



CORISECIO - secRT & SOA Security

Open Source SOA Security

Web service technologies have prevailed and, in most cases, they represent the basis of Service Orientated Architecture (SOA). Protection of services is a pre-condition for application in SOA environments. Unlike conventional systems, a SOA-based business process often covers a huge number of loosely coupled services, which communicate through open internet protocols by means of standardized, readable formats. Application of standardized security mechanisms is able to guarantee protection. These methods are recorded and publicly accessible. The implementation, the architectural approach and the administration have to be clarified, since security methods have to be likewise controllable and flexible as the infrastructure itself.

SECURITYRUNTIME

CORISECIO, with the Open Source secRT, an Eclipse Foundation project, provides a runtime environment for security solutions. Independent from the platform and the system, the runtime environment allows simple implementation and processing of security applications. The secRT itself is constructed completely according to the SOA principals and is based on open standards like Java, XML and Web Services, which makes it capable for any kind of system environment.

Released as Open Source Software, the secRT provides transparency and allows adaptation to individual requirements. Every secRT instance operates independently as a so called Policy Enforcement Point. As a consequence, an independent local check of which rules have to be applied, thus which action can be taken in every instance, is feasible.

ENTITY & KEY MANAGEMENT

An integrated PKI infrastructure is included, which provides certificates and keys for protection of Web Services. In case that there is already an own PKI, an adaptation is, of course, possible, which offers the possibility to use own certificates and keys.

Even Entity Management is already included in the secRT. It allows quick and simple administration of users and servers. Moreover, the administered entities can be imported from the company's own directory easily. To prevent that the administration and configuration steps have to be repeated in every secRT instance, they can be synchronized with one another. Conclusively, configuration is made centrally in one instance and all others are simply synchronized consecutively. During this process, entities, roles and workflows are replicated.

FACTS

- Open Source runtime environment for SOA infrastructures
- Platform-independent
- Protection of Web Services through standards like XML Encryption, XML Signature, XKMS and SAML
- Definition of Security Workflows without programming work
- Integrated Entity- & Key Management

BENEFITS

- Slight implementation work
- Minimum training efforts
- Changes to the original system not necessary
- High level of flexibility and reliability for future concepts
- Transparency through Open Source
- High level of inter-operability





DEFINITION OF WORKFLOWS

By use of the Workflow Editor, application flows of security processes matched to the companies requirements can be defined within a few minutes. For implementation of security, the secRT applies the so called Proxy Principal. No modifications in the original application have to be made during this process. The interacting secRT instances are simply linked between the communicating parties, which guarantees secure communication between them. The secRT provides a huge number of functions, which involves conducting transformations to Web Services, as well as connection to Legacy Systems. By means of the CORISECIO Adapter Concept, the secRT can easily be upgraded with a further range of functions.

SOA SECURITY

The SOA Security Adapter provides basic security methods for SOA architecture. Also this adapter is made available by CORISECIO as Open Source and integrates easily in the secRT. Standards like XML Encryption, XML Signature, XKMS and SAML are used. As a consequence, protection goals like authentication, authorization, confidentiality, integrity and non-repudiation are achieved also in a SOA.

As services play a major role in the SOA, it is possible to provide security services with the SOA Security. One possibility is making available a signature service for Web Services centrally in the company's infrastructure.

FLEXIBILITY BY MEANS OF AN ADAPTER CONCEPT

The secRT includes a plug-in adapter concept and is thereby completely upgradeable. The entire range of functions is made available within the systems as services through adapters. Besides the Open Source SOA Adapter, CORISECIO provides a huge number of Enterprise Adapters, which may be combined easily through plug-in concepts. Therefore, even very special customer's requirements can be met by application of standard solutions.

KEY FEATURES

- Entity Management
- Key Management
- Simple Definition of Security Workflows
- Synchronization of secRT instances
- Integration of original systems possible (Entity Management, PKI Infrastructure)
- XML Encryption & XML Signature
- SAML support
- Retrieval of certificates through XKMS

