**Functional Test Report for**

**Deployment Testing with DNS**

on 07-07-2025

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# Testing Scope

The scope of testing is to verify fitment to the specification from the perspective of

* Deployability
* Functionality

Verification is performed not only from the end user perspective but also from the System Integrator (SI) point of view. Hence Configurability and Extensibility of the software is also assessed. This ensures readiness of software for use in multiple countries. Since MOSIP is an “API First” product platform, Verification scope required comprehensive automation testing for all the MOSIP APIs. An automation Test Rig is created for the same.

# Test Approach

**Reference docs:**

<https://github.com/mosip/documentation/blob/1.2.0/docs/setup/deploymentnew/v3-installation/1.2.0.2/on-premises-deployment.md>

* Deployability
* Functionality

The verification methods may differ based on how the need was addressed.

MOSIP Test Rig covers the end to end test execution and reporting. The end to end functional test scenarios are written starting from pre-registration, to creation of packet in registration center, processing the packet through the registration processor, generating UIN and authenticating identity using IDA through various permutation and combinations of cases being covered. MOSIP Test Rig will be an open source artifact which can also be enhanced and used by countries to validate the SI deliveries before going live.

Environment name: ooru.mosip.net

Deployment test completed date: 4th July 2025.

# Time taken for deployment

|  |  |  |
| --- | --- | --- |
| **Step No** | **Step Description** | **Time Taken with DNS** |
| 1 | Pre-requisites | 8 hr |
| 2 | Wireguard | 8 hr |
| 3 | Observation K8s Cluster setup and configuration | 12 hr |
| 4 | Observation K8s Cluster Ingress and Storage class setup | 12 hr |
| 5 | Setting up nginx server for Observation K8s Cluster | 8 hr |
| 6 | Observation K8's Cluster Apps Installation | 8 hr |
| 7 | MOSIP K8s Cluster setup | 8 hr |
| 8 | MOSIP K8 Cluster Global configmap, Ingress and Storage Class setup | 4 hr |
| 9 | Import MOSIP Cluster into Rancher UI | 1 hr |
| 10 | MOSIP K8 cluster Nginx server setup | 4 hr |
| 11 | MOSIP External Dependencies setup | 8 hr |
| 12 | MOSIP Modules Deployment | 8 hr |
| 13 | API Testrig | 8 hr |
|  | **Total Time Taken** | **97 hrs (12 days)** |

# Main features tested:

* Deployment
* Basic functionality - by automation

Out of scope:

* Docker Compose testing
* Real device testing
* Upgrade testing

# **High-level observation points:**

### 1. Ubuntu 24.04 Not Supported During Deployment

* Deployment failed when attempted on Ubuntu 24.04.

Root Cause: Compatibility issues with deployment scripts and dependencies not fully supported on Ubuntu 24.

**Resolution**: Downgraded to **Ubuntu 22.04 LTS**, after which the deployment completed successfully.

### 2. Rancher Latest Version Incompatible with Cluster Import

* Unable to import clusters using the latest version of Rancher.

Root Cause: Recent Rancher releases have deprecated or altered cluster import functionality.

Resolution: Installed Rancher version 2.6.9, which successfully supported cluster import.

### 3. PostgreSQL Connection Failure Despite Valid Credentials

* PostgreSQL did not accept connections, even when correct credentials were used.

Root Cause: Required network ports (e.g., 5432) were not open or allowed by firewall settings.

Resolution: Configured firewall and network rules to open necessary PostgreSQL ports. Connection established successfully afterward.

### 4. Reg-client Installation Failure Due to OpenSSL Version

* Reg-client installation failed due to incompatible OpenSSL version.

Root Cause: Reg-client requires OpenSSL v1.1.1f, but the system had a different version.

Resolution: Installed OpenSSL version 1.1.1f before running the reg-client installation.

# Test execution statistics

# Automation test results

Below are the test metrics by performing functional testing using mock MDS, mock Auth and mock ABIS. The process followed was black box testing which based its test cases on the specifications of the software component under test. Functional test was performed in combination of individual module testing as well as integration testing. Test data were prepared in line with the user stories. Expected results were monitored by examining the user interface. The coverage includes System testing, End-To-End flows across multiple languages and configurations. The testing cycle included simulation of multiple identity schema and respective UI schema configurations.

Here is the detailed breakdown:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Module** | **Passed** | **Failed** | **Skipped** | **Ignored** | **Total** |
| Master data | Eng: 923  Ara: 895  Fra: 907 | 0  1  0 | 0  0  0 | 0  15  15 | 945  945  945 |
| Pre-reg | 0 | 0 | 281 | 2 | 281 |
| ID Repo | 58 | 40 | 218 | 84 | 414 |
| IDA | 580 | 9 | 0 | 21 | 610 |
| PMS | 104 | 108 | 285 | 12 | 509 |
| Resident | 0 | 0 | 1126 | 0 | 1126 |

**Note:** In API-based testing, most of the test cases marked as failed or skipped are due to undeployed dependent modules.

DSL Sanity - End to end scenarios results:

|  |  |
| --- | --- |
| **End to end scenarios** | |
| Total | 4 |
| Pass | 4 |
| Fail | 0 |
| Skipped | 0 |