

FR-DEP-005 — Deploy Platform Services

[Go to Crucible Deployment Orchestration Requirements](#)

Statement

[Crucible](#) SHALL deploy an identified Platform Service to a target [Infrastructure Environment](#).

Source Statement

The system shall deploy platform services.

Source

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

Assessment

The source statement expresses a direct functional behavior but requires terminology and normative-language normalization.

The following Specification, Discipline, and Authoring findings apply:

- **The system** does not use the defined system name
- **shall** does not follow the established uppercase normative convention
- **Platform services** identifies a class of deployment subjects, but does not identify the target Infrastructure Environment
- The source statement does not define which Platform Services apply to a particular deployment
- The source statement does not prescribe a platform, provider, deployment tool, service implementation, or deployment method
- The source statement does not independently require activation, validation, rollback, compliance assessment, monitoring, or lifecycle recording

The normalized Statement:

- Replaces **The system** with [Crucible](#)
- Retains the direct and testable verb **deploy**
- Identifies a Platform Service as the deployment subject
- Identifies the target Infrastructure Environment
- Preserves implementation independence
- Retains one primary required behavior

The applicable [Infrastructure Configuration](#) or deployment specification identifies the Platform Service and its required configuration.

Platform Service should receive a glossary definition because it identifies a distinct deployment subject used by this requirement.

Rationale

A Platform Service supplies a shared capability used by applications, [Workloads](#), operators, or other platform components.

Platform Services may include:

- Identity services
- Authorization services
- Name-resolution services
- Secret-management services
- Key-management services
- Logging services
- Monitoring services
- Messaging services
- Data services
- Repository services
- Policy-enforcement services
- Service-discovery services
- Configuration-distribution services

A Platform Service may operate:

- As a [Containerized Workload](#)
- On a [Virtual Machine](#)
- Through a provider-managed service
- As a component of a [Kubernetes Cluster](#)
- Through another platform-specific realization

Platform Service deployment contributes to:

- Consistent shared platform capabilities
- Repeatable platform establishment
- Automated service deployment
- Controlled service configuration
- [Reproducibility](#)
- [Provenance](#)
- [Traceability](#)

Applies To

This requirement applies to:

- [Crucible](#)
- Platform Services

- Platform Service configurations
- Platform Service deployment workflows
- [Infrastructure Environments](#)
- [Infrastructure Configurations](#)
- [Container Platforms](#)
- [Kubernetes Clusters](#)
- [Virtual Machines](#)
- [Provider Implementations](#)
- [CI/CD Pipelines](#)

Verification

1. Verification SHALL confirm that [Crucible](#) executes a deployment operation for an identified Platform Service
2. Verification SHALL confirm that the deployment operation targets an identified [Infrastructure Environment](#)
3. Verification SHALL confirm that the identified Platform Service exists in the target Infrastructure Environment after successful deployment

Verification may include:

- Platform Service deployment testing
- Target-environment inspection
- Service-state inspection
- Platform-interface inspection
- Provider-interface inspection
- Deployment-output inspection
- Deployment-log inspection
- Automated [CI/CD Pipeline](#) testing

The verification record SHALL identify:

1. The deployed Platform Service
2. The target Infrastructure Environment
3. The deployment operation
4. The deployment result
5. The observed Platform Service state
6. The generated [Evidence](#)

Outgoing Traceability

This requirement realizes:

- [MO-001](#)
- [MO-002](#)
- [MO-003](#)
- [MO-006](#)

This requirement relates to:

- [FR-DEP-001 — Deploy Infrastructure Resources](#)
- [FR-DEP-002 — Deploy Virtual Machines](#)
- [FR-DEP-003 — Deploy Kubernetes Clusters](#)
- [FR-DEP-004 — Deploy Containerized Workloads](#)
- [FR-DEP-006 — Deployment Rollback](#)
- [FR-DEP-007 — Deployment Validation](#)
- [7. Infrastructure and Deployment](#)

Referenced By

The wiki Backlinks function provides the current list of pages that reference FR-DEP-005.

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 automated infrastructure and platform deployment through a Phase 1 [CI/CD Pipeline](#).

FR-DEP-005 establishes the required behavior for deploying an identified Platform Service to a target Infrastructure Environment.

Requirements governing infrastructure resources, Virtual Machines, Kubernetes Clusters, Containerized Workloads, rollback, and validation define separate behavior.

Delivery Phase

Phase 1

Implementation Status

Not Assessed

Implementation status requires verification that [Crucible](#) deploys an identified Platform Service to a target Infrastructure Environment.

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-DEP-005.

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

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

The Statement should remain limited to deployment of an identified Platform Service.

Requirements for service activation, availability, scaling, monitoring, rollback, validation, compliance assessment, and retirement should remain in their applicable requirement pages.

Verification criteria should test only the behavior stated in the normalized Statement and should not introduce additional normative obligations.

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:03-03-deployment-orchestration:fr-dep-005#Statement&noheader&nofooter&noeditbtn}}
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