. see demo "oai-osc-ric-demo.mp4" in link and the demo session recording on the O-RAN web site (thoralf-todo)
            b. more discussion coming at the joint OSC/OAI workshop in Boston
         3. session on SCCL did make some progress in that WG10/WG6 understanding improved. Additional discussion scheduled under O-RAN umbrella for Oct-31.
      ii. OSFG discussed on the super wireless footprint (matrial available at O-RAN OSFG)
   d. 2023-11-07
      i. James is working with Taiwan lab on making sure we have good coverage
   e. 2023-11-21
      i. was at OSC-OAI conference
      ii. could start using team accounts to test beds from Colosseum (NU) and ARA
      iii. discussed with Bimo (Taiwan lab) on pair-wise testing
      iv. discussed with John Keeney (non-rt ric ptl) and discussed A1 pairwise testing. Asked from Sunil what's best A1-policy using xApp. None exists on open-src side. Naman commented that for Policy the hello-world xApp (C++ likely) could be used (just requires RMR route for policy type (must match the policy type that is created via curl)). James to contact Naman if help needed.
5. Prashant's work in near-RT RIC(subteam-p)
   a. 2023-08-22, 2023-09-26. 2023-11-07: could not participate
   b. 2024-01-16
6. Sunil updates (subteam-h)?
   a. 2023-09-12: can give update next time. Maybe 2 or 3 items to work on.
   b. 2023-11-07: Not in the call today
   c. 2023-11-21: no updates. Difficult to find engineers working on this.
   d. 2024-01-16: no news. Wants to re-valuate tickets (earlier assigned to HCL).
7. Subhash/Naman updates (subteam-s) ?

a. 2023-08-29: no news, other than Naman working on the operator implementation.
b. 2023-09-12:
   i. We had a meeting with John and Denis on non-rt RIC compatibility. Agreed in fixes for URL and policystatusobject type from integerstring (as per standard) Naman.
   ii. Thoralf to figure out a way to start A1 mediator standalone for CI testing
      1. Thoralf sent instructions to John DONE
   iii. current implementation of /data-delivery URL in A1 - need to check if >1 consumer of EI data (sent by non-RT RIC) works on our side.
   iv. Naman also works on the operator implementation
c. 2023-09-26:
   i. kubernetes operator new repo needed or not?
      1. xapp deployment appmgr or ricdms
      2. ric platform ric-dep (still work in progress) - check if operator can use helm chart defined by Abhijit.
   ii. What happened to kserve adapter? Subhash can check.
d. 2023-11-07
   i. Naman presented his k8s operator work. Naman used Kubebuilder
   ii. still working on operator to deploy RIC platform
e. 2023-11-21:
   i. k8s operator commits - needs to be finalized.
f. 2023-12-05: Naman gave an update on status of Samsung items

8. Abhijit updates (subteam-ag) ?
   a. 2023-10-24:
      i. Abhijit and James release new base image: docker pull nexus3.o-ran-sc.org:10002/o-ran-sc/bldr-ubuntu22-c-go:0.1.0 still to be made 1.0.0 Reminder Abhijit Gadgil
      ii. no progress in review on the plain helm chart based deployment in https://gerrit.o-ran-sc.org/r/c/ric-plt/ric-dep/+/11743 to be merged by Thoralf Czichy
      iii. ~~Abhijit raise RIC-1013 ... RIC-1017 for issues he has discovered. Thoralf to find someone to work on it most assigned to Nokia~~
      iv. 1 and 2 of RIC-1004 still be finailized this week. Rest to be moved to a new item.
      v. Sunil asked about the Rust xApp ready with basic hello world scenario. Documentation is best placed into readme *and* confluence.

9. Cap Gemini updates (subteam-cg)?
   a. 2023-11-07: after discussions on the topic we would like to proceed with
      i. Phase1: Conflict Manager (running as a platform component) without E2SM parsing which means that Conflict Manager feature will work only for Conflict Aware xApps. Interface between Conflict Aware xApp and Conflict Manager will be gRPC.
      ii. Phase2: E2SM xApp support so that the Conflict Manager feature works for Conflict Unaware xApps as well.
      iii. discuss-with-Sunil-on-when-and-how-in-terms-of-repo-creation we agreed to come back to this in 1H2024
      iv. TODO-thoralf-to-ask-Gunja-to-present- Thoralf

10. Himanshu (subteam-gs) would like to work on RIC-963
    a. 2023-08-29: ready for merging once the CI problem (gofmt) is fixed. Can be merged together with a change in the helm chart (ric-dep). Default behavior is "strict order" (as currently). But config value can change to "any order".
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    c. 2023-11-21: as discussed in teh beginning of the meeting. Review comment still being worked on. Once handled, pls. merge. And wer handle commits as piecemeal small items.
    d. 2023-12-05: RIC-963 seems to be ready. Himanshu still wants to test this with unordered IEs. Requires a minor addition in ric-dep repo for new config parameter.

