

OpenSpliceDDS RnR Manager

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Innovation shapes the vision.

Hard work brings it to life.

Determination turns it into success."

— ZettaScale Technology

About ZettaScale

ZettaScale's mission is to bring to every connected human and machine the unconstrained freedom to communicate, compute and store — anywhere, at any scale, efficiently and securely. We strive for excellence as engineers and humans -- we firmly believe that we can't separate "the engineer" from "the human". As such we embrace and promote the Seven Knightly Virtues of Courage, Justice, Mercy, Generosity, Faith, Nobility and Hope.



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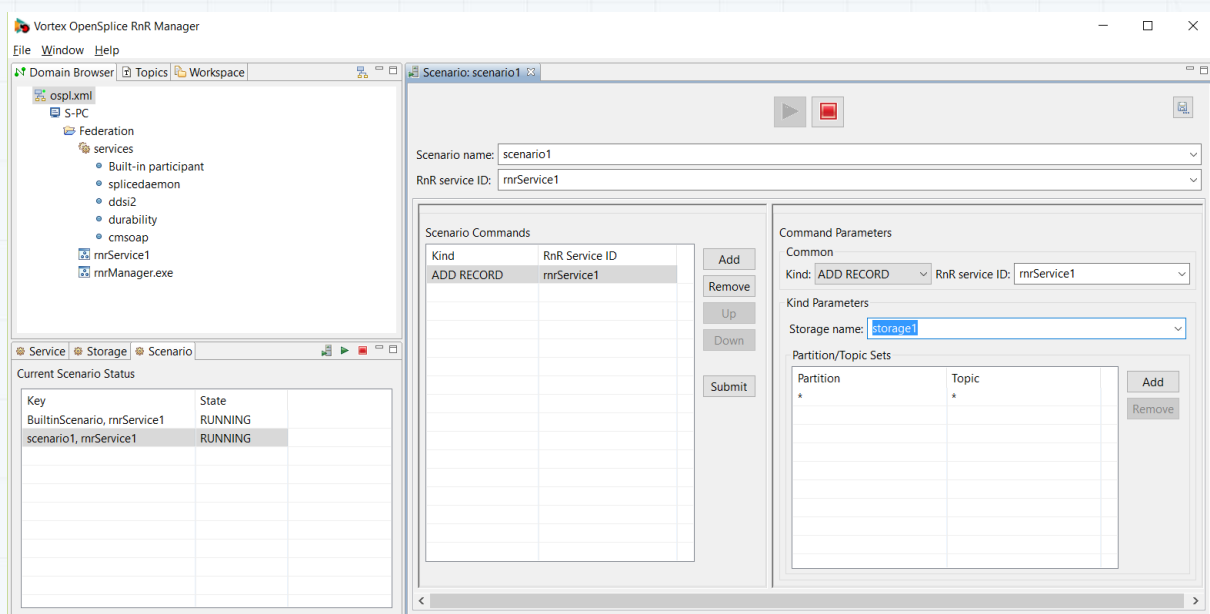


OpenSpliceDDS is part of the ZettaScale DDS offering - it is a fully featured DDS implementation targeted for enterprise platforms and devices. It is fully interoperable with Cyclone DDS, Vortex Link and Vortex Insight products. The OpenSpliceDDS product offering is made of the Core offering and a set of commercially available add-ons and extra features. The OpenSpliceDDS Core is a full implementation of the Object Management Group (OMG) Data Distribution Service for Real-time Systems (henceforth DDS) rev1.4 standard (DCPS profiles) and the OMG-DDSI-RTPS v2.3 interoperable wire-protocol.

Overview

The OpenSpliceDDS Record and Replay Manager, or RnR Manager, is a tool to control OpenSpliceDDS Record and Replay Services (RnR Services) and to inspect and change recorded data.

RnR Manager uses the internal Control and Monitoring API for access to the OpenSpliceDDS middleware. Connections to local nodes via JNI and remote nodes (via SOAP) are supported. The manager tool does not need to have OpenSpliceDDS installed locally. A connection can be made remotely to a node that is running OpenSpliceDDS.





Key Features

Features provided by the RnR Manager product include:

- Control and monitor all Record and Replay Service instances in the system.
- Connect to local and remote nodes.
- Monitor RnR Service status (scenarios, storages and services).
- Record and replay scenarios.
- Import and export recorded data.
- Query and edit recorded data.
- One-Click Recording: start recording selected DDS topics directly from the Topics view, using pre-populated default parameters that can be edited if required.
- Scenario authoring and reuse: create and edit scenario commands in the Scenario File Editor, save them as an xml file, and load and submit them to the DDS system whenever needed.

Key Concepts

Services

An RnR Service is identified by a unique name, known as its `nrId`. A domain may run multiple RnR Service instances, each addressed individually by name, or together using a wildcard `*` to target all available RnR Services in a domain.

Scenarios

The actions of an RnR Service are organized into scenarios: named groups of commands — including Add Record, Add Replay, Remove Record, Remove Replay, Set Replay Speed, Truncate, Start, Stop, Suspend and Config — that share the same scenario name. A special scenario, the `BuiltinScenario`, is always running while the service is operational and is used by RnR Manager to configure and control the service.

Storages

Each RnR Service operates in conjunction with storages, which can be configured statically in a configuration file or dynamically through interaction with the service. RnR Manager can create new storages and monitor their state directly.

- Flexible storage formats: storages can be recorded in XML for human-readable inspection and post-processing, or in the more compact, binary CDR format for efficient recording and replaying of high-volume data

Samples



Recorded samples are stored together with metadata such as partition, topic name, and recording timestamp. Once a storage is imported into RnR Manager, its data can be queried, viewed and updated using the Storage Editor: select the fields to display, filter samples with SQL-like WHERE conditions and time-range criteria, order the results, and edit individual samples or multiple rows at once.

Time Ranges

Time ranges can be used to limit the selection of data in a replay session, so that only the samples recorded within a specific start and end timestamp are replayed.

Benefits

- Non-intrusive by design: when deployed on a dedicated computing node and control/status traffic is confined locally, recording over a multicast-enabled network can be non-intrusive to the existing system
- Data-centric control: RnR Services are controlled the DDS way, using command and status topics, enabling remote control of the service from anywhere in the system
- Remote management without local installation: RnR Manager can connect to remote OpenSpliceDDS nodes without requiring OpenSpliceDDS to be installed on the Manager host
- A single tool for the full record-and-replay workflow: from defining a domain connection, through creating storages and running scenarios, to reviewing and editing recorded samples

Availability

- Works with OpenSpliceDDS V7.x
- Requires Java version 1.8
- Platforms: Windows and Linux
- RnR Manager does not need OpenSpliceDDS installed on the same system in order to control the RnR service; a local installation is required only for connecting to a local domain using a Domain URI or Domain ID, and for the storage Import/Export functions

Support/Maintenance

ZettaScale 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 OpenSpliceDDS which can be tailored to customer's best fit requirements. OpenSpliceDDS RnR Manager is supported by the Standard and Silver annual support programs.



References and For More Information

For further information regarding OpenSpliceDDS, please e-mail: contact@zettascale.tech or visit: www.zettascale.tech



OpenSpliceDDS

DATA-CENTRIC MIDDLEWARE FOR MISSION-CRITICAL SYSTEMS



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