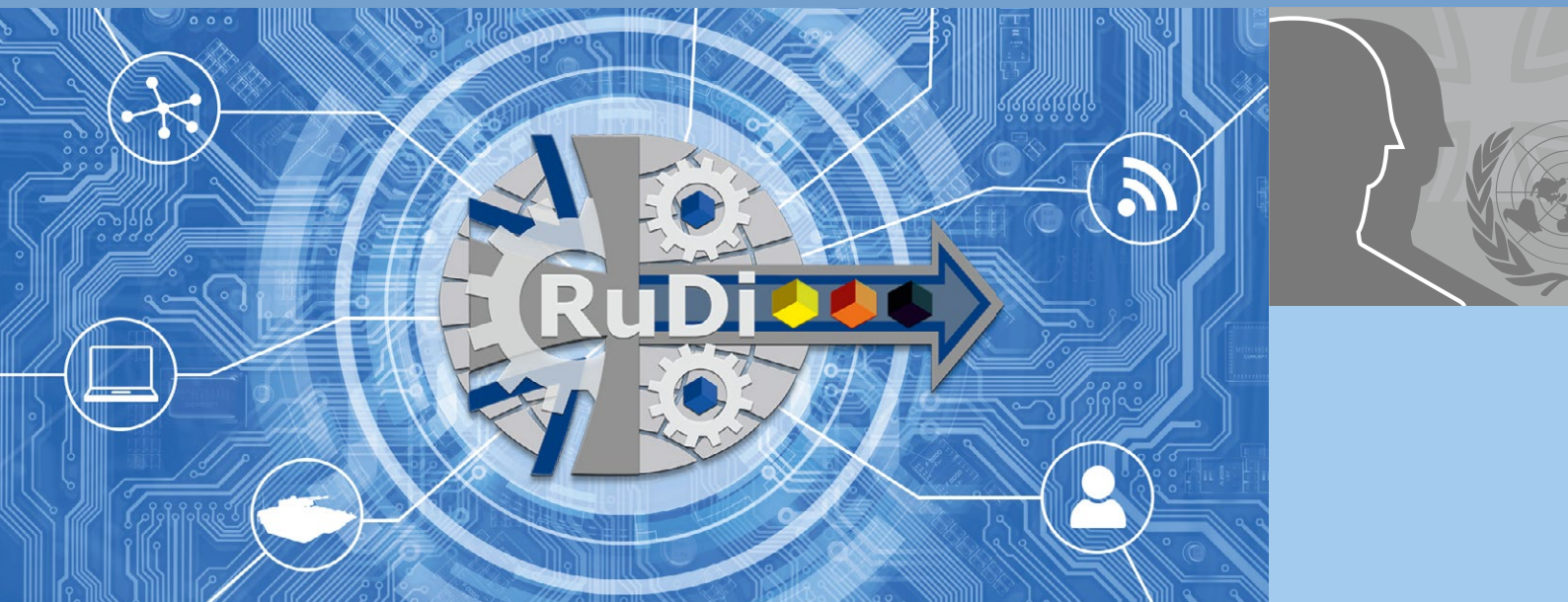


Our mission – peace and security.



RuDi • Services Integration Middleware and Identity Management Platform

National and international operations within the deployed allied and partner forces context as well as for platforms and systems in all domains (space, air, cyber, land and sea) require efficient and secure distribution of mission critical information in a digitalised and contested environment. Complex acquisition programmes must interface to existing legacy equipment via various communication systems and be quickly adaptable to the evolving requirements of the digital space. These therefore require a flexible, adaptable and vendor independent solution to ensure the exchange of digital information and achieve system interoperability.

RuDi was developed to provide a multi-application IT infrastructure able to operate and exploit services, while delivering broader system governance solutions. The final product is a technology appropriate for military information and deployable communication infrastructures.

Problem Statement

Coherent data exchange between multiple sensors, mission systems, support capabilities and decision-makers is a complex task. Complex system architectures dealing with multi-layered mission data and multiple and varying military communication systems require a service-oriented architecture middleware solution able to efficiently leverage underlying IP network and routing services.

