

FR-MC-003 — Deployment Portability Across Cloud Providers

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

Statement

[Crucible](#) SHALL deploy the same provider-independent deployment intent to at least two cloud providers by changing only the applicable provider-specific parameters and provider implementation.

Source Statement

The system shall support deployment portability across cloud providers.

Source

Crucible System Requirements Specification, Version 1.1 Draft, Functional Requirements, FR-MC-003.

Assessment

The source statement identifies a portability objective but does not state an observable portability test.

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
- **Deployment portability** does not identify what remains unchanged
- **Across cloud providers** does not specify the minimum number of providers needed to demonstrate portability
- The source statement does not require identical provider services or identical implementation details
- The source statement does not prescribe particular cloud providers

The normalized Statement:

- Replaces **The system** with [Crucible](#)
- Replaces **support** with the direct behavior **deploy**
- Identifies the provider-independent deployment intent that remains unchanged
- Requires deployment to at least two cloud providers
- Limits expected changes to provider-specific parameters and the provider implementation

- Preserves provider-specific realization

The phrase **at least two** establishes the minimum observable condition needed to verify “across cloud providers.”

Rationale

[Cloud Portability](#) requires more than storing provider-neutral descriptions. Crucible must use common deployment intent to produce acceptable deployments through more than one cloud provider.

Portability does not require:

- Identical provider resource identifiers
- Identical service names
- Identical provider APIs
- Identical physical infrastructure
- Identical costs
- Identical performance
- Availability of every provider-specific service on every provider

Portability requires preservation of the applicable deployment intent and acceptance criteria while provider-specific realization details vary.

Applies To

This requirement applies to:

- [Crucible](#)
- [Cloud Portability](#)
- Provider-independent deployment intent
- Provider-specific parameters
- [Provider Implementations](#)
- Cloud providers
- [Infrastructure Baselines](#)
- [Acceptance Criteria](#)
- Deployment workflows

Verification

1. Verification SHALL confirm that one provider-independent deployment intent is selected for testing
2. Verification SHALL confirm that [Crucible](#) deploys the selected intent to at least two cloud providers
3. Verification SHALL confirm that each provider deployment uses the applicable provider implementation
4. Verification SHALL confirm that differences in deployment input are limited to identified

provider-specific parameters

5. Verification SHALL confirm that the provider-independent deployment intent remains unchanged
6. Verification SHALL confirm that each resulting deployment satisfies the common [Acceptance Criteria](#)

Verification may include:

- Cross-provider deployment tests
- Provider implementation tests
- Deployment-input comparison
- Infrastructure Baseline comparison
- Provider-parameter comparison
- Deployment-result comparison
- Acceptance testing

The verification record SHALL identify:

1. The provider-independent deployment intent
2. The tested cloud providers
3. The provider implementations
4. The provider-specific parameters
5. The common Acceptance Criteria
6. The provider-specific Acceptance Criteria
7. The observed deployment results
8. The generated [Evidence](#)

Outgoing Traceability

This requirement realizes:

- [MO-003](#)
- [KVP-006 — Enable Cloud Portability](#)

This requirement relates to:

- [FR-MC-001 — Cloud Provider Abstraction](#)
- [FR-MC-002 — Provider-Specific Extensions](#)
- [C.3.3 Deployment Orchestration](#)
- [7. Infrastructure and Deployment](#)

Referenced By

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

Incoming Traceability should be derived dynamically from backlinks.

ConOps Relationship

The Crucible Concept of Operations describes provider-independent deployment information combined with provider-specific parameters and provider implementations.

FR-MC-003 establishes the observable cross-provider deployment behavior required for Cloud Portability.

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-003.

The Statement should remain limited to deployment of the same provider-independent intent through at least two cloud providers.

Portability should not be interpreted as requiring identical provider-specific realizations.

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-003#Statement&noheader&nofooter&noeditbtn}}
```

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