

Rubin Observatory

Vera C. Rubin Observatory
Data Management

LDM-503-10 DAQ Validation Test Plan and Report

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DMTN-181

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Abstract

This is the test plan and report for LDM-503-10 (DAQ Validation), an LSST level 2 milestone pertaining to the Data Management Subsystem.

Change Record

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	2019-10-22	Draft	Michelle Butler
1.0	2019-12-02	Test plan approved. DM-16193.	Michelle Butler

Document curator: Michelle Butler

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LDM-503-10 DAQ Validation Test Plan and Report

1 Introduction

1.1 Objectives

This milestone verify the DAQ network from the summit to the base ensuring that systems at the base can receive communications from the DAQ.

1.2 System Overview

This milestone will take simulated data from the DAQ at the Summit and use the DWDM network environment to place data on DM machines at Base Data Center (BDC), essentially extending the DAQ extended network to the BDC. The test machines at the BDC will be a L1 handoff environment and a single forwarder

1.3 Applicable Documents

LDM-294 Data Management Organization and Management

LDM-503 DM Test Plan

LDM-148 Data Management System Design

1.4 Document Overview

This document was generated from Jira, obtaining the relevant information from the LVV-P54 Jira Test Plan and related Test Cycles (LVV-C107).

Section 1 provides an overview of the test campaign, the system under test (Data Management), the applicable documentation, and explains how this document is organized. Section 2 describes the configuration used for this test. Section 3 describes the necessary roles and lists the individuals assigned to them.

Section 4 provides a summary of the test results, including an overview in Table 1, an overall assessment statement and suggestions for possible improvements. Section 5 provides detailed results for each step in each test case.

The current status of test plan LVV-P54 in Jira is **Approved**.

1.5 References

- [1] **[LDM-148]**, Lim, K.T., Bosch, J., Dubois-Felsmann, G., et al., 2018, *Data Management System Design*, LDM-148, URL <https://1s.st/LDM-148>
- [2] **[LDM-294]**, O'Mullane, W., Swinbank, J., Jurić, M., DMLT, 2018, *Data Management Organization and Management*, LDM-294, URL <https://1s.st/LDM-294>
- [3] **[LDM-503]**, O'Mullane, W., Swinbank, J., Jurić, M., Economou, F., 2018, *Data Management Test Plan*, LDM-503, URL <https://1s.st/LDM-503>

2 Test Configuration

2.1 Data Collection

Observing is not required for this test campaign.

2.2 Verification Environment

DAQ machines at the summit and forwarder machine at the base data center (BDC) on networks extending the DAQ network from the summit to the base and BDC 10GigE networks.

2.3 Entry Criteria

DAQ at the summit and test machines at BDC all have been installed and in working order with all networks configured.

2.4 Exit Criteria

Files and other communications can take place from the summit machines and the BDC systems for the DAQ network.

3 Personnel

The following personnel are involved in this test activity:

- Test Plan (LVV-P54) owner: Michelle Butler
- Test Cycles:
 - LVV-C107 owner: Michelle Butler
 - * Test case LVV-T1550 tester:
- Additional Test Personnel involved:
 - Test case LVV-T1550:

4 Overview of the Test Results

4.1 Summary

Test Cycle LVV-C107: LDM-503-10 DAQ verification			
test case	status	comment	issues
LVV-T1550	Not Executed		

Table 1: Test Results Summary

4.2 Overall Assessment

Not yet available.

4.3 Recommended Improvements

Not yet available.

5 Detailed Test Results

5.1 Test Cycle LVV-C107

Open test cycle *LDM-503-10 DAQ verification* in Jira.

LDM-503-10 DAQ verification

Status: Not Executed

Verify that the BDC systems on the DAQ DWDM network can communicate with the Summit DAQ system.

5.1.1 Software Version/Baseline

Not provided.

5.1.2 Configuration

Not provided.

5.1.3 Test Cases in LVV-C107 Test Cycle

5.1.3.1 Test Case LVV-T1550 - LDM-503-10 DAQ Validation

Open *LVV-T1550* test case in Jira.

Verify that the DAQ can talk to test machines at the BDC through the DWDM network.

Preconditions:

DAQ at the Summit and machines on networks at the base.

Execution status: **Not Executed**

Final comment:

Detailed step results:

Step	Description, Results and Status	
1	Description	have DAQ produce image at the summit
	Expected Result	Image on At-archiver
	Actual Result	
	Status	Not Executed
2	Description	Have the at-archiver machine at the summit BBCP a copy of the file to the L1-handoff machine at the base and ingest the file to the butler
	Expected Result	L1-handoff machine can see the file and ingest it into ButlerG3.
	Actual Result	
	Status	Not Executed
3	Description	Send message back through SAL that the file was ingested
	Expected Result	This will make sure that the machines at the base can see and update SAL messages from the summit.
	Actual Result	
	Status	Not Executed

A Acronyms used in this document

Acronym	Description
BDC	Base Data Center
Center	An entity managed by AURA that is responsible for execution of a federally funded project
DAQ	Data Acquisition System
DM	Data Management
DMTN	DM Technical Note
DWDM	Dense Wave Division Multiplex
LDM	LSST Data Management (Document Handle)
LSST	Large Synoptic Survey Telescope
Subsystem	A set of elements comprising a system within the larger LSST system that is responsible for a key technical deliverable of the project
Summit	The site on the Cerro Pachón, Chile mountaintop where the LSST observatory, support facilities, and infrastructure will be built
Validation	A process of confirming that the delivered system will provide its desired functionality; overall, a validation process includes the evaluation, integration, and test activities carried out at the system level to ensure that the final developed system satisfies the intent and performance of that system in operations