NOD-005c — Provide Node Inputs

Go to NOD-005 — Execute a Node

Statement

The DIDO-TE SHALL provide each applicable Test Input to the intended Node during Test Execution.

Derived From

- NOD-005 — Execute a Node
- NOD-005a — Authorize Node Execution
- NOD-005b — Initiate Node Execution
- [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

Node inputs include Test Inputs, control instructions, execution parameters, messages, data, events, signals, files, and other information supplied to a Node during Test Execution.

The applicable Test Definition identifies the required input, source, destination, format, type, value, sequence, timing, delivery mechanism, and applicable constraints.

Controlled input delivery ensures that the intended Node receives the intended input through the specified Node Binding under reproducible conditions. It also preserves the relationship between the supplied input, the resulting Node behavior, and the corresponding Test Result.

An incorrect, incomplete, duplicated, corrupted, mistimed, misdirected, unauthorized, or untraceable input may invalidate Test Execution and its Test Results.

Applies To

- DIDO-TE
- Node
- Node Definition
- Node Implementation
- Node Configuration
- Node Binding
- Test Definition
- Test Input

- Test Resource
- Test Environment
- Test Execution
- Test Result
- Evidence
- Traceability

Verification

Verification confirms that:

- The DIDO-TE uniquely identifies each Node input.
- The DIDO-TE identifies the Test Definition and Test Execution governing each input.
- The DIDO-TE identifies the authorized source and intended destination of each input.
- The DIDO-TE identifies each input’s type, format, value, version, sequence, timing, and delivery mechanism.
- The DIDO-TE confirms that each input falls within the applicable execution authorization.
- The DIDO-TE confirms that each input satisfies applicable validity, integrity, security, privacy, jurisdictional, residency, and handling constraints.
- The DIDO-TE confirms that the intended Node occupies the required lifecycle and execution state before providing the input.
- The DIDO-TE provides each input through its specified Node Binding or equivalent input mechanism.
- The DIDO-TE provides inputs in the sequence and at the time or event specified by the Test Definition.
- The DIDO-TE verifies successful delivery or identifies the actual delivery outcome.
- The DIDO-TE records whether the intended Node accepted, rejected, ignored, or failed to receive the input.
- The DIDO-TE prevents an unauthorized source from supplying an input.
- The DIDO-TE prevents delivery of an input to an unintended Node, Test Environment, Test Execution, interface, endpoint, topic, route, or other destination.
- The DIDO-TE detects a missing, incorrect, incomplete, duplicated, corrupted, altered, stale, mistimed, misordered, misdirected, or unauthorized input.
- The DIDO-TE distinguishes a deliberately repeated input from an unintended duplicate.
- The DIDO-TE preserves the identity and integrity of each input or an authorized immutable reference to it.
- The DIDO-TE protects sensitive input content from unauthorized disclosure.
- The DIDO-TE identifies the effect of an input delivery exception on the Node, Test Execution, Test Results, and other affected participants.
- The DIDO-TE prevents continued Test Execution when an input exception invalidates the applicable execution conditions.
- The DIDO-TE records the input identity, source, destination, content or protected reference, type, format, value, version, sequence, timing, delivery mechanism, delivery outcome, findings, and exceptions.
- Repeated delivery of an equivalent input under equivalent controlled conditions produces equivalent delivery outcomes within specified tolerances.
- The DIDO-TE maintains Traceability among the Test Definition, Test Execution, execution authorization, Node, Node Configuration, Node Binding, input source, input identity, delivery activity, Node response, Test Results, exceptions, and resulting Evidence.

- An incorrect, incomplete, duplicated, corrupted, mistimed, misordered, misdirected, unauthorized, or untraceable Node input constitutes nonconformance with this requirement.

Verification includes:

- Inspection of input identities and governing Test Definitions
- Inspection of authorized input sources and intended Node destinations
- Inspection of input types, formats, values, versions, sequences, timing, and delivery mechanisms
- Observation of input delivery through the specified Node Binding
- Confirmation of delivery and Node acceptance or rejection
- A negative assessment involving an unauthorized input source
- A negative assessment involving an unintended destination
- A negative assessment involving a corrupted or altered input
- A negative assessment involving a duplicated, mistimed, or misordered input
- Confirmation that sensitive inputs remain protected
- Confirmation that an invalidating input exception prevents continued Test Execution
- Inspection of input delivery records, Node responses, Test Results, exceptions, Evidence, and Traceability

Referenced By

- NOD-005d — Observe Node Execution
- NOD-005e — Control Node Execution
- NOD-005f — Handle a Node Execution Exception
- NOD-005g — Complete Node Execution
- NOD-005h — Record Node Execution

Related Architecture Sections

- Add links to the architecture sections governing Test Inputs, Node Bindings, input delivery, execution sequencing, Test Results, 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-005-execute-a-node:nod-005c-provide-node-inputs#Statement&noheader&nofooter&noeditbtn}}
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