Challenge 7

Remove EE Charms when VNF has only day-1 operations

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State of the art

- When a VNF has day-1 operations in the descriptor new charms are created to perform these operations. After the operations are completed, the charms are still deployed, but they won't be executed anymore.

- Current flow:

  - For each VNF (and each VDU/KDU belonging to it) register a task to create an execution environment

  - Execute the tasks

    - Create a new execution environment

    - Deploy the application

    - Execute initial configuration primitive (day-1 operation)

The proposed solution

- At instantiation keep track of entities (NS, VNFs, VDUs, KDUs) requiring only day-1 configuration

- Wait for instantiation

- Remove all execution environments (applications) associated to the previously tracked entities

- Delete information regarding the removed execution environments from the database

Changes in LCM

- For each VNF (and VDU/KDU belonging to it) and NS:

  - If only day-1 operations are present -> store identifier on the entity (NS/VNF/VDU/KDU specific)

- Wait for instantiation tasks (model creation, application deployment, day-1 operation execution)

- For each previously saved identifier

  - Retrieve application names from VCAs

  - Register tasks to remove the selected execution environments

- Wait for removal tasks

- Delete from the database the information associated with the removed execution environments

Changes in N2VC

- Modify async def delete_execution_environment(…):
  - add optional "application_to_delete" argument:
    - connect to Juju controller
    - remove the application
    - wait for application removal
    - if model is empty -> destroy the model
    - disconnect from Juju controller

Demo

- Network Service with 2 VNFs

- VNF 1:
  - only day-1 operation

- VNF 2:
  - day-1 operations
  - day-2 operations
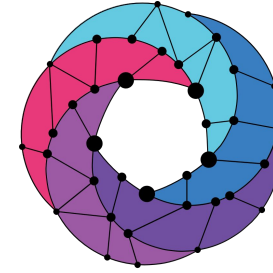
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