

RELIABILITY QoS Parameter

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The RELIABILITY policy indicates the level of reliability requested by a DataReader or offered by a DataWriter. These levels are ordered, BEST_EFFORT being lower than RELIABLE. A DataWriter offering a level is implicitly offering all levels below.

The setting of this policy has a dependency on the setting of the RESOURCE_LIMITS policy. In case the RELIABILITY kind is set to RELIABLE the write operation on the DataWriter may block if the modification would cause data to be lost or else cause one of the limits in specified in the RESOURCE_LIMITS to be exceeded. Under these circumstances, the RELIABILITY max_blocking_time configures the maximum duration the write operation may block.

If the RELIABILITY kind is set to RELIABLE, data-samples originating from a single DataWriter cannot be made available to the DataReader if there are previous data-samples that have not been received yet due to a communication error. In other words, the service will repair the error and re-transmit data-samples as needed in order to re-construct a correct snapshot of the DataWriter history before it is accessible by the DataReader.

If the RELIABILITY kind is set to BEST_EFFORT, the service will not re-transmit missing data-samples. However for datasamples originating from any one DataWriter the service will ensure they are stored in the DataReader history in the same order they originated in the DataWriter. In other words, the DataReader may miss some data-samples but it will never see the value of a data-object change from a newer value to an older value.

The value offered is considered compatible with the value requested if and only if the inequality offered kind $\geq$ requested kind evaluates to TRUE. For the purposes of this inequality, the values of RELIABILITY kind are considered ordered such that BEST_EFFORT < RELIABLE.

Source: [DDS 1.4 Spec](#)

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