Security Model

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The **Security Model** for data_distribution_service_dds defines the security principals (users of the system), the objects that are being secured, and the operations on the objects that are to be restricted. DDS applications share information on DDS Global Data Spaces (called DDS Domains) where the information is organized into Topics and accessed by means of read and write operations on data-instances of those Topics.

Ultimately what is being secured is a specific DDS Global Data Space (domain) and, within the domain, the ability to access (read or write) information (specific Topic or even data-object instances within the Topic) in the DDS Global Data Space.

Securing DDS means providing:

- **Confidentiality** of the data samples
- **Integrity** of the data samples and the messages that contain them
- **authentication** of DDS writers and readers•Authorization of DDS writers and readers
- **Message-origin** authentication
- **Data-origin** authentication
- **Non-repudiation** of data (Optional)

Source: https://www.omg.org/spec/DDS-SECURITY/1.1/PDF#Security_mode Section 7.1

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Last update: **2020/09/25 14:41**