11. Dhiraj (subteam-r)
    a. ~~2023-08-22:~~
       i. ~~checking compliance/license issues~~
       ii. ~~How are policy types created? xApps register by policy type and understands the schema that is bound to it. Non-RT RIC should create policies using the same schema (there's a GUI for this on non-RT RIC side).~~
    b. ~~2023-08-29:~~
       i. ~~got clarity on license issues and now waiting for internal approval before publishing ipv6 releated changes~~
    c. ~~2023-11-07~~

       i. ~~license topic still be discussed. Was working on an other project for last months~~
    d. 2023-12-05: moved the IPv6 item to J release

12. Alexandre (subteam-utfpr)
    a. 2023-08-29: Alexandre working on RIC-989 and RIC-991. Will also take a look at RIC-1001
    b. 2023-09-26: subscription message issue with encoding E2SM parts. A. will send e-mail to Thoralf

13. Nokia (subteam-n)
    a. RIC-997 postponed to J

14. Demo
    a. We will use the project meeting slot for the demos
    b. Naman to demo k8s operator deployment of platform (xapp part already done) and also A1 creating a policy.
    c. Adding support for DU in E2T/E2M/RNIB - >thoralf can do if not Gunja.

15. I release content
    a. we mark items that you are >90% sure (="committed") to work on during 2H2023 with your label, like subteam-n (Nokia), subteam-s (Samsung) and so on. Items that are proposed for I release but not "committed" we mark with subteam-n-proposal, subteam-s-proposal and so on. To ease usage I created a couple of filters for follow up. See §7.3 from Jira usage conventions.

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    b. Sprint dates
       i. Sprint I release dev sprint 1: Aug-21 to Sep-10
       ii. Sprint I release dev sprint 2: Sep-11 to Oct-1
       iii. Sprint I release dev sprint 3: Oct-2 to Oct-22
       iv. Sprint I release dev sprint 4: Oct-23 to Nov-12 (last planned development sprint)
       v. Sprint I release dev sprint 5: Nov-13 to Dec-3 (only for unplanned last-minute development items)
    c. Plan (v03 as of 2023-08-18):
       i. I release plan moved to I release page.

    ii. Thoralf will start generating images next week (Dec-11 - Dec-13)
 2. RICAPP agenda: RICAPP Meetings.

2023-11-21

Recording: link to zoom recording

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    i. TODO
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   i. RIC-991 RMR related (not a duplicate) - Alexandre will take a look
   j. RIC-989 RMR (minor) security issue - Alexandre will take a look
   k. ~~RIC-972 (Naman) URL for A1 mediator to align with spec. CLOSED~~
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   o. RIC-905 new (from PW) Issue in reporting the CLEAR ALARM as VES EVENT
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   q. RIC-896 xapps sending same msg type and sub id fails - details to be clarified
   r. RIC-894 long idle period (days) causes RMR connection breaks
   s. RIC-864 xapp-frame-cpp CI does not use Dockerfile and therefore uses Ubuntu18.04 (not 20.04) in build
   t. RIC-857 sporadically RMR takes multiple minutes before being "ready"
   u. RIC-852 Intermittent Issue with E2T: While setting up E2 setup request and response.
    i. 2021-12-21: Trying to get bandwidth for this during F release.
   v. RIC-837 RMR is not forwarding messages from E2T to E2M
   w. RIC-835 2021-12-07 no news from Viktor
   x. fixed:
 4. James: updates?
   a. ~~2023-09-12: requested from PTLs pair-wise testing. From Near-RT RIC point of view we hope for the non-RT RIC project to initiate testing with A1 mediator standalone version.~~
   b. ~~2023-09-26: This was presented in TOC (See link). Cases relevant for near-RT RIC:~~
    i. ~~ODU high and near-RT RIC (currently using stub).~~
    ii. ~~near-RT RIC and xApp (KPIMON/bouncer or maybe adding CCC xApp)~~
    iii. ~~near-RT RIC and non-RT RIC (A1) - next step on non-RT RIC side (A1 standalone mediator provided)~~
    iv. ~~James will check with Sunil on issues he has with the test cases~~
    v. ~~ArgoCD used by Taiwan lab in some ONAP SMO case and the engineers there where wondering if something similar could be done with OSC.~~
   c. ~~2023-10-24~~
    i. ~~updates from O-RAN f-2-f:~~
     1. ~~nephio and OAI discussion: Nephio team would like to add RAN components (OAI, OSC, and parts of the OSC SMO (via Seshu) into R2 (~Feb2024)~~
     2. ~~OAI had three demos. One of them is about improving QoE with H release of near-RT RIC using some code copied from KPM and hello world xApps.~~
      a. ~~see demo "oai-osc-ric-demo.mp4" in link and the demo session recording on the O-RAN web site (thoralf-todo)~~
      b. ~~more discussion coming at the joint OSC/OAI workshop in Boston~~
     3. ~~session on SCCL did make some progress in that WG10/WG6 understanding improved. Additional discussion scheduled under O-RAN umbrella for Oct-31.~~
    ii. ~~OSFG discussed on the super wireless footprint (matrial available at O-RAN OSFG)~~
   d. ~~2023-11-07~~
    i. ~~James is working with Taiwan lab on making sure we have good coverage~~
   e. 2023-11-21
    i. was at OSC-OAI conference
    ii. could start using team accounts to test beds from Colosseum (NU) and ARA
    iii. discussed with Bimo (Taiwan lab) on pair-wise testing
    iv. discussed with John Keeney (non-rt ric ptl) and discussed A1 pairwise testing. Asked from Sunil what's best A1-policy using xApp. None exists on open-src side. Naman commented that for Policy the hello-world xApp (C++ likely) could be used (just requires RMR route for policy type (must match the policy type that is created via curl)). James to contact Naman if help needed.
 5. Prashant's work in near-RT RIC(subteam-p)
   a. 2023-08-22, 2023-09-26. 2023-11-07: could not participate
 6. Sunil updates (subteam-h)?

