

ENV-004a — Define Deterministic Environmental Conditions

[Go to ENV-004 — Provide Deterministic Test Environment](#)

Statement

The [DIDO-TE](#) SHALL define the environmental conditions requiring control, measurement, or recording for each [Test Execution](#).

Derived From

- [ENV-004 — Provide Deterministic Test Environment](#)
- [\[DTE5\] DIDO-TE Requirements Register](#), source requirement identifier and obligation to be assigned
- [\[DTE6\] Structured Information Processing Reference Architecture \(SIP-RA\)](#)
- [\[DTE7\] Federated Data Interpretation Systems Reference Architecture \(FDIS-RA\)](#)

Rationale

A deterministic [Test Environment](#) depends on the explicit identification of environmental conditions capable of influencing a Test Execution or its resulting [Test Results](#).

These conditions include applicable [Baselines](#), [Configuration](#) values, [Test Inputs](#), time sources, random values, execution ordering, resource allocation, communication conditions, external dependencies, and other environmental variables identified by the applicable [Test Definition](#).

The definition of each condition establishes its required value, range, sequence, tolerance, measurement method, recording obligation, and permitted variation. It also distinguishes conditions requiring direct control from conditions requiring measurement and recording.

This controlled descriptive information provides the basis for configuring, validating, observing, and reproducing the Test Environment.

Applies To

- [Test Environment](#)
- [Test Definition](#)
- [Test Execution](#)
- [Test Object](#)
- [Node](#)
- [Test Input](#)

- [Test Resource](#)
- [Baseline](#)
- [Configuration](#)
- [Constraint](#)
- [Evidence](#)

Verification

Verification confirms that:

- The controlled descriptive information identifies each environmental condition capable of influencing the applicable Test Execution or Test Results.
- The identified conditions address Baselines, Configuration values, Test Inputs, time sources, random values, execution ordering, resource allocation, communication conditions, and external dependencies, where applicable.
- Each identified condition has a unique identity and unambiguous description.
- Each identified condition specifies its applicable Test Environment element.
- Each identified condition specifies whether the DIDO-TE controls the condition or measures and records its variation.
- Each controlled condition specifies its required value, range, sequence, state, or tolerance.
- Each measured condition specifies its measurement method, unit, precision, sampling criteria, and recording obligation, where applicable.
- Each condition identifies the Test Definition and Test Execution to which it applies.
- The DIDO-TE maintains [Traceability](#) among each environmental condition, its governing source, applicable Test Environment element, Test Definition, and Test Execution.
- An unidentified, ambiguous, unsupported, incomplete, conflicting, or untraceable environmental condition constitutes nonconformance with this requirement.

Verification includes:

- Inspection of the controlled descriptive information defining deterministic environmental conditions
- Inspection of the identified sources of environmental variation
- Inspection of the control or measurement classification assigned to each condition
- Inspection of required values, ranges, sequences, states, tolerances, and measurement criteria
- Comparison of the defined conditions with the applicable Test Definition
- Inspection of Traceability records connecting each condition to its governing source, Test Environment element, Test Definition, and Test Execution
- A negative assessment using an omitted, ambiguous, incomplete, conflicting, or untraceable environmental condition
- Confirmation that the negative assessment produces a nonconformance result

Referenced By

Plugin Backlinks: Nothing was found.

Related Architecture Sections

- Add links to the architecture sections governing environmental-condition definition, Test Definition preparation, Configuration control, environmental monitoring, Evidence, and Traceability.

Delivery Phase

Assign the applicable delivery phase.

Requirement Status

Draft

Statement Reference

Use the following syntax to reference this requirement's Statement section from another DokuWiki page:

```
{{section>dido:03-dido-te:99-annexes:annex-c-requirements:02-test-environment-requirements:env-004-provide-deterministic-test-environment:env-004a-define-deterministic-environmental-conditions#Statement&noheader&nofooter&noeditbtn}}}
```

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