

NC3A SOA Techwatch Day Call for Presentations



1 February 2012

Hosted at

NATO C3 Agency, The Hague, The Netherlands

By

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NC3A SOA TechWatch Day

Call for Presentations

Background and Objectives

The NATO Consultation, Command and Control Agency (NC3A) is responsible for requirements capture, systems design, acquisition, integration, engineering, testing and technical support for assigned NATO systems, as well as the delivery of new systems and capabilities to meet new threats and challenges. The NC3A's core business is research, acquisition and development of advanced technology for NATO, including complex Information Systems based upon a Service Oriented Architecture (SOA). In addition, NC3A participates in interoperability projects carried out in collaboration with coalition partners. The SOA paradigm is seen as one of the tenets of the NNEC vision enabling dynamic federation of heterogeneous systems from NATO and non-NATO nations and various international organisations and thus achieving comprehensive information sharing leading to enhanced decision superiority.

- **SOA Foundation** – NATO has identified a set of **Core Enterprise Services** (ref. CES Framework, attached) to provide fundamental support to service-based frameworks both in the form of infrastructure and enabler services. The CES include:
 - **Messaging** – to provide a federated, distributed, and fault-tolerant SOA messaging capability which is realized via open standards at the application/service layer, supporting content based routing and asynchronous messaging.
 - **Publish/Subscribe** – to provide event-driven messaging and to deliver information from a single source to multiple “subscribed” consumers.
 - **Security** – to provide for secure service interactions, including support for federated scenarios with direct and brokered authentication, single sign-on, support for policy management, data confidentiality and data integrity.
 - **Translation** – to provide the automated means for the semantics of information to be translated from one structure to another as possible. Also to support mediation between different message formats.
 - **Metadata Registry** – to provide the ability for enterprise systems to discover and manage various metadata artefacts – such as XML data models and transformations.
 - **Service Discovery** – to provide a capability for finding services and also for publishing service definitions – both in the static (enterprise) domain and in the deployed (ad hoc) domain; at design and at runtime.
 - **Collaboration** – to provide users with a range of interoperable collaboration capabilities.
 - **Composition** – to provide an approach to connecting Services together to create high-level business processes via orchestration and choreography.
 - **Information Discovery** – to provide a service for searching for documents, and for information within documents (and other information) throughout the enterprise.
 - **Enterprise Directory** – to provide single-logon identity establishment and authorization capability, storing identity, authorization, and application-specific information, as well as directory service configuration data.

- **Transaction** – to allow for multiple individual operations to be linked together as a single, indivisible action.

The SOA TechWatch Day is intended as a forum for the industry and NC3A to discuss current and forthcoming technological developments in the area of SOA, and exchange knowledge on industry best practices and specific NATO requirements.

Submission Guidelines

Industry is invited to submit an abstract for a presentation and/or a demonstration in any of the topics listed below. The abstracts will be reviewed by the NC3A and the 8-12 most relevant proposals will be invited for a presentation at the NC3A SOA TechWatch.

During the event each invited participant will be assigned a time slot (30 minutes talk + 10 minutes Q&A) for a presentation and/or demonstration. Alternatively, a shorter time slot (15 + 5 min.) can be allocated, if so requested in the submission. A dedicated 1 hour joint discussion session is planned at the end of the event.

All presentations must be unclassified and will be posted on NC3A/s internal Portal after the event.

The NC3A SOA TechWatch is **not intended** to become a pre-sales event for the industry and presenters are asked to respect this rule.

Important Dates

- Presentation / demo abstract submission: 4 January 2012
- Acceptance notification: 11 January 2012
- NC3A SOA TechWatch Day: 1 February 2012

Topics

The NC3A SOA TechWatch is looking for high quality, technical, and diverse industry presentations and/or demonstrations related but not limited to the following topics:

- **SOA standardization** becomes a crucial interoperability enabler in a multinational and very heterogeneous environment that NATO has to operate in. Support for open, industry accepted standards that fulfil NATO specific requirements is a very important selection factor for SOA based solutions.
 - How is your company involved in various SOA and web services standardisations bodies?
 - Which open standards does your company support? In case of several competing standards, why was one chosen over the others? If your company promotes its own solution, what is the reason?
- **Case Studies** – NC3A is interested in real SOA case studies, learning from both successful and failed projects:
 - Positive experience and best practice learned from real SOA projects.
 - Lessons learned in a hard way and what should NATO and any large organisation avoid in their SOA projects. “Gotchas” and points to remember during large SOA projects.
 - Areas of special interest to NC3A:

- Federated ESBs;
 - Cross-domain, federated single sign-on and web services security;
 - Usage of metadata registries and repositories in large organisations;
 - Usage of design time and run time service discovery;
 - Interaction patterns including combination of the Core Enterprise Services listed above.
- **Support for SOAP and REST** – there is a growing number of web services available in NATO following either SOAP or REST approach. NC3A is interested in industry view on:
 - When to use one or the other? When to use hybrid solutions?
 - SWOT analysis of REST and SOAP;
 - Mediation between SOAP and REST web services;
 - Standardization efforts in the REST area:
 - Web services security and REST;
 - REST best practices and patterns.
- **SOA Quality Assurance** – quality is of vital importance for all military systems. What are the best ways of ensuring quality in large SOA projects?
 - Best practice in specifying requirements for SOA solutions;
 - Testing methods;
 - Tools support for defining requirements and testing.
- **Architectures and methodologies** – currently NATO is heavily involved in defining architectures and taxonomies for the NNEC. For that reason service-oriented architectures and SOA methodologies are of vital interest:
 - Methodologies;
 - Frameworks;
 - Best practices;
 - Tools support;
 - Approaches towards federation of multiple independent partners.
- **SOA Governance** – a key lesson learned from on-going National network enabled (SOA) programs is that a strong governance framework must be in place if the implementation is to be successful.
 - Federated SOA governance with multiple independent organisations / bodies / Nations;
 - Design-time (or pre-deployment) procedures;
 - Run-time (or post-deployment) procedures;
 - SOA lifecycle;
 - SOA configuration management.
- **Enterprise Service Buses and SOA** – an ESB does not implement a SOA, but rather, an ESB provides an infrastructure to support the implementation of the SOA concept. However, an ESB product offered by one vendor does not necessarily represent an identical set of technologies or functionality found in a product by another vendor.
 - ESB standardisation efforts;
 - ESB federation and interoperability;
 - ESB and Service Management and Control in distributed, federated environments.
- **Enterprise Mashups** enable end-user-oriented compositions of Web APIs, Web content and Web data sources. How can web services and other technologies be combined into the mashups?
 - Mashups within and across enterprises (i.e. in a federated environment);
 - Service models that are well-suited for mashups;

- Platforms and ergonomics in different operational contexts;
- Quality of service for mashups, including performance, reliability, and security;
- Standardization efforts for mashups.
- **Future of SOA** – SOA became the main stream, but what is its future? What is industry working on next? What are the strengths and weaknesses of SOA that could be improved in the future?

Venue Information

The NC3A SOA TechWatch day will be held at

NATO C3 Agency
Oude Waalsdorperweg 61
2597 AK The Hague
The Netherlands

Contact Information

Presentation proposals and any queries about the event should be sent to

<https://www.etches.com/32628>