Unified Architecture Framework (UAF)

Course Outline

Overview of Architecture Frameworks

- Department of Defense Architecture Framework (DoDAF) 2.02

- Ministry of Defense Architecture Framework (MODAF)

- Security Views from Canada's Department of National Defense Architecture Framework (DNDAF)

- North Atlantic Treaty Organization (NATO) Architecture Framework (NAF) v 3.1

- Best practices derived from historical support of DoDAF, MODAF and UPDM

- Well-formed models with clear separation of stakeholder concerns

- Grid Approach for NATO Architecture Framework (NAF 4)

- Why the Grid?

Overview of Object Management Group® (OMG®) Standardization

- Unified Modeling Language™ (UML®) 2.0 Standard

- Systems Modeling Language™ (SysML®) Standard

- SysML v1.4 profile

- Unified Profile for DoDAF and MODAF (UPDM) 2.1

- Basics of Unified Architecture Framework (UAF)

Introduction to Unified Architecture Framework (UAF)

- What is the UAF?

- Value proposition of UAF

- UAF and representation of an enterprise architecture

- UAF and specific business, operational and systems-of-systems integration needs

- Developing models

- Systems Engineering (SE) technical processes

- Associated UAF metamodel

- Architecture data exchange between related tools

Working with Unified Architecture Framework (UAF)

- Operational capabilities

- Services and interactions between complex systems

- Tracing systems to strategies, and organizations

- Models to verify architectural completeness

- Support for Additional Viewpoints beyond those defined in DoDAF, MODAF/ MODEM, NAF, and the Security Viewpoint from DNDAF

Introduction to Unified Architecture Framework Profile (UAFP)

- UAFP 1.0 supporting capabilities

- Model architectures for a broad range of complex systems

- Representation of hardware, software, data, personnel, and facility elements

- Model consistent architectures for system-of-systems (SoS)

- Analysis, specification, design, and verification of complex systems

- Ability to exchange architecture information among related tools

- Department of Defense Architecture Framework (DoDAF) 2.02

- The Ministry of Defence Architecture Framework (MODAF)

- Security Views from Canada's Department of National Defense Architecture Framework (DNDAF)

- The North Atlantic Treaty Organization (NATO) Architecture Framework (NAF) v 3.1

- Core concepts in the UAF domain metamodel

- DoDAF 2.02 Domain Metamodel (DM2)

- MODAF ontological data exchange mechanism (MODEM)

Scope UAFP 1.0 – Unified Architecture Framework Profile (UAFP)

- Language extensions supporting integrated architecture description (AD)

- Creating models describing a system or a System of Systems (SoS)

- Set of stakeholders' concerns such as security or information

- Set of predefined viewpoints and associated views

Developing Models with UAF and UAFP

- Complete workflow of systems of systems engineering using the UAF Framework.

- Activities of defining capability requirements

- Specifying operational scenarios

- Solutions for operational scenarios,

- Managing project portfolios required to implement the selected solutions

- Tool vendors

- IBM, No Magic, PTC, and Sparx Systems