

NOD-001h — Validate the Node Definition

[Go to NOD-001 — Define a Node](#)

Statement

The [DIDO-TE](#) SHALL validate each [Node](#) Definition before using it to provision, configure, or execute a Node.

Derived From

- [NOD-001 — Define a Node](#)
- [\[DTE5\] 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 Node Definition provides the controlled description used to provision, configure, execute, observe, and assess a Node. Missing, ambiguous, inconsistent, incompatible, or unauthorised definition content introduces uncertainty into the Test Environment and weakens the interpretation of Test Results.

Validation determines whether the Node Definition satisfies its governing structural, semantic, integrity, compatibility, and approval criteria. Validation occurs before the DIDO-TE relies on the definition for an applicable Node activity.

A recorded validation result establishes which Node Definition and version the DIDO-TE assessed, which criteria it applied, which findings it produced, and whether the definition was accepted or rejected.

Applies To

- [Node](#)
- [Test Environment](#)
- [Test Definition](#)
- [Configuration](#)
- [Constraint](#)
- [Dependency](#)
- [Evidence](#)

Verification

Verification confirms that:

- Each Node Definition has a unique identity.
- Each Node Definition identifies its version, revision, status, authority, and applicable effective period.
- Each Node Definition identifies the Node or Node type to which it applies.
- The DIDO-TE identifies the validation criteria applicable to the Node Definition.
- The validation criteria identify the required structure, content, syntax, semantics, integrity, compatibility, and approval conditions.
- The DIDO-TE verifies that the Node Definition conforms to its governing schema, metamodel, template, or description format.
- The DIDO-TE verifies that the Node Definition contains each mandatory element.
- The DIDO-TE verifies that mandatory values remain unambiguous and use permitted formats, types, units, ranges, and controlled terms.
- The DIDO-TE verifies that references contained in the Node Definition resolve to uniquely identified and applicable artifacts.
- The DIDO-TE verifies that the Node role and Node type remain identified and mutually consistent.
- The DIDO-TE verifies that the defined interfaces satisfy applicable compatibility and completeness criteria.
- The DIDO-TE verifies that mandatory Dependencies remain identified and compatible with the Node type, interfaces, and Test Environment.
- The DIDO-TE verifies that resource requirements remain complete and compatible with the applicable Test Environment.
- The DIDO-TE verifies that lifecycle states, transitions, preconditions, postconditions, and completion criteria remain complete and internally consistent.
- The DIDO-TE verifies that observation requirements remain sufficient to assess the defined Node behaviour and condition.
- The DIDO-TE verifies consistency among the Node's role, type, interfaces, Dependencies, resources, lifecycle behaviour, and observation requirements.
- The DIDO-TE verifies consistency between the Node Definition and the applicable Test Definition.
- The DIDO-TE verifies the identity, provenance, integrity, approval status, and change history of the Node Definition.
- The DIDO-TE identifies each missing, ambiguous, malformed, inconsistent, incompatible, unresolved, unauthorised, or obsolete definition element.
- The DIDO-TE assigns a uniquely identified validation result to the assessed Node Definition and version.
- The validation result identifies the criteria applied, checks performed, findings produced, exceptions accepted, and resulting determination.
- The DIDO-TE rejects a Node Definition that fails a mandatory validation criterion.
- The DIDO-TE prevents a rejected or unvalidated Node Definition from governing Node provisioning, configuration, or execution.
- The DIDO-TE requires revalidation after a material change to the Node Definition, its governing criteria, or a referenced artifact.
- The DIDO-TE records the validated Node Definition and validation result as [Evidence](#).
- The DIDO-TE maintains [Traceability](#) among the Node Definition, its version, governing criteria, referenced artifacts, validation activities, findings, exceptions, approval, and validation result.

- A missing, incomplete, inconsistent, incompatible, unauthorised, obsolete, unvalidated, or untraceable mandatory Node Definition constitutes nonconformance with this requirement.

Verification includes:

- Inspection of the Node Definition identity, version, status, authority, and change history
- Inspection of the applicable validation criteria
- Structural and syntactic validation against the governing schema, metamodel, template, or format
- Semantic validation of required terms, values, units, ranges, and relationships
- Resolution and integrity verification of referenced artifacts
- Consistency assessment across the Node role, type, interfaces, Dependencies, resources, lifecycle behaviour, and observation requirements
- Compatibility assessment against the applicable Test Environment and Test Definition
- A negative assessment involving a missing mandatory definition element
- A negative assessment involving an unresolved or altered reference
- A negative assessment involving incompatible interfaces or Dependencies
- A negative assessment involving inconsistent lifecycle or observation requirements
- Confirmation that a rejected or unvalidated Node Definition cannot govern Node provisioning, configuration, or execution
- Modification of a material definition element to confirm revalidation
- Inspection of validation findings, exceptions, determinations, Evidence, and Traceability

Referenced By

- [NOD-002a — Select the Node Definition](#)
- [NOD-002h — Validate the Provisioned Node](#)

Related Architecture Sections

- Add links to the architecture sections governing Node definitions, validation, configuration control, change control, provisioning, Test Definition, 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:03-node-requirements:nod-001-define-a-node:nod-001h-validate-the-node-definition#Statement&noheader&nofooter&noeditbtn}}
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