Accelerating Customer Success & Solving Customer's IIoT Architecture Challenges

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Senior Application Engineer

Professional Services Group

RTI Professional Services

Our Mission

- Is your success

- Our team focuses on helping you
    - Maximize realized value from RTI technology
    - Design it right the first time
    - Deliver more value in less time
    - Achieve your goals

Our Values

- Be passionate about customer success

- Build trust, become Trusted Advisors

- Take ownership, no excuses

- Build long term customer relationships

- Do what we say we will do - we commit, then deliver

- Always seek new ways to do better

Services Team

The Team at the Conference

Enrique Pallares
Sr Application Engineer
Based in Spain

Chin Siong
Sr Application Engineer
Based in Singapore

Our experience

Some successful cases of fires extinguished along with very demanding use-cases

ENSURE CRITICAL
INFRASTRUCTURE RELIABILITY

RTI controls the 6.8 GW Grand Coulee Dam, the largest power plant in North America and the fastest-responding power source on the Western Grid.

Connext DDS met the extreme availability, security and real-time challenges. USACE is deploying the design across the 75-dam U.S. hydropower system.
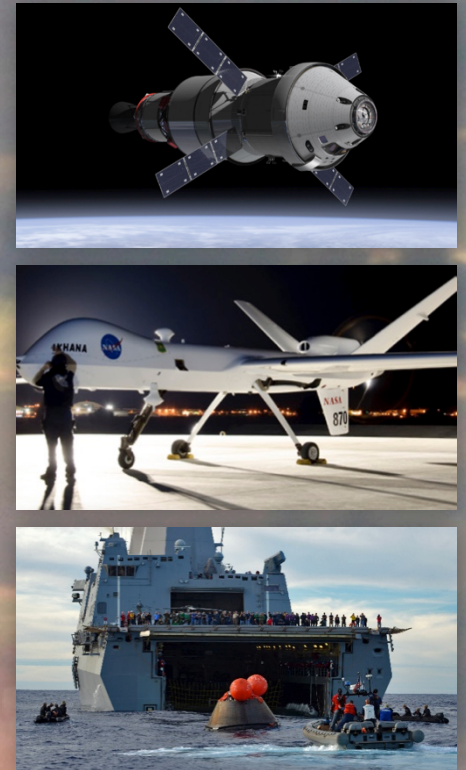
Grand Coulee Dam

- Two weeks on-site porting the whole system to use RTI Connext DDS and prove its performance improvement over the existing technology

- 3 Services engineers + Software Architect remotely

- USACE decided to use RTI Connext DDS

Grand Coulee Dam

- After the initial engagement, a Solutions Architect was assigned to the project (several months of consultancy):
    - Code reviews, and a few critical bugs found
    - Transport configuration to traverse Firewalls and NATs
    - Remote assistance for problems in the test bed
    - On-site presence during the final phase and upgrade

ENABLE LARGE-SCALE SYSTEM CONTROL

It combines 500k points,
at 750k messages/sec

RTI Connext DDS reduces complexity for NASA's Launch Control and Data Systems through a DDS data exchange infrastructure that provides fault tolerance through passive process replication, message traceability, persistence profile, and content subscription profile capabilities.

NASA KSC

- A DDS issue is causing a stop in testing
    - Hundreds of man/hours were being lost every day
- Fernando Crespo (West Coast) develops instrumentation in code and provides updates to the office in Spain
- The office in Spain builds the executables and provides them to Services in the East Coast

NASA KSC

- Services in the East Coast has the updated executables when waking up and can spend the day on-site testing

- After 3 days (**three iterations**) the problem is **solved**

MODERNIZE WIDE-AREA SURVEILLANCE

BAE SYSTEMS

BAE Systems selected RTI Connext DDS as part of the $1.2 billion AUD Upgrade to Australia's Jindalee Operational Radar Network (JORN).

With Connext DDS, the JORN Phase 6 Upgrade Program will modernize the system, significantly increasing the radar coverage area and information gathered for the Royal Australian Air Force, strengthening the protection of Australia's northern borders.

BAE Systems - JORN

- Customer required to make a "professional assessment" of their DDS infrastructure

- Reviewed their current layered architecture

- Advised how to improve performance

- Code Reviews

- Discussed the fit for the newest Connext 6 features

Defense

Defense

- The US government spends 3 months trying and failing to integrate a DDS-based system with components developed by different parties

- It was decided to purchase a 12-week engagement to have the Professional Services Group solving this integration issue

Defense

- They call all the parties to show up on a Monday morning

- In 3 days, all the communication issues were resolved, and the integrators were debugging application errors

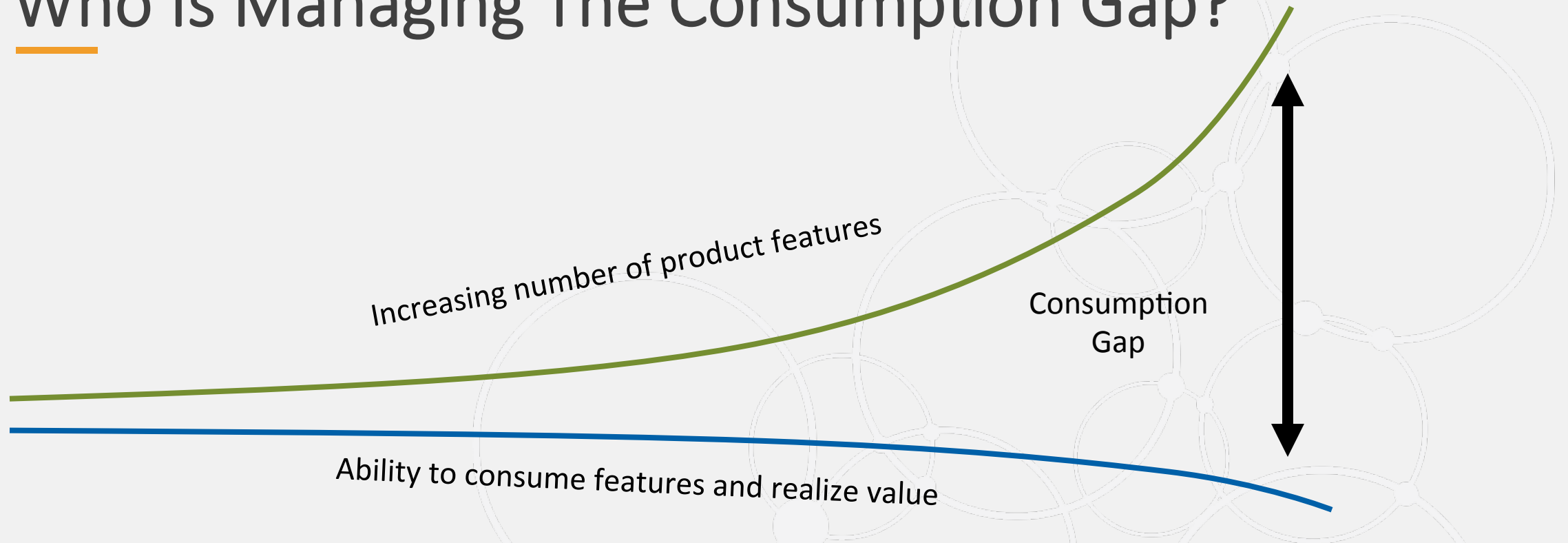- An original effort of 12 weeks is completed in **less than a week**

Verticals Expertise

Opportunities

How do we ensure your success?

Who Is Managing The Consumption Gap?

Increasing number of product features

Consumption Gap

Ability to consume features and realize value

Consumption Gap: The difference between the value a product ***could*** provide to the customer and the value it ***actually does*** provide.

Your Benefits

- We accelerate product adoption and 'time-to-value'
- Help you adopt best practices that promote your success
- Identify and reduce your risk
- Elevate your performance over time

Choose Your RTI Support Plan

Each Year You Get	Basic Support	Essential Support	Premium Support
Phone, email and web support for one Developer	Yes	Yes	Yes
Free half-day annual checkup	Yes	Yes	Yes
Tailored training days[1]	None	3	3
Consulting days[2]	None	2	3
Project Review days onsite[3]	None	None	4
Included onsite visits[4]	None	1	2

1 – Any number of training days may be transferred to consulting days after the first year.
2 – This is CSP time subject to the same constraints described in the price book description.
3 – Project Review may be exchanged for four additional consulting days after the first year.
4 – Additional travel will be charged separately.

Educational Services

01 QuickStart Training

02 Secure Training

03 Micro Training

Tools Training 04

Advanced Training 05

Customized Training 06

New Singapore Training

- Training tailored to APAC business needs
  - Supports public or private venues
- Public trainings also offered
  - US East Coast
  - Milton Keynes, UK (Nov 11-13)

DATASHEET
RTI Connext DDS QuickStart Training SINGAPORE
A THREE-DAY PUBLIC TRAINING COURSE

HIGHLIGHTS

Bring your team up to speed quickly with a three-day intensive course

Budget-friendly public training delivered by RTI Professional Services

Hands-on learning to understand how to apply Connext DDS to your project

Learn best practices in the architecture of your distributed real-time system

The Connext DDS QuickStart public training course provides your company with an efficient, cost-effective approach to learning. Held in a central Singapore location, the small classroom setting delivers an interactive learning experience with individualized attention from a highly-experienced RTI Professional Services engineer.

PACKAGED TRAINING SOLUTIONS

Jump start your team's productivity and accelerate your project via RTI QuickStart training. This three-day course is the fastest and most effective way to learn how to apply the Connext DDS product suite to your application. Along with lectures, QuickStart training includes hands-on exercises to reinforce concepts, design guidance and best practices to obtain the most value from the Connext databus. The training course is held at a central Singapore location; special arrangements can be made to hold it at your office facilities.

A QuickStart typically begins with an overview of Connext DDS, with a discussion on semantics and terminology associated with the databus and anonymous publish/subscribe communication. The training continues by explaining how to define a data model and use Quality of Service (QoS) policies to specify the data-flow communication behavior for your system. Finally, it provides detailed descriptions and demonstrations of Connext DDS capabilities, features and tools. Attendees have several opportunities to apply principles through hands-on exercises. The final agenda for each training session is based on the requirements from the registered attendees.

FEES AND AVAILABILITY

The 3-day training fees are US$2,990 per person. Discounts are available for on-site training at your facilities. There is a minimum of eight participants per course, with a maximum of ten hands-on participants.

WORLD-CLASS TRAINING TEAM

RTI Public Training courses are led by highly-experienced members of RTI Professional Services. These engineers have decades of experience in the optimization, deployment and tuning of large-scale, high-performance distributed systems.

For more information or to request custom training, please contact kelvinhor@rti.com.

rti.com

Accelerating Your Path To Success

Customer Onboarding

Decreasing your 'time-to-value'

