

MO-005f — Approved Baseline Immutability

[Go to MO-005 — Reusable and Version-Controlled Infrastructure Baselines](#)

Statement

[Crucible](#) SHALL NOT modify the content of an approved [Infrastructure Baseline](#) revision during reuse.

Derived From

This requirement derives from:

- [MO-005 — Reusable and Version-Controlled Infrastructure Baselines](#)

The Original Requirement states:

The system SHALL establish infrastructure as a reusable and version-controlled asset.[\[C1\]](#)

MO-005f preserves the controlled-reuse intent of the Original Requirement by prohibiting modification of approved Infrastructure Baseline content during reuse.

The separate requirements derived from MO-005 address:

- [MO-005a — Infrastructure Baseline Artifact Management](#)
- [MO-005b — Infrastructure Baseline Identification](#)
- [MO-005c — Infrastructure Baseline Version Control](#)
- [MO-005d — Infrastructure Baseline Selection](#)
- [MO-005e — Infrastructure Baseline Reuse](#)
- [MO-005g — Baseline Revision Deployment Traceability](#)

Assessment

The Original Requirement describes infrastructure as reusable and version controlled but does not identify how approved content remains controlled during reuse.

Without an explicit immutability constraint, reuse could permit:

- Direct modification of an approved revision
- Silent replacement of approved content
- Deployment-specific changes within the approved revision
- Modification without creation of a new revision
- Loss of the content associated with the approval record
- Loss of reproducibility across Infrastructure Deployments

The phrase **reusable and version-controlled asset** does not identify:

- The content protected from modification
- The approval state that activates the protection
- The period during which the protection applies
- The distinction between modifying an approved revision and creating a new revision
- The treatment of deployment-specific parameters
- The Evidence required to demonstrate preservation of approved content

MO-005f:

- Identifies [Crucible](#) as the responsible actor
- Identifies an approved Infrastructure Baseline revision as the protected subject
- States the prohibited behavior directly through **SHALL NOT**
- Limits the prohibition to modification of approved revision content during reuse
- Distinguishes approved baseline content from deployment-specific parameter values
- Separates immutability from Version Control, selection, reuse, and deployment traceability

Rationale

An approved [Infrastructure Baseline](#) revision represents a controlled configuration accepted for use.

Modification of the approved revision during reuse would prevent an evaluator from determining whether multiple Infrastructure Deployments used the same controlled baseline.

Approved baseline immutability supports:

- Preservation of the approved configuration
- Reproducibility across Infrastructure Deployments
- Reliable comparison of deployment results
- Accurate approval records
- Controlled change management
- Recovery of previously approved configurations
- Preservation of Provenance
- Maintenance of Traceability
- Generation of auditable [Evidence](#)

A required change to approved Infrastructure Baseline content results in creation of a new revision through the applicable Version Control process. The new revision remains distinct from the approved revision from which it derives.

This requirement does not prohibit the use of deployment-specific parameters when those parameters remain external to the approved Infrastructure Baseline revision and do not alter its controlled content.

This requirement does not establish the Version Control process used to create a new revision. MO-005c establishes Version Control.

This requirement does not establish the minimum reuse threshold. MO-005e establishes Infrastructure Baseline reuse.

This requirement does not require an Infrastructure Deployment to record the revision used. MO-005g

establishes deployment traceability.

Applies To

This requirement applies to:

- [Crucible](#)
- [Infrastructure Baselines](#)
- Approved Infrastructure Baseline revisions
- Infrastructure Baseline content
- [Artifacts](#)
- Artifact identifiers
- Revision identifiers
- Approval records
- Version Control records
- Change records
- Selection records
- Reuse records
- Deployment-specific parameters
- [Infrastructure Deployments](#)
- Artifact repositories
- Artifact catalog records
- [Evidence](#)
- [Provenance](#)
- [Traceability](#)

Verification

Verification confirms that:

1. The approved Infrastructure Baseline revision is identified
2. The content associated with the approved revision is identified
3. The approval record applies to the identified revision
4. The approved revision content remains unchanged during reuse
5. Each detected content change results in a distinct revision
6. The original approved revision remains retrievable after creation of a subsequent revision
7. Deployment-specific parameters do not alter the approved revision content
8. The generated Evidence demonstrates preservation of the approved revision content

Verification includes:

- Infrastructure Baseline inspection
- Artifact identifier inspection
- Revision identifier inspection
- Approval-record inspection
- Approved-content inspection
- Content-integrity inspection
- Content comparison before and after reuse

- Artifact digest comparison
- Version Control history inspection
- New-revision creation testing
- Prior-revision retrieval testing
- Deployment-parameter inspection
- Infrastructure Deployment comparison
- Evidence inspection
- Provenance inspection
- Traceability inspection

The verification record identifies:

1. The Infrastructure Baseline
2. The stable Artifact identifier
3. The approved revision identifier
4. The approval status
5. The approved content or content reference
6. The content-integrity value before reuse
7. The content-integrity value after reuse
8. Each Infrastructure Deployment involved in the reuse evaluation
9. Each deployment-specific parameter applied
10. Each detected content difference
11. Each new revision created from the approved revision
12. The prior-revision retrieval result
13. Each identified failure or exception
14. The observed result
15. The generated [Evidence](#)

Requirements Realized By

This requirement is realized by:

- [FR-CFG-001 through FR-CFG-005](#)
- [FR-DEP-001 through FR-DEP-007](#)
- [FR-MC-001 through FR-MC-005](#)
- [FR-BAS-001 through FR-BAS-004](#)

Related Architecture Sections

- [5. Descriptions, Composition, and Baselines](#)
- [7. Infrastructure and Deployment](#)
- [10. Reproducibility, Provenance, and Traceability](#)

Referenced By

The following pages reference this requirement:

- [MO-005a — Infrastructure Baseline Artifact Management](#)
- [MO-005b — Infrastructure Baseline Identification](#)
- [MO-005c — Infrastructure Baseline Revision Control](#)
- [MO-005d — Approved Infrastructure Baseline Selection](#)
- [MO-005e — Infrastructure Baseline Reuse](#)
- [MO-005g — Infrastructure Deployment Baseline Traceability](#)
- [Annex D: Requirements Traceability](#)

Delivery Phase

Phase 1 and subsequent phases

Implementation Status

Not Assessed

Implementation status requires verification that the current [Crucible](#) implementation preserves the content of an approved Infrastructure Baseline revision during reuse.

Requirement Status

Draft

This requirement derives from MO-005 in the Crucible System Requirements Specification, Version 1.1 Draft.

Notes for Editors

This requirement page should retain the stable requirement identifier MO-005f.

This page is a leaf requirement page and omits a trailing :start from its namespace.

Changes to the Statement should preserve the approved Infrastructure Baseline immutability intent derived from MO-005.

The immutability record should identify:

- The stable Infrastructure Baseline Artifact identifier
- The approved revision identifier
- The approval status
- The approved content or content reference
- The applicable content-integrity value
- Each Infrastructure Deployment involved in reuse

- The deployment-specific parameters applied
- Each subsequent revision derived from the approved revision
- The associated Provenance
- The associated Traceability
- The supporting Evidence

Material changes should receive review and should update the related verification criteria, requirements realization, related architecture sections, and source records.

To reference this requirement Statement from another wiki page, insert:

```
{{section>dido:02-crusible:99-annexes:annex-c-requirements:01-mission-objectives:mo-005:mo-005f#Statement&noheader&nofooter&noeditbtn}}
```

Do not rename this page after an external citation unless a redirect or move plan is in place.

© 2026 Dido Solutions, Inc. and Jackrabbit Consulting, Inc.

From:
<https://wiki.didosolutions.com/> - **Dido Solutions, Inc Wiki**

Permanent link:
<https://wiki.didosolutions.com/dido/02-crusible/99-annexes/annex-c-requirements/01-mission-objectives/mo-005/mo-005f?rev=1784562821>

Last update: 2026/07/20 08:53

