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An ADLINK Industry White Paper

Vortex OpenSplice Tuner



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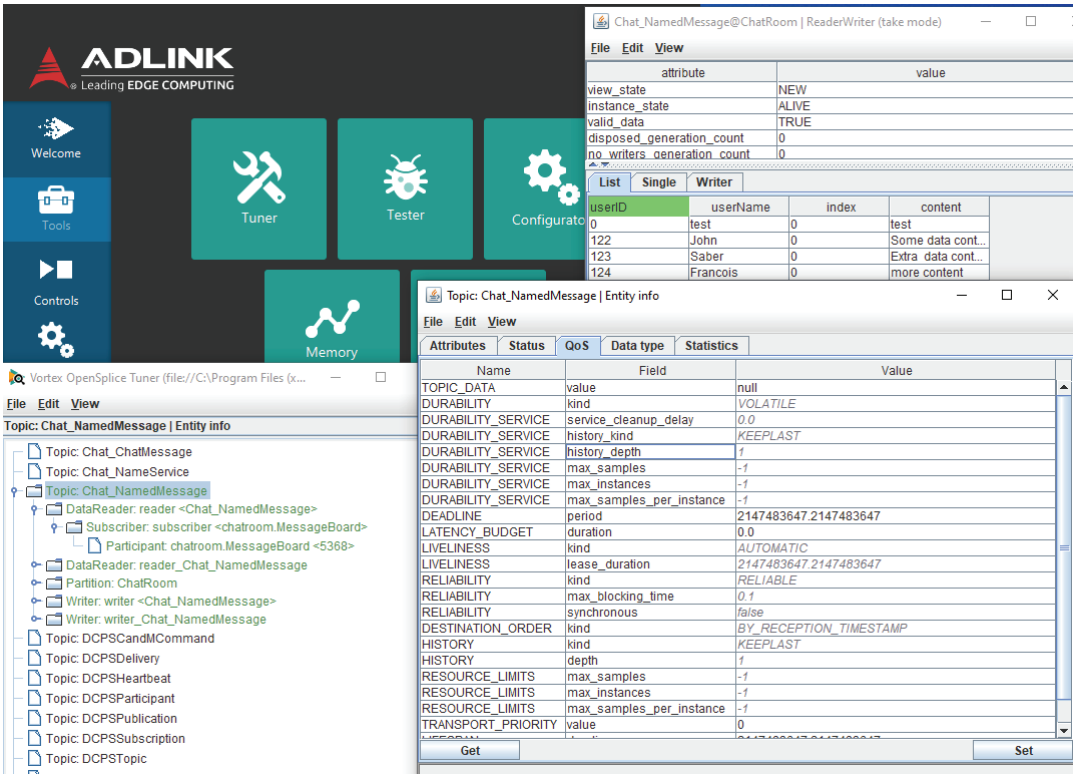
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Overview

The Vortex OpenSplice Tuner is a powerful deployment tool within ADLINK's Vortex OpenSplice DDS suite. This tool offers total control over a deployed Vortex OpenSplice based DDS-system from any local or remote platform that supports the Java language.

The 100% Java based Vortex OpenSplice Tuner tool greatly aids the design, implementation, test and maintenance of Vortex OpenSplice based distributed systems. The tuner allows you also to perform white box testing for any given application and see the DDS based system from the application perspective.



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Key Benefits

Vortex OpenSplice Tuner can be used during all phases of software development:

- **Design**: During the design phase, once the information model is established, the Vortex OpenSplice Tuner can import the topic xml descrition or visualize those already defined and registred in the DDS domain. It also allows creation of publishers/writers and subscribers/readers on the fly to experiment and validate how this data should be treated by the middleware regarding QoSs such as persistence and durability, history, reliability or get initial results on data distribution latency.

- **Implementation**: During the implementation phase, where actual application-level processing and distribution of this information is developed, the Vortex OpenSplice Tuner allows injection of test input-data by creating publishers and writers on the fly, as well as validating the responses by creating subscribers and readers for any produced topics.

- **Test and Deployment**: During the test or deployment phases, the total system can be monitored by inspection of data (by making snapshots of writer- and reader-history caches) and behavior of readers & writers (statistics, like how long data has resided in the reader's cache before it was read), as well as monitoring of the data-distribution behavior (memory-usage, transport-latencies, latency).

- **Maintenance**: Maximum flexibility for planned and ad-hoc maintenance is offered by allowing the 100% Java based Vortex OpenSplice Tuner tool, which can be executed on any Java enabled platform without the need for Vortex OpenSplice to be installed, to remotely connect via the web-based SOAP protocol to any reachable Vortex OpenSplice system around the world, as long an HTTP-connection can be established with the Vortex OpenSplice computing-nodes of that system. Using such a dynamic-connection, critical data may be logged and data-sets may be injected into the system to be maintained, such as new settings which can be automatically persisted using the QoS features as offered by the persistence-profile supported by Vortex OpenSplice.

The Vortex OpenSplice Tuner is differentiated from other vendor's DDS tooling based by its dynamic capabilities to not only connect to any remote Vortex OpenSplice based system at runtime, but also its capabilities to create, discover and (QoS) tune any DDS entities on-the-fly. Vortex OpenSplice Tuner provides facilities to observe entities in the Vortex OpenSplice system and browse over their (mutual) relationships using different views.

The Vortex OpenSplice Tuner can work both with the Opensplice Federated or with the Standalone modes. Further informations on the deployment modes can be found at [1].

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Key Features

The key features of Vortex OpenSplice Tuner include:

- **Automatic discovery** of all the DDS applications and their related Data Readers and Writers as well as the DDS services that are operating in the active DDS domain.
- **Interactive browsing** to allow users to:
  - » Visualize the DDS Global Data Space, by displaying all its topics, all its data instances and their samples.
  - » Analyze the meta-data that describes the state of data.
  - » Browse the DDS partitions to discover the list of Publisher and Subscribers within each DDS partition.
- **Inspection** of any application data-cache and make cache-snapshots.
- **Monitor & Control** of all DDS-entities and their relationships, including **QoS** settings and services such as communication and durability, Record and Replay (RnR) DDS services.
- **Update** the DDS changeable **QoSs** at the runtime.
- **Dynamic creation** of readers with appropriate filters or queries to inspect the data being exchanged on the network and creation of writers with input validation to inject new data in the system.
- **The Export or Import** of topics description and their data samples in XML based file.
- **Remote connection** via the SOAP protocol from any place in the network without the need to have a DDS infrastructure running.

Support/Maintenance

ADLINK provides world class support, delivering a timely, reliable service to ensure every customer's business success. We offer a wide range of Support and Maintenance Programs for Vortex OpenSplice which can be tailored to customer's best fit requirements. Vortex OpenSplice Tuner tool is supported by the Standard and Silver annual support programs.

References and For More Information

For further information regarding Vortex OpenSplice, please e-mail: ist_info@adlinktech.com
or visit: www.adlinktech.com
[1] : Vortex Opensplice Architecture white paper.

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