

NET-004c — Configure Internet Quality of Service

[Go to NET-004 — Configure Communication Behavior](#)

Statement

The [DIDO-TE](#) SHALL configure the [Internet Quality of Service \(Internet QoS\)](#) specified for communication through each [Virtual Network](#).

Source

- [\[DTE1\] U.S. Patent Application US20220237111A1](#), representation and configuration of communication conditions within Virtual Networks
- [\[DTE2\] Non-Traditional BAA Submission](#), Virtual Networks and Communication
- [\[DTE9\] Distributed Immutable Data Object Reference Architecture \(DIDO-RA\)](#), Quality of Service and distributed communication concepts

Rationale

[Internet Quality of Service \(Internet QoS\)](#) describes the quality of packet delivery provided by an Internet Protocol network using measurable or controlled network communication characteristics.

The governing [Test Definition](#) specifies the Internet QoS required for communication through the [Virtual Network](#).

Configuring Internet QoS allows the Test Environment to reproduce network communication conditions relevant to the distributed system under test independently of the physical network used to realize the Virtual Network.

Internet QoS remains distinct from DDS Quality of Service. Internet QoS concerns packet delivery provided by an IP network, while DDS Quality of Service governs data-distribution behavior among DDS entities.

This requirement does not prescribe a particular Internet QoS mechanism, network technology, traffic-management mechanism, middleware implementation, or physical network.

Applies To

- [DIDO-TE](#)
- [Virtual Network](#)
- [Internet Quality of Service \(Internet QoS\)](#)

- [Communication Characteristic](#)
- [Communication Parameter](#)
- [Test Environment](#)
- [Test Definition](#)
- [Configuration](#)

Verification

Verification confirms that:

1. The Internet QoS specified by the governing Test Definition is configurable for communication through the Virtual Network.
2. The configured Internet QoS can be determined independently of the physical network used to realize the Virtual Network.
3. The configured Internet QoS is distinguishable from DDS Quality of Service.
4. The configured Internet QoS is traceable to the governing Test Definition.
5. Configuring Internet QoS does not require a particular networking product, traffic-management mechanism, or network implementation.

Verification includes a Test Definition specifying Internet QoS and confirms that communication through the Virtual Network is configured with the specified Internet QoS.

Traceability

- [NET-004 — Configure Communication Behavior](#)

ConOps Relationship

This requirement configures the Internet Quality of Service associated with communication through a Virtual Network.

NET-004a separately configures [Latency](#), and NET-004b separately configures the [Communication Protocol](#).

Delivery Phase

TBD

Requirement Status

Draft

Statement Reference

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{{section>dido:03-dido-te:99-annexes:annex-c-requirements:03-functional-requirements:03-04-virtual-network-and-communication-requirements:net-004-configure-communication-characteristics:net-004c-configure-quality-of-service#Statement&noheader&nofooter&noeditbtn}}
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