

O-RAN Component Names

Table of Contents

- [Scope](#)
- [Naming Convention](#)
- [Instance Diagram](#)

Scope

Even in smaller RAN networks, it is quite confusion when description and discussing issues when there is no clear naming conventions are assigned.

This page **proposes** a naming conventions to serve the **O-RAN-SC use cases**.

Naming Convention

The O-RAN Architecture defines a hierarchy of components. This hierarchy should be reflected in the component names. Typically a distinguish name can be used. The drawback of such distinguish names is, that those become very long within a hierarchy. To shorten the names the O-RAN Component name concatenated with a local identifier compared it its hierarchy level could be used.

Example:

O-RU-12123

"O-RU" is the O-RAN Component Name.

The "identifier" 12123 is a combination of the local-ids in the hierarchy.

- **1** -> SMO #**1**
- **12** . . . -> Near-RT-RC #**2**
- **121** . . -> O-CU #**1**
- **1212** . -> O-DU #**2**
- **12123** -> O-RU #**3**

Note: Obviously this naming conventions has its limitation but should be able to server O-RAN-SC use cases. In more complex scenarios more complex rules must be applied.

Instance Diagram

The following diagram show O-RAN component instances with the following patter:

- 2x Near-RT-RICs are assigned to the SMO
- each Near-RT-RIC controls 2 logical O-CUs which are disaggregated into O-CU-UP and O-CU-CP.
- each logical O-CU has F1 interfaces to 2x O-DU and
- each O-DU controls 3x O-RUs.

The blue associations describe the OAM related traffic in a hybrid O-RAN architecture.

- OpenFronthaul M-Plane from O-RUs to the SMO
- O1 from all other O-RAN components to the SMO

