Vera C. Rubin Observatory
Rubin Observatory Project Office

Long Haul Network Maintenance

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ITTN-082

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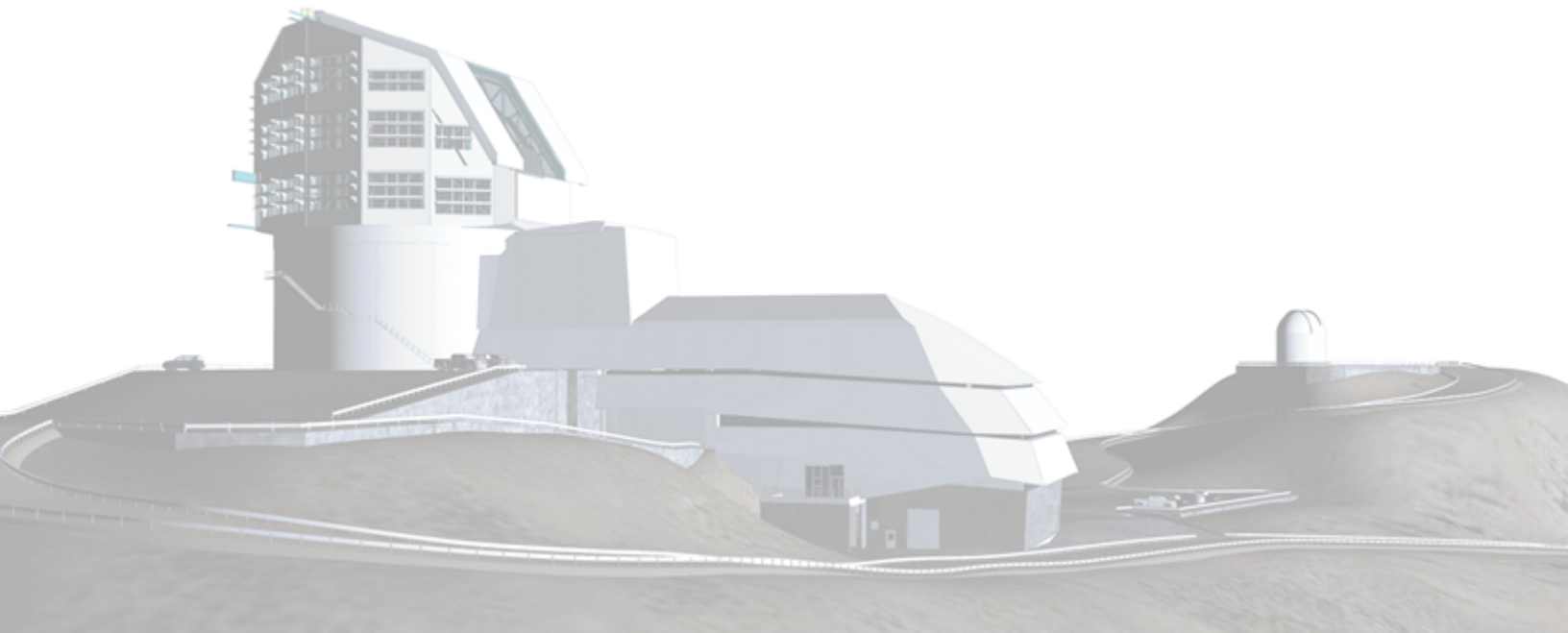
DRAFT



Abstract

Procedures and communication protocols for scheduling and executing Long Haul Network (LHN) maintenances.

Change Record

Version	Date	Description	Owner name
1	2025-05-12	First version	Cristian Silva

Document source location: `https://github.com/lsst-it/ittn-082`

Contents

Long Haul Network Maintenance

Introduction

This document defines the procedures for scheduling, communicating, approving, and executing maintenance activities on the Long Haul Network (LHN) of the Vera C. Rubin Observatory. The LHN is a vital infrastructure component enabling data flow between Chile and the USDF. This policy ensures coordinated planning between LHN operators, and observatory stakeholders to reduce the risk of service disruption.

1 Types of Maintenance

1.1 Standard Maintenances (Internal / LHN Members)

Standard maintenances are planned interventions initiated by LHN members or internal teams that do not pose an immediate operational threat. These must be proposed at least **one week in advance**.

