

Real-time Publish-Subscribe (RTPS)

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Real-time Publish-Subscribe (RTPS) Wire Protocol defines a set of requirements for a wire protocol suitable for the [Data Distribution Service \(DDS\)](#). Primary considerations in the design of the RTPS wire protocol are: [performance](#), configurability (tuning quality-of-service), [fault-tolerance](#) (no single points of failure), extensibility (support new transports), plug-and-play connectivity (automatic discovery), [modularity](#), [scalability](#), and [type safety](#).

RTPS imposes very little requirements on the underlying transport: a connectionless service capable of sending packets [best-effort](#) is sufficient. A connection-oriented protocol can be used but is not required. The mechanisms of the underlying protocol map to the generalized notions of the RTPS [Platform Independent Model \(PIM\)](#).

The original [DDSI-RTPS](#) specification defined a [Platform Specific Model \(PSM\)](#) built upon the [User Datagram Protocol \(UDP\)](#) because of its simplicity, universal [availability](#), best-effort and connectionless capabilities, predictable behavior, scalability, and [multicast](#) support.

Source: [Real-time Publish-Subscribe \(RTPS\)](#)

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