

# FR-CFG-003 — Reusable Infrastructure Blueprints

[Go to Crucible Configuration Management Requirements](#)

## Statement

[Crucible](#) SHALL apply the same [Infrastructure Blueprint](#) to two or more [Infrastructure Environments](#) without modifying the reusable blueprint content.

## Source Statement

The system SHALL support reusable infrastructure blueprints.

## Source

Crucible System Requirements Specification, Version 1.1 Draft, Functional Requirements, Configuration Management, FR-CFG-003.

## Assessment

The source statement expresses the approved functional intent but does not provide all information required for deterministic verification.

The following Specification Discipline and Authoring findings apply:

- **The system** does not use the defined system name
- **Support** is a weak verb that does not identify the behavior [Crucible](#) performs
- **Infrastructure blueprint** does not identify how the blueprint demonstrates reuse
- **Reusable** does not identify the minimum number of applications required to demonstrate reuse
- The source statement does not distinguish application of a blueprint from modification of the reusable blueprint content
- The source statement does not identify the observable result used to verify reuse

The normalized Statement:

- Replaces **The system** with the defined system name
- Replaces **support** with the direct behavior **apply**
- Identifies the [Infrastructure Blueprint](#) as the reusable specification
- Defines reuse as application of the same blueprint to two or more [Infrastructure Environments](#)
- Distinguishes reuse from modification of the reusable blueprint content

The normalized Statement does not introduce blueprint approval, validation, deployment, acceptance,

revision-history, or traceability obligations. Separate requirements govern those behaviors when required.

## Rationale

An [Infrastructure Blueprint](#) specifies reusable infrastructure resources, relationships, configurable properties, and constraints applicable to multiple [Infrastructure Environments](#).

Without a reusable blueprint, an organization may recreate similar infrastructure definitions for each environment. Repeated recreation increases engineering effort and can produce inconsistent infrastructure representations.

Reuse requires the same blueprint content to remain applicable across two or more environments.

Environment-specific configuration may differ without changing the reusable blueprint content. Those differences may appear in separate:

- [Infrastructure Configurations](#)
- Input values
- Parameters
- Overrides
- Environment records

Applying the same blueprint to multiple environments contributes to:

- Reduced configuration duplication
- Consistent infrastructure structure
- Reduced engineering effort
- Controlled environment-specific variation
- Configuration reuse
- [Reproducibility](#)

## Applies To

This requirement applies to:

- [Crucible](#)
- [Infrastructure Blueprints](#)
- Reusable blueprint content
- Blueprint application
- [Infrastructure Environments](#)
- [Infrastructure Configurations](#)
- Environment-specific values

## Verification

1. Verification SHALL confirm that [Crucible](#) applies the same tested [Infrastructure Blueprint](#) to at

least two [Infrastructure Environments](#)

2. Verification SHALL confirm that each tested application uses equivalent reusable blueprint content
3. Verification SHALL confirm that applying the Infrastructure Blueprint does not modify the reusable blueprint content
4. Verification SHALL confirm that environment-specific values remain separate from the reusable blueprint content

Verification may include:

- Infrastructure Blueprint inspection
- Repeated blueprint application tests
- Multi-environment application tests
- Blueprint content comparison
- Environment-specific value inspection

The verification record SHALL identify:

1. The tested Infrastructure Blueprint
2. The reusable blueprint content
3. The tested Infrastructure Environments
4. The environment-specific values
5. The blueprint content comparison result
6. The observed results
7. The generated [Evidence](#)

## Outgoing Traceability

This requirement refines:

- [MO-001 — Repeatable, Compliant, and Secure Infrastructure Environments](#)
- [MO-002 — Reduced Platform Deployment Timelines](#)
- [MO-003 — Platform Independent Deployment](#)
- [MO-005 — Reusable and Version-Controlled Infrastructure](#)
- [MO-006 — Infrastructure Lifecycle Management](#)

This requirement operates within the conditions established by:

- [OR-001 — Operational Roles](#)
- [OR-002 — Deployment Environments](#)
- [OR-003 — Classified and Unclassified Environments](#)
- [OR-004 — Concurrent Environment Management](#)
- [OR-005 — Distributed Environment Management](#)

This requirement also relates to:

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

## Referenced By

The wiki Backlinks function provides the current list of pages that reference FR-CFG-003.

Incoming traceability should be derived dynamically from backlinks rather than maintained as a duplicate manual list.

Backlinks identify incoming references but do not define the semantics of each relationship. Referencing pages should identify whether the relationship represents realization, refinement, verification, dependency, or another defined traceability relationship.

## ConOps Relationship

The Crucible Concept of Operations describes the composition and reuse of infrastructure content within a [CI/CD Pipeline](#) workspace.

A workflow may apply the same Infrastructure Blueprint to multiple Infrastructure Environments while supplying environment-specific values separately.

This separation preserves reusable infrastructure structure while allowing each environment to define the values required for its own context.

## Delivery Phase

Phase 1 and subsequent phases

## Implementation Status

Not Assessed

Implementation status requires verification that [Crucible](#) applies the same Infrastructure Blueprint to two or more Infrastructure Environments without modifying the reusable blueprint content.

## Requirement Status

Draft

The source System Requirements Specification identifies Version 1.1 as a draft.

## Notes for Editors

This requirement page should retain the stable requirement identifier FR-CFG-003.

Changes to the Statement SHALL preserve the approved intent of the source requirement.

Material changes should receive review and should update the related outbound traceability, verification criteria, and source records.

The Source Statement should preserve the original wording from the controlling System Requirements Specification.

Verification criteria should test only blueprint reuse and preservation of reusable blueprint content.

Blueprint approval, validation, deployment, acceptance, revision history, and traceability should not be introduced as normative behavior on this page unless the Statement changes through an approved requirements process.

Incoming traceability should use the wiki Backlinks function rather than a manually maintained list.

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

```
{{section>dido:02-crusible:99-annexes:annex-c-requirements:03-functional-requirements:03-01-configuration-management:fr-cfg-003#Statement&noheader&nofooter&noeditbtn}}
```

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