

Radio Edge Cloud (REC)

The Radio Edge Cloud blueprint is member of the Telco Appliance blueprint family which is designed to provide a fully integration tested appliance tuned to meet the requirements of the RAN Intelligent Controller (RIC). When complete it will include automated configuration and integration testing from the below the OS up through RIC (from <https://gerrit.oran-osc.org/r/#/admin/projects/>). As a member of the Telco Appliance blueprint family it shares many hardware and software components, including installation, configuration management and APIs with other family members. Each family member will be a separate appliance with a close family resemblance to its siblings.

Key Attributes

- Specific hardware configuration that are automatically tested via continuous deployment automation. Multiple hardware variations may be tested in parallel, but each tested configuration will be fully specified and reproducible.
- Specific pre-boot software (e.g. firmware/BIOS) will be specified as part of the CD tested configuration
- Reproducible software installation and configuration - an opinionated deployer will allow deployment of large numbers of sites with versioning that is traceable back to automated CD testing
- Modular building blocks assembled and tested (via CD automation) to ensure a guaranteed level of performance of the target application (RAN Intelligent Controller) while allowing other members of the family to assemble and tune the same modular building blocks to other target applications
- May be extended in the future to integrate RIC+other application, but still in an appliance with tested/guaranteed performance of the combined application set

Code

- The majority of the REC code is actually supplied by the Telco Appliance blueprint family and may be found in Gerrit in the ta/* repositories here: <https://gerrit.akraino.org/r/admin/repos/q/filter:ta>
- An overview of these repositories with explanations of what is in each is available in [Gerrit Code Repository Overview](#)

Target Hardware

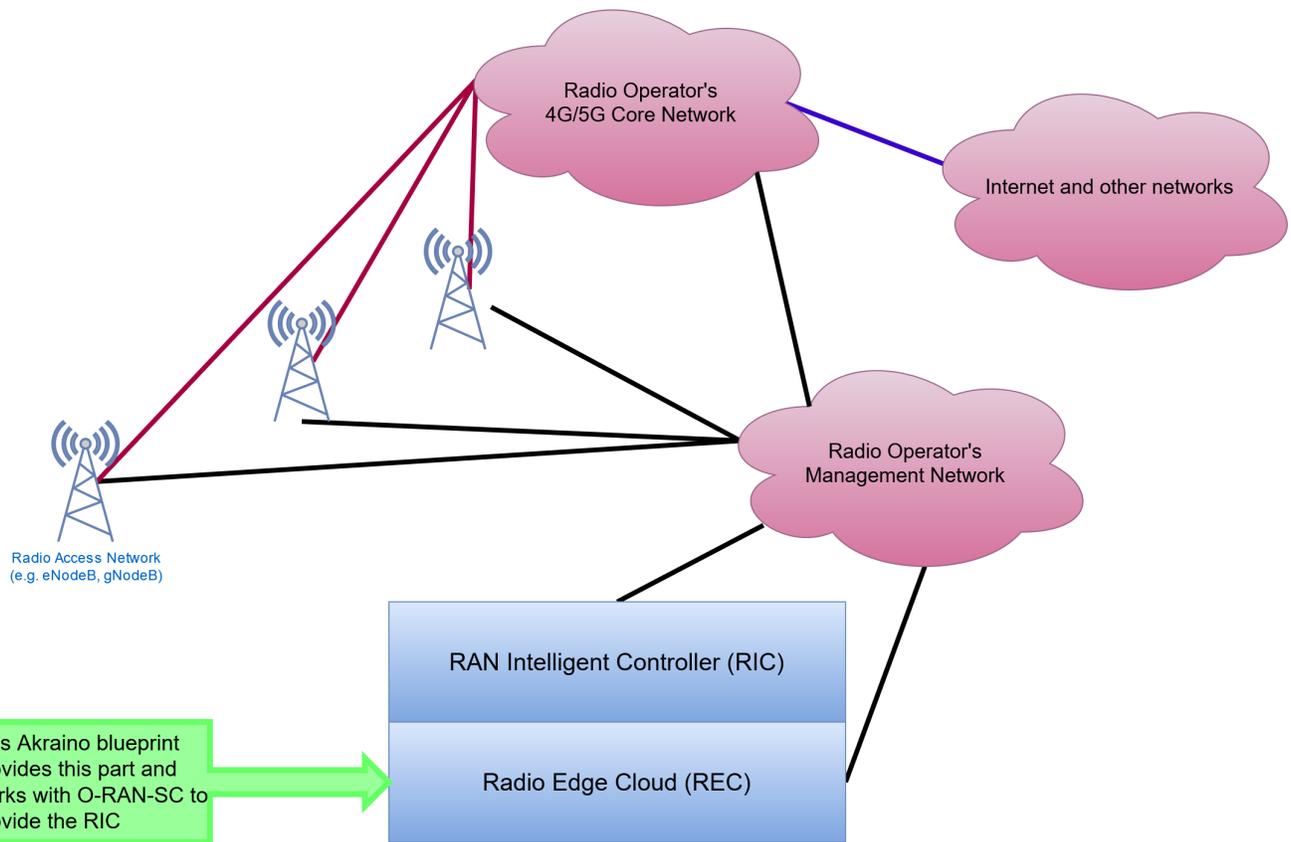
Radio Edge Cloud is intended as a bare metal deployment system, so it does hardware detection using the code in the Hardware Detector repository ([ta/hw-detector \(tree view\)](#)) and therefore may need updates in order to support hardware other than what the active blueprint contributors are using. Such contributions are welcome, but it is worth knowing that the primary contributors are doing all testing on the hardware described in [Radio Edge Cloud Validation Lab](#) and [Radio Edge Cloud Validation Lab \(ARM64\)](#) so these are what we have the most experience with. The [REC Installation Guide](#) does provide some information on installing on other hardware and we welcome contributions to either the installation guide or the hardware detector repository if there is an interest in improving support for other hardware.

Child Pages

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Objective and Context of REC Blueprint

The goal of the REC blueprint is to eventually perform fully automated bare metal deployment of the RIC. Currently The RIC must be installed on top of the REC after the REC's automated installation completes. In order to be useful, the RIC requires a 4G and/or 5G RAN that supports the O-RAN specified interfaces that are used by the RIC. The REC is intended to be deployed into a radio operator's management network with connectivity to the operator's eNodeB/gNodeB radios. The RIC provides a platform as a service environment for running "xApps" which interact with the radios to control them in useful and intelligent ways. For more details about the RIC and xApps refer to O-RAN and the O-RAN Software Community documentation.



Historical Information

Original Proposal Presentation:

