

Designing Secure Integration Architectures¹

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Abstract.

Security has become a paramount concern due to dramatic advances of network technologies and a wide variety of new business opportunities. These advances have also brought the need for integration of computers systems to the surface, mainly for real-time, information sharing. As these systems are network-based, COTS products are predominantly used in these types of integration efforts. Since security is still a relatively new concern, it is often addressed as an afterthought in software development. Unfortunately, to ensure a high degree of security, it is imperative to address the concerns in a principled manner. Software architectures provide a unique opportunity to assess and structure the security as part of integration solution design. In this paper, we describe an approach to constructing secure integration architectures – architectural solutions to component interoperability that both satisfy known functional security policies and that specify the functionality of security mechanisms used to fulfill them.

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