



Deliverable D2.4 Summary

This report describes a set of relevant tests defined and performed for both low level and high level performance evaluation about integration of **Fab** and **Virtual Labs** with the NEWTON Project Platform (NEWTELP¹).

As resulting from **Task 2.5**, this document highlights the specific tests executed for evaluating Fab Lab and Virtual Labs developed as part of the NEWTON Project. The test methodologies applied were Load Testing, Unit Testing, Integration Testing and End-to-End Testing.

In detail, this report is structured as follows.

In **Section 2**, software testing fundamentals including test case plan design and the applied testing methodologies' State of the Art are explained. This introduces the basic concepts about testing, design details and defines a common test case description template used for each evaluation.

In **Section 3**, the test architecture for Fab Lab is described and a deep evaluation is reported. A suitable test automation strategy is designed including test framework set-up, unit test, integration test, end-to-end test and load test.

In **Section 4**, testing and evaluation of Virtual Labs are described. According to **Deliverable D2.3** the list of Virtual Labs defined in NEWTON is presented and, for each lab, a detailed test architecture and model is highlighted.

In **Section 5** a conclusion about experimentations is reported, showing positive results for all tested Virtual and Fab Labs. Finally, some technical details about the testing methodologies and framework and the performed tests are described in **this document's Annex**.

¹ <https://newtelp.eu/login>