Enforcing Governance Policies in NSRR

Presented to:  
NAS and SESAR Registries
Technical Interchange Meeting

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Date:  
December 3-4, 2013
Agenda

- Basic Concepts
- Introducing SWIM Governance
- Role of NSRR in Governance Processes
- Service Lifecycle Management Process in the NSRR
- Promoting Services through the Lifecycle Stages
Basic Concepts

- **SWIM Governance** is the realization of *SOA Governance* by the SWIM program, with the major goal of enabling a set of enforceable policies, procedures, processes, tools, and organizational activities that together ensure a consistent alignment between FAA/NAS business objectives and SOA best practices, methodologies, and technological solutions. [1]

- **NSRR** is the SWIM-supported capability for making services visible, accessible, and understandable across the NAS. NSRR supports a flexible mechanism for service discovery, an automated policies-based way to manage services throughout the services lifecycle, and a catalog for relevant artifacts. [2]
NAS SOA Governance activities

- Developing governance standards, policies, and procedural guidelines to support the functional requirements for implementing all aspects of service-oriented development.

- Making all services discoverable, searchable, and retrievable, through a formal cataloging process of service metadata, by establishing and operating the NAS Service Registry and Repository (NSRR).

- Promoting interoperability among FAA systems by developing a common set of semantic and structural artifacts and promulgating them through communities of stakeholders.[3]
Role of NSRR in Governance Processes

- NSRR supports all activities in *pre-operational stages of service lifecycle*:
  
  • ensures that development is performed in alignment with business and IT policies
  
  • enforces conformance to automated design-time policies
  
  • tracks progressions of services transformations
  
  • notifies on selected changes in service metadata and lifecycle status
NSRR Functional Overview

NSRR provides the several major functions that support SOA-based implementation goals. The major functions of NSRR include *discovery, governance, and lifecycle management*.
Service Lifecycle Management Process

Proposed → Definition → Development → Verification → Production → Deprecation → Retired
Proposed Stage Activity
Development Stage Activities

- SWIM Governance Policies
- Service Lifecycle Management Processes

Service: **Definition**
- WSDL
- WSRD
- WSDD
- SLO
- Schema(s)
- metadata

Advance to **Development**
- Service Provider
- SWIM Governance
Verification Stage Activities

- Service: Development
  - Security Design Document
  - Interoperability Test Report
  - Compliance Checklist
  - Test Plan/Procedures Review
  - Consumer Reference Implementation

- SWIM Governance
- Service Provider
- SWIM Test & Evaluation
- Independent Operational Test & Evaluation (IOT&E)

Advance to Verification

Service: Lifecycle Management Processes

SWIM Governance Policies
Production Stage Activities

Service: Verification

Operational Support Guide

Developer Guide

ISD Action Plan

Advance to Production

Service: Production

SWIM Governance Policies

Service Lifecycle Management Processes

ISR Checklist

Service Provider

SWIM Governance

In-Service Decision Authority
Deprecation and Retirement Activities
Summary

- NAS SOA governance is realized through the body of policies that drive the overall behavioral model of the participants and ensures their interoperability.
- The governance policies include service lifecycle management policies, technical policies and standards compliance policies.
- NSRR is a single point of control and the main tool for automated, policies-based service management throughout the services lifecycle.
References

[1] NAS SOA Governance Policies (Draft), December 2013

http://www.faa.gov/go/swimvocabulary

[3] FAA SWIM Governance and Interoperability Initiatives, Presentation at Twelfth Working Group Meeting of Aeronautical Telecommunication Network Implementation Coordination Group(ATNICG WG/12), Mark Kaplun, August 2013
http://www.icao.int/APAC/Meetings/_layouts/mobile/dispform.aspx?List=bd3f4f91-1680-4170-bf40-8a02baf3ce86&View=756970c5-3285-46fd-8535-51f6ef20ca34&ID=24