Professional Services

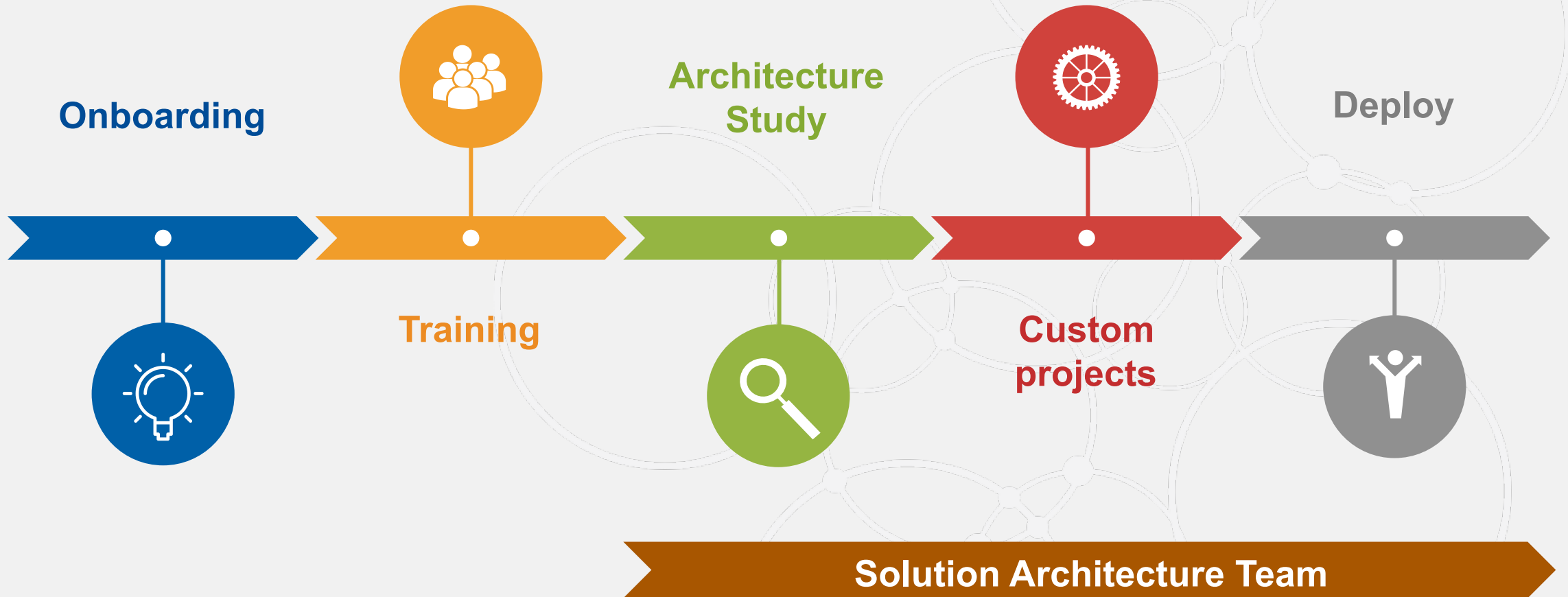Risk mitigation and driving project success

