InterCOM DDS

KONGSBERG

InterCOM DDS

Real-Time Networking Middleware

About InterCOM DDS™

InterCOM DDS is a middleware application designed to facilitate efficient and secure communications between multiple, disparate systems and sensors, using the open standard Data Distribution Service (DDS) protocol. InterCOM DDS provides high performance, distributed data messaging services for applications and hardware requiring a real-time open architecture or service-oriented architecture.

InterCOM DDS is an open standard middleware solution for high performance data distribution. It allows developers to quickly define and share real time data across systems, networks, platforms and processors, significantly reducing the effort to integrate real time distributed systems. It addresses all data distribution requirements, from command sequences to data checkpoints and reconstitution. Due to its proven interoperability, InterCOM DDS is ideal for heterogeneous systems with numerous networks and OS platforms.

InterCOM DDS has been optimized for defense and security applications, and is interoperable with any OMG-compliant DDS application. DDS is an open standard maintained by the Object Management Group (OMG) consortium. Kongsberg Defence & Aerospace is a contributing member of the OMG consortium.

Add a Broad Range of Capabilities to Your Application

The API is available in multiple languages and platforms, and includes the following capabilities:

- High-reliability publish and subscribe API
- Detailed quality of service controls
- Encrypted communication with DDS Security
- Easy-to-use debug tools
- Complete reference solutions
- Intuitive training tutorials
- Complete documentation

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Through our participation in Object Management Group DDS standards groups, Kongsberg Defence & Aerospace is able to provide a data distribution service that can connect with any application or device that supports the OMG RTPS protocol. It provides a highly reliable publish and subscribe backbone to optimize complex systems and maximize available network resources.

With more than 15 years of deployment in some of the most demanding defense and military applications, InterCOM DDS has proven to be reliable, stable and efficient while providing the high performance that complex defense and security projects demand.

Publish and Subscribe

InterCOM DDS leverages a publish and subscribe model over UDP and shared memory, which simplifies and facilitates data distribution from sensors to many subscribers without explicit IP addressing. DDS is designed for battlefield conditions, and provides a very robust peer-to-peer network architecture, with no brokers and no single point of failure.

Quality of Service

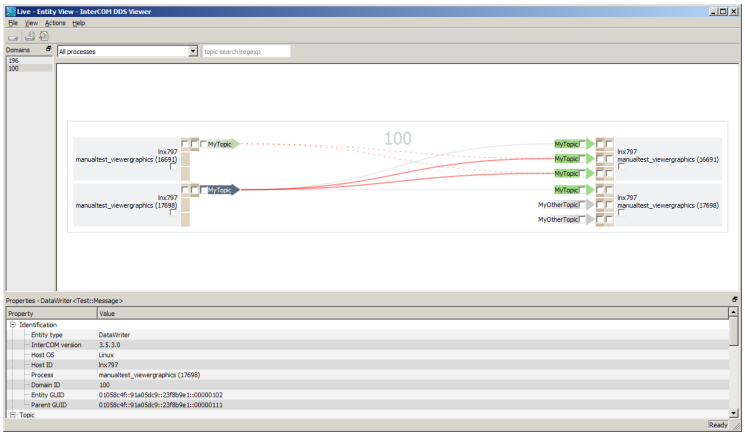
Quality of Service (QoS) policies are used to prioritize data flows and manage system performance. Policies are used to prioritize data delivery and error handling to optimize system resource usage. Intra-node communication via shared memory is extremely fast and further reduces memory use. InterCOM DDS provides several mechanisms for filtering data by both the publisher and subscriber.

QoS filtering helps the system to integrate and blend secure, high-speed, lossy and unreliable links into one system. Policies can be divided into custom categories for refined control.
The categories can include:

- Volatility
- Transport timeliness
- Transport integrity
- Entity configuration
- Entity metadata

InterCOM DDS Viewer

The InterCOM DDS middleware includes an integrated Viewer Tool application. The viewer tool allows developers and integrators to view the network traffic and inject test messages.



The DDS viewer allows you to record and view network traffic, and insert test messages into the data stream

Comprehensive Documentation and Training

InterCOM DDS is supported with comprehensive documentation and training resources, including:

- Complete developer-oriented documentation set
- Sample application demonstrating key components and functionality
- Viewer for monitoring network traffic, injecting messages, and testing
- Instructor-led 2-day training course focused on your integration issues

SPECIFICATIONS

Multi-platform	SDKs available for Windows, Linux, and VxWorks
Multi-language	APIs available for C++, C++11, Java, C# and Ada
High Performance Engine	Ensures reliable, high performance data delivery
Open-standard Interface	Open-standard Data Distribution Service API managed by OMG can reduce development cost
Communication Middleware	Easily define, send, marshal and de-marshal data across platforms and languages
Publish and Subscribe	Anonymous publish and subscribe communication model makes system integration easier
Quality of Service	Maximize network resources and behavior by customizing QOS policies
Object-oriented API	Easily integrate the API into your software architecture

For further information contact us at:
kda.InterCOMDDS@kongsberg.com

Kongsberg Defence & Aerospace AS
P.O. Box 1003
N-3601 Kongsberg, Norway