At the tactical, operational, and strategic levels, varying requirements mandate the use of different connectionless bearer systems, each exhibiting their own characteristics and relying on specific standardised data exchange protocols. A solution is required to provide users and administrators with a common operating picture as well as service management and control irrespective of the protocol in use.

In order to keep up with the fast pace of system evolution and spiral developments, proprietary interfaces and vendor lock-in must be avoided. Open industry standards coupled with an open architecture support scalability and extensibility, while providing an agile response to the emerging communication needs of the modern battle space environment.

Use Case

RuDi enables capabilities for national and multinational deployments and operations on joint armed forces platforms. In a mission-oriented and sustainable manner, this platform ensures continuous secure exchange of information while easily integrating multinational partners.

RuDi's comprehensive and flexible interface architecture solves the problem of interoperability, data distribution and provision. Critical information remains actionable and a common operating picture is provided.

Future technologies can be tested and evaluated within information infrastructures to verify and improve their usability as well as the suitability with existing IT infrastructures.

Information distribution systems are able to have their work processes mapped across multiple security domains. Thus ensuring deployable data centres provide an autonomous reach-back capability.

Value Proposition

Hosted as a middleware on the router, RuDi delivers the components required to ensure essential services are able to leverage the extant routing and network service.

Services are prioritised to meet the decision maker's immediate needs. Specifically designed for mobile networks, RuDi deals with a dynamically changing network topology by managing the loss and reconnection of participating network nodes.

Provision of governed access to all kinds of secure data is achieved through various application interfaces, identity and service management and control modules. System administrators deploy faster and are able to monitor, maintain and, if required, optimise network performance.

Key Advantages

- Commercial of the shelf (COTS) Software
- Deployable on any operating system
- Achieves multi-platform interoperability
- Modular and designed for scalability
- Deployable on multiple security domains
- No third party software required
- ITAR-Free

System Breakdown

At the core of the RuDi platform, operates a reliable and scalable Enterprise Service Bus (ESB) that ensures users are able to access application data and manage administration tasks in a timely and holistic manner.

The ESB is complimented by the following core services:

- Service Registry
- ESB Stub Extensions
- Authorisation, GenKey, SoaPki Distribution and Privilege Management Services
- XML Key Management Specification Service
- Security Token Server
- UDP-Binding Interceptor

Technical Data

Compliant with the following standards:

- Friendly Force Tracking (FFT) IAW ADatP-36(A), ADatP-37 & STANAG 4774 / 4778
- Web Services Messaging Protocol (WSMP) 1.3
- NATO Friendly Force Information (NFFI)
- MIL-STD-2045-47001, MIL-STD-6017
- STANAG 5516 Link 16, STANAG 5602 SIMPLE

The following feature extensions facilitate scalability:

- Notification Broker Publish / Subscribe
- Network/Transport Service
- Services Management and Control
- XMPP Messaging Service
- File Transport Protocol (FTP) Service
- SOA Storage Service

References

Since 2010 RuDi has been supporting the following users:

- Exercise Coalition Warrior Interoperability eXploration, eXperimentation, eXamination, eXercise (CWIX)
- BAAINBw I1.1 SOA and IdM System Specification
- Joint ISR Test Bed, Bundeswehr Technical Centre for IT and Electronics (WTD81)
- German Armed Forces Technical Centre for Weapons and Ammunition (WTD 91)
- IABG Competence Centre Optics (CCO), Control Measurement System

Adaptation Development, Support & Training Services

IABG software products are delivered in accordance with their respective software release plans and maintenance agreements. Support plans delivered with IABG products include regular software and maintenance updates.

IABG training courses deliver the essential content required to ensure trainees are able to apply systems in the context of their operations. All aspects of the use, configuration and administration of the system are covered. Successful completion of the interactive training provides the basis to support continued proficiency improvement.

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