a. ~~2023-09-12: can give update next time. Maybe 2 or 3 items to work on.~~
b. ~~2023-11-07: Not in the call today~~
c. 2023-11-21: no updates. Difficult to find engineers working on this.

7. Subhash/Naman updates (subteam-s) ?
   a. ~~2023-08-29: no news, other than Naman working on the operator implementation.~~
   b. ~~2023-09-12:~~
      i. ~~We had a meeting with John and Denis on non-rt RIC compatibility. Agreed in fixes for URL and policystatusobject type from integerstring (as per standard) Naman.~~
      ii. ~~Thoralf to figure out a way to start A1 mediator standalone for CI testing~~
         1. ~~Thoralf sent instructions to John DONE~~
      iii. ~~current implementation of /data-delivery URL in A1 - need to check if >1 consumer of EI data (sent by non-RT RIC) works on our side.~~
      iv. ~~Naman also works on the operator implementation~~
   c. ~~2023-09-26:~~
      i. ~~kubernetes operator new repo needed or not?~~
         1. ~~xapp deployment appmgr or ricdms~~
         2. ~~ric platform ric-dep (still work in progress) - check if operator can use helm chart defined by Abhijit.~~
      ii. ~~What happened to kserve adapter? Subhash can check.~~
   d. ~~2023-11-07~~
      i. ~~Naman presented his k8s operator work. Naman used Kubebuilder~~
      ii. ~~still working on operator to deploy RIC platform~~
   e. 2023-11-21:
      i. k8s operator commits - needs to be finalized.

8. Abhijit updates (subteam-ag) ?
   a. 2023-10-24:
      i. Abhijit and James release new base image: docker pull nexus3.o-ran-sc.org:10002/o-ran-sc/bldr-ubuntu22-c-go:0.1.0 still to be made 1.0.0 Reminder Abhijit Gadgil
      ii. no progress in review on the plain helm chart based deployment in https://gerrit.o-ran-sc.org/r/c/ric-plt/ric-dep/+/11743 to be merged by Thoralf Czichy
      iii. ~~Abhijit raise RIC-1013 ... RIC-1017 for issues he has discovered. Thoralf to find someone to work on it most assigned to Nokia~~
      iv. 1 and 2 of RIC-1004 still be finailized this week. Rest to be moved to a new item.
      v. Sunil asked about the Rust xApp ready with basic hello world scenario. Documentation is best placed into readme *and* conflue nce.

9. Cap Gemini updates (subteam-cg)?
   a. 2023-11-07: after discussions on the topic we would like to proceed with
      i. Phase1: Conflict Manager (running as a platform component) without E2SM parsing which means that Conflict Manager feature will work only for Conflict Aware xApps. Interface between Conflict Aware xApp and Conflict Manager will be gRPC.
      ii. Phase2: E2SM xApp support so that the Conflict Manager feature works for Conflict Unaware xApps as well.
      iii. discuss-with-Sunil-on-when-and-how-in-terms-of-repo-creation we agreed to come back to this in 1H2024
      iv. TODO-thoralf-to-ask-Gunja-to-present- Thoralf

10. Himanshu (subteam-gs) would like to work on RIC-963
    a. 2023-08-29: ready for merging once the CI problem (gofmt) is fixed. Can be merged together with a change in the helm chart (ric-dep). Default behavior is "strict order" (as currently). But config value can change to "any order".
    b. 2023-11-07: addressing review comments of https://gerrit.o-ran-sc.org/r/c/ric-plt/submgr/+/11681 tomorrow. Then we should be able to merge this.
    c. 2023-11-21: as discussed in the beginning of the meeting. Review comment still being worked on. Once handled, pls. merge. And wer handle commits as piecemeal small items.

