

Notes on the Technical Priorities (Release 3)

UNDER THE OPEN RAN MOU

by Deutsche Telekom, Orange, Telefónica, TIM and Vodafone

This document has been released together with the third release of technical priorities by the signatories of the Open RAN MoU. Its purpose is to summarize supplementary notes on the priorities and the content of the technical priority updates for the reader's better understanding.

1. Treatment of MoU technical releases

Note this third release of technical priorities covers all the Open RAN MoU technical releases, i.e., MoU Releases R1, R2 and R3. For more details on the structure of the three Open RAN MoU technical releases, please refer to the "Notes on the Technical Priorities (Release 2)".

2. Perception of technical priorities

Technical priorities published by the MoU signatories are those that the signatories consider priorities for Open RAN solutions. The technical priorities (i) serve as guidance to the RAN supplier industry on where they can focus to accelerate market deployments in Europe, focusing on commercial product availability in the short term, and solution development in the medium term, and (ii) are intended to act as an input into TIP's OpenRAN Release Framework, which can then be developed with the industry at large to create requirements that can potentially be used as the basis for certification, promoting an efficient supply chain.

As noted above, the technical priorities simply act as guidance on priority and do not represent any alignment on procurement. The signatories welcome and expect competition between suppliers to drive innovation and the development of solutions with greater performance than those described in the technical priorities. Individual signatories are free to and may well demand more stringent requirements in their own product selection processes than those set out in the requirements.

3. Release notes

The third release of the technical priorities has primarily focused on developing further requirements on SMO and RIC while other areas have been significantly enhanced such as Cloud Infrastructure, O-CU/O-DU and O-RU.

Moreover, this new release focuses in more detail on security topics and various challenges introduced by the disaggregation promoted by the O-RAN architecture. In particular, the security requirements are now contained within a dedicated section of the MoU Technical Priorities document.

Energy efficiency (EE) topics were also analyzed in more detail, with new requirements identified in various streams, e.g., Cloud Infrastructure, O-CU/O-DU, RIC use cases and RAN features. A release note on EE is also expected to be published in the near future with focus on test & measurement methodology for comparing Open RAN solutions with legacy ones. Again, with the aim that industry can take this forward and work together to develop a common approach to improve efficiency and comparisons.

This third release embraces 3 documents:

- The present “umbrella” document, describing the mapping of the technical requirements to the 3 MoU releases and giving a brief summary of the content
- The Security Summary
- The full Technical Priority Document in Excel format

The Security summary provides an overview of the included security requirements, based on the security requirements that were present in the previous release, augmented with new requirements coming from the latest O-RAN Alliance specifications (November 2022). The complete set of security requirements was then consolidated and rationalized.

The full Technical Priority Document provides an update of the second release document (released in March, 2022), covering both updated and additional requirements. Note that a naming convention is introduced in this third release to facilitate the unique identification of requirements between different releases and among the various streams (details provided in the Technical Priority Document).

While all areas have been revisited, the most significant updates have been performed in the following areas:

- The SMO has taken charge of defining more precise requirements regarding Non RT RIC (completing AI/ML related requirements), previously taken over by the RIC stream. More requirements added on Conflict Management and Software License Management. Moreover, the SMO-internal architecture has been updated wrt AI/ML framework.
- The RIC stream has focused on Near RT RIC features and E2E RIC use cases, while Non RT RIC related requirements have been moved to SMO stream. More detailed requirements have been introduced concerning the E2 functionalities, mainly focused on E2 service models, and Open API related requirements have been added in order to allow to xApp to exploit functionalities of Near RT RIC platform. Moreover, conflict mitigation requirements have been extended and O2 related requirement has been added. Concerning the End2End Use Cases, the Energy Efficiency use case has been updated and split among 4 different use cases defined in O-RAN alliance.
- Cloud Infrastructure, with enhanced requirements on O-Cloud Life Cycle Management, O-Cloud Scalability, High Availability, ORAN compliance Notification Subscription, and Energy Efficiency.
- RAN Software, with several new requirements on feature enhancements from 3GPP Release 16 and 17.
- O-RU, with the addition of new radio products (new bands of interest, hybrid antennas, etc.).
- O-DU/O-CU with new requirements on L1 hardware acceleration architecture (look-aside/ inline configuration), CPU power state configuration for O-DU/O-CU server power consumption optimization and lifecycle requirements for hardware purchase, duration and mixed generation support.