

MO-005b — Infrastructure Baseline Identification

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

Statement

[Crucible](#) SHALL assign a unique [Artifact](#) identifier to each [Infrastructure Baseline](#).

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-005b preserves the identification needed to manage infrastructure as a reusable and version-controlled asset by requiring each [Infrastructure Baseline](#) to have a unique [Artifact](#) identifier.

The separate requirements derived from MO-005 address:

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

Assessment

The Original Requirement identifies infrastructure as an asset but does not require a unique identifier for the managed asset.

Without a unique identifier, an evaluator cannot reliably distinguish:

- One Infrastructure Baseline from another Infrastructure Baseline
- An Infrastructure Baseline from an Infrastructure Deployment created from it
- References to the same Infrastructure Baseline across repositories, catalogs, deployment records, and Evidence
- The identity of an Infrastructure Baseline from the identity of one of its revisions

The Original Requirement does not identify:

- The object receiving the identifier
- The uniqueness boundary for the identifier
- The relationship between the identifier and the Infrastructure Baseline Artifact
- The use of the identifier in selection, reuse, deployment records, Provenance, and Traceability
- The Evidence required to demonstrate identifier uniqueness

MO-005b:

- Identifies [Crucible](#) as the responsible actor
- Identifies the Infrastructure Baseline as the object receiving the identifier
- Identifies the assigned identifier as an Artifact identifier
- Requires the identifier to be unique
- Separates Infrastructure Baseline identity from revision identification and Version Control
- Separates identification from Artifact management, selection, reuse, immutability, and deployment traceability

Rationale

A unique Artifact identifier provides a stable identity for each [Infrastructure Baseline](#).

The identifier enables Crucible and external systems to reference the same Infrastructure Baseline across:

- Artifact repositories
- Artifact catalogs
- Baseline composition records
- Approval records
- Version Control systems
- Infrastructure Deployment records
- Compliance records
- Security records
- Evidence records
- Provenance records
- Traceability relationships

The Infrastructure Baseline identifier identifies the baseline as a managed Artifact. A separate revision identifier can distinguish individual revisions of that Artifact.

The stable Artifact identifier supports:

- Unambiguous baseline selection
- Reuse of the same baseline across multiple Infrastructure Deployments
- Comparison of baseline revisions
- Retrieval of baseline history
- Association of approvals with the correct baseline
- Association of deployments with the correct baseline
- Preservation of Provenance
- Maintenance of Traceability

- Generation of auditable [Evidence](#)

This requirement does not establish the revision identifier or revision-management behavior. MO-005c establishes Version Control requirements.

This requirement does not require selection or reuse of the identified Infrastructure Baseline. MO-005d and MO-005e establish those requirements.

Applies To

This requirement applies to:

- [Crucible](#)
- [Infrastructure Baselines](#)
- [Artifacts](#)
- Artifact identifiers
- Artifact catalog records
- Artifact repositories
- Baseline composition records
- Baseline approval records
- Version Control records
- Infrastructure Deployment records
- Compliance records
- Security records
- [Evidence](#)
- [Provenance](#)
- [Traceability](#)

Verification

Verification confirms that:

1. Each Infrastructure Baseline has an Artifact identifier
2. The Artifact identifier refers to one Infrastructure Baseline
3. No two Infrastructure Baselines have the same Artifact identifier within the applicable identifier scope
4. The Artifact identifier remains associated with the Infrastructure Baseline across repositories, catalogs, and related records
5. The Artifact identifier distinguishes the Infrastructure Baseline from an Infrastructure Deployment created from it
6. The Artifact identifier remains distinguishable from identifiers assigned to individual baseline revisions
7. The identification record preserves the required Evidence, Provenance, and Traceability

Verification includes:

- Infrastructure Baseline inspection
- Artifact identifier inspection

- Identifier uniqueness testing
- Artifact catalog inspection
- Artifact repository inspection
- Cross-repository identifier comparison
- Baseline composition record inspection
- Baseline approval record inspection
- Version Control record inspection
- Infrastructure Deployment record inspection
- Evidence inspection
- Provenance inspection
- Traceability inspection

The verification record identifies:

1. The Infrastructure Baseline
2. The assigned Artifact identifier
3. The applicable identifier scope
4. The associated Artifact catalog record
5. The associated Artifact repository record
6. Each related baseline record inspected
7. Each duplicate or conflicting identifier detected
8. The uniqueness determination
9. Each identified failure or exception
10. The observed result
11. 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-005c — Infrastructure Baseline Revision Control](#)
- [MO-005d — Approved Infrastructure Baseline Selection](#)
- [MO-005e — Infrastructure Baseline Reuse](#)
- [MO-005f — Approved Infrastructure Baseline Preservation](#)
- [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 assigns a unique Artifact identifier to each Infrastructure Baseline.

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-005b.

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

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

The identifier scheme should define:

- The identifier syntax
- The applicable uniqueness scope
- The identifier-issuing authority
- The relationship between an Artifact identifier and a revision identifier
- The relationship between the identifier and the Artifact catalog record
- The treatment of identifier collisions
- The treatment of retired Infrastructure Baselines

- 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-005b#Statement&noheader&nofooter&noeditbtn}}
```

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