11. Dhiraj (subteam-r)
    a. ~~2023-08-22:~~
       i. ~~checking compliance/license issues~~
       ii. ~~How are policy types created? xApps register by policy type and understands the schema that is bound to it. Non-RT RIC should create policies using the same schema (there's a GUI for this on non-RT RIC side).~~
    b. ~~2023-08-29:~~
       i. ~~got clarity on license issues and now waiting for internal approval before publishing ipv6 releated changes~~
    c. 2023-11-07

       i. license topic still be discussed. Was working on an other project for last months

12. Alexandre (subteam-utfpr)
    a. 2023-08-29: Alexandre working on RIC-989 and RIC-991. Will also take a look at RIC-1001
    b. 2023-09-26: subscription message issue with encoding E2SM parts. A. will send e-mail to Thoralf

13. Nokia (subteam-n)
    a. .RIC-997 likely being postponed.

14. I release content

    a. we mark items that you are >90% sure (="committed") to work on during 2H2023 with your label, like subteam-n (Nokia), subteam-s (Samsung) and so on. Items that are proposed for I release but not "committed" we mark with subteam-n-proposal, subteam-s-proposal and so on. To ease usage I created a couple of filters for follow up. See §7.3 from Jira usage conventions.
    b. input for release candidates: left overs and generally open items, RSAC
    c. Sprint dates
       i. Sprint I release dev sprint 1: Aug-21 to Sep-10
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       iii. Sprint I release dev sprint 3: Oct-2 to Oct-22
       iv. Sprint I release dev sprint 4: Oct-23 to Nov-12 (last planned development sprint)
       v. Sprint I release dev sprint 5: Nov-13 to Dec-3 (only for unplanned last-minute development items)
    d. Plan (v03 as of 2023-08-18):
       i. I release plan moved to I release page.
       i.

2. RICAPP agenda: RICAPP Meetings.

2023-11-07

Recording: link to zoom recording

1. Every time: Check rule RC-4 (link) that all L or XL commits of the last two weeks have also new unit tests. This is our policy. **link-to-reviews** (gerrit filter instructions // gerrit t-shirt-sizing).
   a. Last checked on 2023-09-26
      i. https://gerrit.o-ran-sc.org/r/c/ric-plt/submgr/+/11681 ok, (not yet merged)
      ii. https://gerrit.o-ran-sc.org/r/c/ric-plt/a1/+/11889 ok. included test cases
      iii. https://gerrit.o-ran-sc.org/r/c/ric-plt/ricdms/+/11999 actually small changes, but as this is generated code, no need for test cases. Actually hand-written code is coming in another review together with test code.
2. every second time: Review **code coverage stats** and **blocker code smells**
   a. We take a look at the two links in the beginning of this page: Code coverage reports..
   b. The list below is only working reports // Anybody volunteering to work with LF on making the code coverage CI to work again (there's still the old JVM version)
   c. Thoralf did this last on 2023-05-23: we did not do this this time
3. Every time: Check if there are new bug reports in JIRA: link
   a. RIC-1017 xapp-frame - xapp-frame may not be able to successfully subscribe to messages
   b. RIC-1016 e2t sctp_params structure may not be initialized properly Nokia
   c. RIC-1015 e2t too High default message size. Nokia
   d. RIC-1014 e2t potential race condition in the `listener` function due to multiple `listener` threads. Nokia
   e. RIC-1013 e2t e2term pod does not become ready. Possible stack/heap corruption
   f. ~~RIC-1009 E2Mgr API can be improperly invoked TODO thoralf converted this to Epic~~
   g. RIC-1002 (Nokia fixes) Abnormal signaling process cause E2Term crash (this could be a security issue)
   h. RIC-1001 RMR service should verify route tables - Alexandre will take a look
   i. RIC-991 RMR related (not a duplicate) - Alexandre will take a look
   j. RIC-989 RMR (minor) security issue - Alexandre will take a look
   k. ~~RIC-972 (Naman) URL for A1 mediator to align with spec. CLOSED~~
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Older meeting minutes

check from here: Project meetings (old)