

FR-DSO-005 — Automated Deployment Execution

[Go to C.3.8 DevSecOps Integration](#)

Statement

[Crucible](#) SHALL execute automated [Deployment Operations](#).

Derived From

This requirement derives from:

- Crucible System Requirements Specification, Version 1.1 Draft, Functional Requirements, FR-DSO-005

The Original Requirement states:

The system shall support automated deployment execution.[\[C1\]](#)

FR-DSO-005:

- Replaces **The system** with the defined system name [Crucible](#)
- Changes **shall** to the established uppercase normative form **SHALL**
- Replaces the weak phrase **support automated deployment execution** with the direct and observable behavior **execute automated Deployment Operations**
- Links [Deployment Operation](#) to its controlling definition

No other substantive normalization is required.

Rationale

An automated [Deployment Operation](#) applies identified deployment inputs and instructions to a selected [Deployment Target](#) without requiring interactive execution by an operator.

Automated Deployment Operations enable repeatable deployment behavior within [Development, Security, and Operations \(DevSecOps\) Workflows](#), [GitOps Workflows](#), and [CI/CD Pipelines](#).

A Deployment Operation can use:

- Deployment instructions
- [Declarative Configuration](#)
- Infrastructure Configurations

- Machine Images
- Container Images
- Application [Artifacts](#)
- Platform Services
- Deployment parameters
- An identified Deployment Target

A Deployment Operation can produce:

- A created Deployment
- A changed Deployment
- Replaced deployed resources
- Removed deployed resources
- A Deployment Rollback
- Deployment status
- Deployment logs
- Deployment metadata
- A recorded failure result

This requirement establishes automated Deployment Operation execution without prescribing:

- A particular deployment tool
- A particular Deployment Target
- A particular Deployment Platform
- A particular Infrastructure Provider
- A particular deployment strategy
- A particular triggering mechanism
- A particular [CI/CD Pipeline](#)
- Deployment validation
- Deployment approval
- Deployment rollback criteria
- Post-deployment monitoring

Separate requirements, architecture specifications, deployment definitions, and Workflow definitions govern those subjects and behaviors.

Applies To

This requirement applies to:

- [Crucible](#)
- Automated [Deployment Operations](#)
- Deployment inputs
- [Deployment Targets](#)
- [DevSecOps](#) Workflows
- [GitOps](#) Workflows
- [CI/CD Pipelines](#)

Verification

Verification confirms that:

1. A [Deployment Operation](#), its required inputs, and a [Deployment Target](#) are selected for testing
2. [Crucible](#) initiates the selected Deployment Operation without interactive operator execution
3. Crucible executes the selected Deployment Operation
4. The Deployment Operation completes with an observable status
5. The resulting Deployment, changed resources, or failure information can be identified

Referenced By

The following pages reference this requirement:

- [Annex D: Requirements Traceability](#)

Implementation Status

Implemented and Verified

Requirement Status

- ☐ Review and approve FR-DSO-005 as a leaf requirement.
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Issues

- ☐ Determine whether separate requirements define the required Deployment Operation inputs, outputs, metadata, and status information.
 - ☐ Determine whether separate requirements govern deployment approval, rollback criteria, validation, and post-deployment monitoring.
 - ☐ Determine whether separate requirements identify the Deployment Targets for which Crucible must execute automated Deployment Operations.
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Notes for Editors

This requirement page retains the stable requirement identifier FR-DSO-005.

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

The Statement uses the controlling Terms and Definitions entry:

- [Deployment Operation](#)

The Statement addresses execution of automated Deployment Operations.

FR-DSO-001 governs integration with Git-based Workflows.

FR-DSO-002 governs integration with GitOps Workflows.

FR-DSO-003 governs integration with CI/CD Pipelines.

FR-DSO-004 governs automated Build Operation execution.

FR-DSO-006 governs automated Validation Operation execution.

Do not add particular deployment tools, Deployment Targets, Deployment Platforms, Infrastructure Providers, deployment strategies, triggering mechanisms, validation behavior, rollback criteria, or monitoring obligations unless the controlling requirement changes through an approved requirements process.

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

```
{{section>dido:02-crusible:99-annexes:annex-c-requirements:03-functional-requirements:03-08-devsecops-integration:fr-dso-005#Statement&noheader&nofooter&noeditbtn}}
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