

MO-005d — Infrastructure Baseline Selection

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

Statement

Crucible SHALL permit selection of an approved [Infrastructure Baseline](#) revision for an [Infrastructure Deployment](#).

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-005d preserves the selection behavior required to reuse a controlled Infrastructure Baseline by requiring Crucible to permit selection of an approved Infrastructure Baseline revision for an Infrastructure Deployment.

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-005e — Infrastructure Baseline Reuse](#)
- [MO-005f — Approved Baseline Immutability](#)
- [MO-005g — Baseline Revision Deployment Traceability](#)

Assessment

The Original Requirement describes infrastructure as reusable but does not identify the selection behavior required before reuse or deployment.

The phrase **reusable asset** does not identify:

- The object selected
- The revision selected
- The approval condition applicable to the selected revision
- The Infrastructure Deployment for which the revision is selected
- The actor or process initiating the selection

- The criteria used to determine whether the selected revision applies
- The behavior required when a revision is not approved
- The Evidence required to demonstrate selection

MO-005d:

- Identifies [Crucible](#) as the responsible actor
- Identifies an approved Infrastructure Baseline revision as the selected object
- Identifies an Infrastructure Deployment as the selection context
- Distinguishes selection from application and reuse
- Separates selection from Artifact management, identification, Version Control, immutability, and deployment traceability

Rationale

Selection identifies the approved Infrastructure Baseline revision that applies to a specific Infrastructure Deployment.

Selecting a revision before deployment supports:

- Deliberate use of an approved baseline
- Prevention of accidental use of a draft or superseded revision
- Reproducible Infrastructure Deployments
- Comparison of Infrastructure Deployments created from different revisions
- Controlled promotion of Infrastructure Baseline revisions
- Association of deployment inputs with an approved configuration
- Preservation of Provenance
- Maintenance of Traceability
- Generation of auditable [Evidence](#)

The selection can depend on:

- Deployment purpose
- Deployment Platform
- Operational environment
- Security classification
- Compliance profile
- Applicable policy
- Required Machine Images
- Required dependencies
- Deployment parameters
- Approval status
- Effective period

The Infrastructure Baseline identifier identifies the managed baseline. The revision identifier distinguishes the selected controlled state of that baseline.

This requirement does not require application of the selected revision to multiple Infrastructure Deployments. MO-005e establishes reuse.

This requirement does not prohibit modification of the selected approved revision. MO-005f establishes approved baseline immutability.

This requirement does not require the Infrastructure Deployment record to preserve the selected identifiers. MO-005g establishes that requirement.

Applies To

This requirement applies to:

- [Crucible](#)
- [Infrastructure Baselines](#)
- Infrastructure Baseline revisions
- Approved Infrastructure Baseline revisions
- [Infrastructure Deployments](#)
- Artifact identifiers
- Revision identifiers
- Approval records
- Selection records
- Deployment requests
- Deployment parameters
- Deployment Platforms
- Operational environments
- Security profiles
- Compliance profiles
- Policy constraints
- Artifact catalog records
- Artifact repositories
- [Evidence](#)
- [Provenance](#)
- [Traceability](#)

Verification

Verification confirms that:

1. The Infrastructure Deployment is identified
2. The candidate Infrastructure Baseline is identified
3. The candidate Infrastructure Baseline revision is identified
4. The selected revision has an approved status
5. The approval applies to the intended Infrastructure Deployment context
6. Crucible permits selection of the approved revision
7. Crucible does not present an unapproved revision as approved
8. The selection result identifies the selected Artifact identifier and revision identifier
9. The selection record preserves the required Evidence, Provenance, and Traceability

Verification includes:

- Infrastructure Deployment inspection
- Infrastructure Baseline inspection
- Artifact identifier inspection
- Revision identifier inspection
- Approval-record inspection
- Approval-scope inspection
- Artifact catalog inspection
- Baseline-selection testing
- Approved-revision selection testing
- Unapproved-revision selection testing
- Superseded-revision selection testing
- Selection-record inspection
- Evidence inspection
- Provenance inspection
- Traceability inspection

The verification record identifies:

1. The Infrastructure Deployment
2. The candidate Infrastructure Baseline
3. The stable Artifact identifier
4. The candidate revision identifier
5. The approval status of the candidate revision
6. The approval scope
7. The selected revision
8. The selection result
9. Each rejected candidate revision
10. The reason for each rejection
11. Each identified failure or exception
12. The observed result
13. 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-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 permits selection of an approved Infrastructure Baseline revision for an Infrastructure Deployment.

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-005d.

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

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

The selection record should identify:

- The Infrastructure Deployment

- The stable Infrastructure Baseline Artifact identifier
- The selected revision identifier
- The approval status
- The approval scope
- The selection date and time
- The actor or process responsible for the selection
- The applicable operational environment
- The applicable Deployment Platform
- The applicable policy and compliance constraints
- 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-005d#Statement&noheader&nofooter&noeditbtn}}
```

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