RTI Connext Tools: The Essential DDS Workbench

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Software and system development stages

Reproduce
Analyze
Test

Control & Manage

DDS Applications

Integrate & Deploy

Observe & Monitor

Design

Test
Design: UML Tools implementing UML Profile for DDS specification
Drag and drop types into Topic diagram.

Associate Topics and data types.

Multiple Topics can be associated to the same or new data types.
Use Toolbar to create new participants
Drag and drop Topics into Participant diagram
Use Toolbar to add Writers and Readers to the new participants
Connect Writer port to Topic to indicate Participant is writing the Topic

QoS can be configured from UML for each Entity (Participant, Writer, Reader) using QoS profiles
Integrate & Deploy: RTI Analyzer

View to all of the objects from a single workstation
• Find out who’s talking to whom
• Display object parameters
• Try out different properties without changing code
• Find out what’s wrong

Provides different perspectives
• Node view to debug application
• Topic view to debug system

Make sense of your distributed system
Network packet & traffic analyzer

• Traps RTPS packets
• Shows packet contents
• Counts packet types, produces graphs and charts
• Also filters other popular protocols

Used to analyze wire traffic and adjust parameters for optimal performance
Observe & Monitor: RTI Monitor

• Detailed statistics on traffic, errors, and resource usage
• Detailed system topology display
• Configurable alerts and thresholds
• Helps to Track and tune performance
• Helps in diagnosing unusual behavior
Observe & Monitor: Excel Add-in

- Easy Integration
- Real-time updates
  - Spreadsheets
  - Charts
  - Formulas
- Content aware - learn data type dynamically
Control & Manage: RTI Admin Console

- Overall System Health / Status
- Service Configuration View/Edit
- Global Log View
Reproduce, Analyze, Test: RTI Recording Console

- Record real-time data for future analysis and debugging
- Replay function
- Console interface
Conclusion

• DDS & RTPS open the door to a whole ecosystem of interoperable tools & services
• These can be developed by any vendor and interoperate with any compliant implementation
• DDS-XTYPES spec has provided what is needed to build these tools in an interoperable manner
• RTI Connext Tools Provides the practical well-tested toolset you need to succeed with DDS