**3GPP TSG-SA5 Meeting #140-e *S5-216367rev1***

**e-meeting, 15 - 24 November 2021**

**Source: Lenovo, Motorola Mobility, CMCC**

**Title: pCR - 28.819 Add Proposed overall process**

**Document for: Approval,**

**Agenda Item: 6.5.5**

# 1 Decision/action requested

***Please approve***

# 2 References

# 3 Rationale

*Add process based on the scenarios and solutions approved.*

# 4 Detailed proposal

Start of changes

# 7. Proposed Process for Multi-Vendor CI-CD



Figure X Overall testing process for newly delivered NF

Editor’s note: To be updated based on further approved scenarios

Editor’s note: Interaction with ETSI NFV TST is not covered thus far

Editor’s note: Feature testing has not been incorporated in this process

The overall CI-CD and testing process for a 3GPP system looks like that shown in Figure X. The salient steps in the process are as follows

1. The 3GPP management system subscribes to receive notification for a newly delivered NF to the appropriate delivery server identified in prior business agreements with each vendor
2. The NF is delivered to the (operator or vendor owned) delivery server. In case of multiple vendors multiple such delivery servers may exist. This trigger a notification to the 3GPP management system that a new NF is now available at the delivery location.

Note: it is not important to the 3GPP management system where the notification comes from as long as the notification provides where to fetch the new NF.

1. The 3GPP management system triggers the CI-CD system to perform the unit, acceptance, integration, and system tests on the new NF. If any of the tests fail the NF is rejected and a feedback maybe provided to the vendor. Additionally, feedback may also be provided when the tests pass with other supporting information
2. During the process in step 3, the CI-CD system may fetch information that can help it determine the set of tests that the 3GPP management system wants to run on the new NF.
3. When all tests succeed the CI-CD system provides a notification to the 3GPP management system and the NF is transferred to a software inventory from which the NF maybe deployed in the operational environment.
4. Finally, when the NF is ready for deployment the operator may still perform operational tests on the NF prior to full deployment. The 3GPP management system monitors test status, collects test results and othe related information during the testing execution. If any of the tests fail, the process will slip to 8, a feedback maybe provided to the vendor through the 3GPP management system.
5. When the tests in operational environment have passed, the 3GPP management system will include the NF as part of operational network, keep continuous monitoring and operational data collection.

**Vendor feedback:** At any step in the process the 3GPP management system may analyse collected data and diagnose various problems with the new NF. If a problem with the NF is diagnosed, the 3GPP management system may propose improvements, filter related environment information, do necessary data processing, and provide a feedback to vendor.

End of changes