All standard maintenances require approval from the **End-to-End Responsible (E2E)**. Approvals are issued every **Tuesday afternoon at 16:00 CLT**.

1.2 Emergency Maintenances

Emergency maintenances address critical issues requiring urgent resolution to prevent or mitigate outages. These also require E2E approval, with an expedited timeline. Requests must include a **detailed justification** describing the urgency and potential risks of delay.

2 Communication Protocols

Actions to be taken by the LHN operator.

2.1 Standard Maintenances

- Submit a **Jira ticket**.
- Send a **notification email** to the LHN distribution list.

2.2 Emergency Maintenances

- Submit a **Jira ticket**.
- Send a message to **#rubinobs-lhn** on Slack.
- Send a **notification email** to the LHN distribution list.

2.3 Jira Guidelines

Jira accounts will be delivered to LHN operators, the following are basic guidelines to create the tickets.

- Tickets must be created by authorized network operators.
- Use the **IT Project** with **LHN** as the component.
- Jira serves as the central record for approval, rejections, and execution updates.

Upon creation of the ticket, it will be assigned to a DevOps team member and all actions related to the maintenance will be followed in the ticket.

3 Maintenance Rejections

3.1 Standard Maintenance Rejections

- Communicated on **Tuesdays at 16:00 CLT**.
- Includes a justification, suggested alternative dates, and Jira updates.

3.2 Emergency Maintenance Rejections

- Communicated within **minutes or hours**, depending on severity.
- Jira updated with rejection reason and E2E notes.

4 Maintenance Communication Format

The following information must be included in the Jira ticket. This information will be used as the source of truth for the approval process.

4.1 Standard Maintenances

- Title
- Description
- Owner and Contacts
- Affected Services
- Impact of Deferral
- Start and End Time (include estimated duration)
- Rollback Plan

4.2 Emergency Maintenances

- Title
- Description
- Owner and Contacts
- Affected Services
- Severity
- Start and End Time (include estimated duration)
- Rollback Plan

4.3 Severity Classification

Every emergency maintenance must include a severity, which will be used to prioritize it.

- **Minor:** No impact on science observations (e.g., routine patches)
- **Major:** Degraded service (e.g., data latency)
- **Critical:** Blocking flow of pixels from Summit to USDF or complete service disruption

5 Approval Workflow

5.1 Standard Maintenance Approvals

5.1.1 CAP Authorization

CAP Authotizations will be requested during the CAP meetings on Tuesdays. The time of the meeting changes depending on daylight saving times, hence the approvals will be released at late as 16:00 (or earlier) depending on the time of the meeting.

The following is a summary of the authorization process

- Jira ticket used as source document.
- E2E submits request and manages review.
- Approvals released **Tuesdays at 16:00 CLT**.
- Recorded in Jira.

5.1.2 DevOps Authorization

The DevOps will evaluate the maintenance request and upon approval it will be added to the topic list of the next CAP meeting.

- Review completed within 24 hours.
- Added to next CAP meeting agenda.
- Jira updated accordingly.

5.2 Emergency Maintenance Approvals

Emergencies are typically approved on the minute/hour and do not require CAP approval, given that they should be fixing outages.

To ensure smooth operations, the E2E will seek approval from the day or night summit lead.

- Granted directly by E2E.
- Decisions made within minutes or hours.
- Coordination with:
  - Night Summit Responsible (if at night)
  - Day Summit Responsible (if during the day)
- Jira updated with all decisions.

6 Maintenance Execution

After approval, the execution of the activity must adhere to the established notification process between the LHN operator and the vNOC, which will initiate an API call to Squadcast to execute the integration into Rubin tools.

The following is the execution flow:

- E2E informs the **Virtual Network Operations Center (vNOC)** of approval or rejection.
- Operator triggers notification to vNOC.
- vNOC issues API call to Squadcast for tracking.

- E2E announces maintenance in **#summit-announce** and follows up in the dedicated channel.

Conclusion

By adhering to this structured protocol, LHN operators and observatory stakeholders help minimize operational disruptions while ensuring transparency and system uptime. Furthermore, it enables the LHN to be fully integrated into the coordinated maintenance workflow of all Rubin Observatory products.

A References

B Acronyms

Acronym	Description
DM	Data Management