Educational Services

Increasing your team's development and test efficiency

Support/Services Packages

Basic, Essential, and Premium Support

Customer Success Engagement Lifecycle

Onboarding

Training

Architecture Study

Custom projects

Deploy

Solution Architecture Team

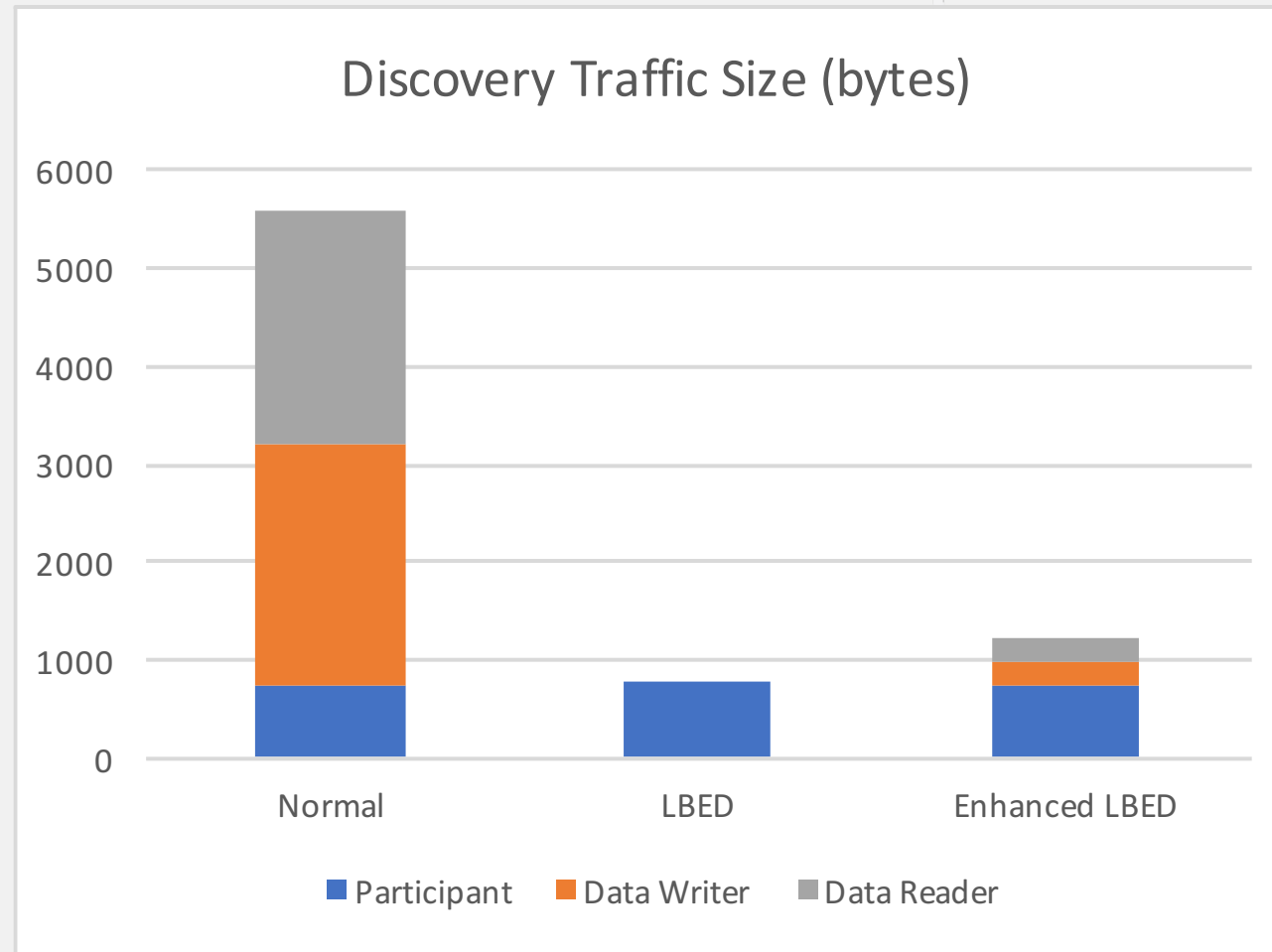# Customization and Development Opportunities

Customization and Development

- Customized version of RTI products
  - New feature implementation
  - Additional API functions
  - Routing Service Adapters

- Customized tools

- Adapt to custom non-Ip Transports

Enhanced LBED Plugin – High Level Comparison

- The **SEDP** (Simple Endpoint Discovery Plugin)
  - Shares all QoS settings and data type definitions for all DataReaders and DataWriters with other Participants that are discovered
  - It enables a fully dynamic system, with Participants joining and leaving the domain at any time and publishing or subscribing any Topic at any time.

- **LBED** (Limited Bandwidth Endpoint Discovery Plugin) requires
  - Endpoint discovery information to be distributed out-of-band, before system startup, in the form of XML configuration files,
  - The endpoint discovery information is thus never shared by Participants on the network, saving 100% of the endpoint discovery bandwidth at runtime,
  - However, this static configuration cannot be changed at runtime.
  - To make a change to the system such as adding a new subscriber of a Topic requires updating the XML configuration files (i.e. for the publishers of the Topic) and re-deploying them.

- **The Enhanced LBED plugin**
  - Exchanges only the names of the data types and QoS profiles rather than their entire contents,
  - Provided that applications are configured with matching data types and have the definition of the QoS profiles as they normally would with SEDP, the data type and QoS profiles for remote entities are inferred by the plugin.

Enhanced LBED Bandwidth Measurements

Custom Recording Tool

- Customer required event triggered recorder
- Requirements not met by RTI standard products
- PS developed the product in 3 months with close attention from the customer
- Performance requirements exceeded

Our advice:
How to Avoid Having Fires

"The best life insurance is the one you don't have to use"

What to do with DDS?

The Professional Services Group

1. Proven Experience
2. Trusted Advisors
3. Accelerating Time To Value
4. Flexible Services Options

Stay Connected!

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