# Performance Scope Statement

## Introduction

The following scope statement applies to the Performance Scope Statement project within the SFS-DEV-001 contract/SOW dates 08/01/2011.

## Problem Statement

This subproject ensures that LFSCK is ready to be used in production environments. It will characterize and optimize the performance of the features implemented in Subprojects 3.1-3.3, ensure that the performance impact of background scrubbing is sufficiently controlled, and determine whether Lustre protocol modifications (e.g. support for aggregate RPCs) are required. Administrative controls and monitoring will be finalized and documentation and procedures will be provided for system administrators.

## Project Goals

1. Ensure performance impact of background scrubbing can be controlled.
2. Finalize administrative controls.
3. Document procedures for LFSCK Operations.
4. Implement performance optimizations.

In-Scope

- Improve inode iteration for uninitialized groups.
- Improve OI scrub trigger strategy: do not trigger urgent OI scrub on the whole system if only few inconsistent OI entries are found.
- Optimize ldlm lock used by LFSCK.
- Record linkEA verification history in RAM.
- Update documentation.
- Review command line options.

## Out of Scope

- e2fsck characterization and optimization. External development and optimization that has been done on e2fsck since the time the proposal was written have improved e2fsck performance already, and further optimization is expected to be of significant complexity and is unlikely to yield the best return within the project constraints.

## Project Constraints

- Six weeks of implementation effort.
- Fan Yong is the preferred engineer for this work.

## Key Deliverables

- Solution Architecture
- LU-1452
- LU-1453
- LU-5682
- LU-5820
- LUDOC-259

## Key Milestones

Milestones and schedule recorded at Project Review NRE 1 & 3