

Semantic Infrastructure Concept of Operations - Role Of Enterprise Conformance and Compliance Framework (ECCF)

Semantic Infrastructure Concept of Operations Links

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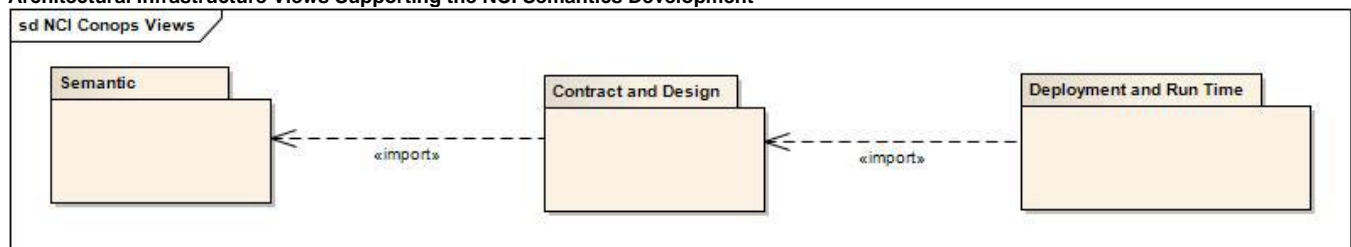
The fundamental challenge is providing the community with an interoperability framework that surfaces and clarifies the inherent complexity of the domain while allowing the communities to continue to effectively respond to the changing needs of science and healthcare. NCI CBIIT has adopted Reference Model for Open Distributed Processing (RM-ODP ISO/IEC 10746) and developed the Enterprise Conformance and Compliance Framework (ECCF) for use with all major caBIG® and caGrid projects. RM-ODP provides for distribution, interworking, platform and technology independence, and portability. It provides the basis of the ECCF, an enterprise architecture and interoperability framework comprising formal conformance and governance models and for integrating RM-ODP based standards such as the ISO 19793. (ISO 19793 describes UML profiles aligned with Model Driven Architecture (MDA) for each of the various RM-ODP viewpoints). ECCF artifacts will be focused on realizing these standards on the enterprise, information, and computation points of view as defined by RM-ODP. Together they provide implementation-independent abstraction while also providing the precision needed for development of the engineering and technology viewpoints to support interoperability of independent implementations.

The ECCF will be used to govern all major NCI CBIIT Semantics Initiatives.

Through the realization of RM-ODP and MDA the ECCF provides an approach to providing implementation-neutral system specifications that can be assessed for compliance to specific conformance levels to meet interoperability criteria. The RM-ODP viewpoint specifications, represented as UML artifacts (*ITU-T Rec. X. 906 | ISO/IEC 19793 Use of UML for ODP system specifications*) provide an implementation independent logical design for third parties to use to develop their own engineering and technology implementations, and for caBIG® and CBIIT developers to use to develop reference implementations, while the ECCF provides for conformance and compliance assessment.

The Architectural Infrastructure is the means by which CBIIT enables and delivers architecture and interoperability within the framework provided by the RM-ODP and ECCF. It insures that the integrity of the domain semantics delineated by the RM-ODP viewpoints is preserved from definition to deployment by way of contracts. The following diagram shows the essential relationship between these three infrastructure views.

Architectural Infrastructure Views Supporting the NCI Semantics Development



The diagram shows Deployment and Run Time import Contract and Design import Semantic.