

FR-MC-004 — Hybrid-Cloud Deployments

[Go to Crucible Multi-Cloud Management Requirements](#)

Statement

[Crucible](#) SHALL perform an [Infrastructure Deployment](#) across an identified combination of cloud and non-cloud [Infrastructure Environments](#).

Source Statement

The system shall support hybrid-cloud deployments.

Source

Crucible System Requirements Specification, Version 1.1 Draft, Functional Requirements, FR-MC-004.

Assessment

The source statement identifies a deployment topology but does not state the required deployment behavior.

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
- **Support** is a weak verb
- **Hybrid-cloud deployment** requires a controlled definition
- The source statement does not identify the participating Infrastructure Environments
- The source statement does not prescribe public-cloud, private-cloud, on-premises, provider, network, or orchestration technology

The normalized Statement:

- Replaces **The system** with [Crucible](#)
- Replaces **support** with **perform**
- Identifies Infrastructure Deployment as the required activity
- Identifies a combination of cloud and non-cloud Infrastructure Environments
- Preserves implementation independence

Hybrid-Cloud Deployment should receive a glossary definition.

Rationale

A Hybrid-Cloud Deployment distributes related deployment subjects across cloud and non-cloud Infrastructure Environments.

A Hybrid-Cloud Deployment may combine:

- A public-cloud environment and an on-premises environment
- A provider-managed cloud environment and a privately operated environment
- Cloud-hosted services and locally hosted workloads
- Cloud computing resources and edge computing resources

The participating environments may differ in:

- Administrative authority
- Network accessibility
- Security controls
- Resource models
- Provider interfaces
- Operational constraints
- Compliance obligations

The deployment must identify the subjects assigned to each environment and the relationships that cross environment boundaries.

Applies To

This requirement applies to:

- [Crucible](#)
- Hybrid-Cloud Deployments
- Cloud Infrastructure Environments
- Non-cloud Infrastructure Environments
- [Infrastructure Resources](#)
- [Virtual Machines](#)
- [Kubernetes Clusters](#)
- [Containerized Workloads](#)
- [Platform Services](#)
- Cross-environment relationships

Verification

1. Verification SHALL confirm that the tested deployment identifies at least one cloud Infrastructure Environment
2. Verification SHALL confirm that the tested deployment identifies at least one non-cloud Infrastructure Environment
3. Verification SHALL confirm that the tested deployment identifies the deployment subjects

assigned to each Infrastructure Environment

4. Verification SHALL confirm that [Crucible](#) deploys the identified subjects to their assigned Infrastructure Environments
5. Verification SHALL confirm that the resulting deployment satisfies the applicable cross-environment [Acceptance Criteria](#)

Verification may include:

- Hybrid-Cloud Deployment testing
- Environment-topology inspection
- Cross-environment connectivity testing
- Identity-boundary testing
- Deployment-state inspection
- Acceptance testing

The verification record SHALL identify:

1. The participating Infrastructure Environments
2. The cloud environment
3. The non-cloud environment
4. The assigned deployment subjects
5. The cross-environment relationships
6. The observed deployment results
7. The generated [Evidence](#)

Outgoing Traceability

This requirement realizes:

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

This requirement relates to:

- [C.3.3 Deployment Orchestration](#)
- [FR-MC-001 — Cloud Provider Abstraction](#)
- [FR-MC-005 — Edge Deployments](#)
- [7. Infrastructure and Deployment](#)

Referenced By

The wiki Backlinks function provides the current list of pages that reference FR-MC-004.

Incoming Traceability should be derived dynamically from backlinks.

ConOps Relationship

FR-MC-004 establishes deployment across cloud and non-cloud Infrastructure Environments while preserving a coordinated deployment description and traceability relationship.

Delivery Phase

Phase 1

Implementation Status

Not Assessed

Requirement Status

Draft

Notes for Editors

This requirement page should retain the stable requirement identifier FR-MC-004.

The Statement should remain limited to Infrastructure Deployment across an identified combination of cloud and non-cloud Infrastructure Environments.

Requirements for connectivity, security, identity federation, synchronization, and workload placement should remain separate.

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

```
{{section>dido:02-crusible:99-annexes:annex-c-requirements:03-functional-requirements:03-04-multi-cloud-management:fr-mc-004#Statement&noheader&nofooter&noeditbtn}}
```

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