could be virtualized in software form (e.g., virtual machine (VM)-based, etc.), or could be in physical hardware form (e.g., non-VM based, etc.) Accordingly, O-RAN disaggregates the RAN functions into different entities, such as a central unit (CU), a distributed unit (DU), and a radio unit (RU). Since these entities have open protocols and interfaces between them, they can be developed by different vendors.

SUMMARY

[0006] Example embodiments of the present disclosure provide systems, apparatuses, methods, and the like, that facilitate the provisioning of one or more energy-saving policies of the O-RAN.

[0006a] According to an aspect, the present disclosure refers to a system comprising:

a non-real-time (Non-RT) radio access network intelligent controller (RIC) configured to:

obtain a policy schema;

generate, based on the policy schema, at least one energy-saving policy for execution by a near-real-time (Near-RT) RIC, wherein the at least one energy-saving policy comprises at least one policy scope identifier specifying at least one node to which the energy-saving policy is applied, at least one policy objective specifying an energy-saving target, and at least one policy resource specifying a condition for resource usage for the energy-saving policy; and

provide, to the Near-RT RIC via an A1 interface, the at least one energy-saving policy.

[0006b] According to an aspect, the present disclosure refers to a method comprising:

obtaining a policy schema;

generating, based on the policy schema, at least one energy-saving policy for execution by a near-real-time (Near-RT) radio access network intelligent controller (RIC), wherein the at least one energy-saving policy comprises at least one policy scope identifier specifying at least one node to which the energy-saving policy is applied, at least one policy objective specifying an energy-saving target, and at least one policy resource specifying a condition for resource usage for the energy-saving policy; and

providing, to the Near-RT RIC via an A1 interface, the at least one energy-saving policy.

[0006c] According to an aspect, the present disclosure refers to a non-transitory computer-readable recording medium having recorded thereon instructions executable by a system that comprises a non-real-time (Non-RT) radio access network intelligent controller (RIC) to cause the Non-RT RIC to perform a method comprising:

obtaining a policy schema;

generating, based on the policy schema, at least one energy-saving policy for execution by a near-real-time (Near-RT) RIC, wherein the at least one energy-saving policy comprises at least one policy scope identifier specifying at least one node to which the energy-saving policy is applied, at least one policy objective specifying an energy-saving target, and at least one policy resource specifying a condition for resource usage for the energy-saving policy; and

providing, to the Near-RT RIC via an A1 interface, the at least one energy-saving policy.

[0007] According to example embodiments, a system may include a non-real-time (Non-RT) radio access network intelligent controller (RIC). The Non-RT RIC may be configured to obtain a policy schema and then generate at least one energy-saving policy based on the policy

schema for execution by a near-real-time (Near-RT) RIC. The at least one energy-saving policy may include at least one policy scope identifier specifying at least one node to which the energy-saving policy is applied, at least one policy objective specifying an energy-saving target, and at least one policy resource specifying a condition for resource usage for the energy-saving policy. Accordingly, the Non-RT RIC may be configured to provide, to the Near-RT RIC via an A1 interface, the at least one energy-saving policy.

[0008] According to example embodiments, a method may include: obtaining a policy schema, generating at least one energy-saving policy based on the policy schema for execution by a near-real-time (Near-RT) radio access network intelligent controller (RIC), and providing the at least one energy-saving policy to the Near-RT RIC via an A1 interface. The at least one energy-