Domain Managed QoS

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Domain Managed QoS

- Described in ID: draft-nichols-dcpel-strawman-arch-00 Section 4.0
  - Specific application of the general model described in Section 2 within a standards based, textbook services framework
- Control plane providing resource management and admission control for diffserv enabled network
  - Authentication and authorization prior to service use
  - Policy driven administration and allocation
  - Signaled use of network services
  - Provisioned use of network services
- Scoped to manage network domain edge to edge
- Interoperate with other interconnected domains
- Conventions for interoperation are consistent with domain behaviors

Requirement to
Network System Integration teams

- Provide an industry standards based, architecture for policy driven assured delivery of network services to users
  - Assurance includes security and reliability
  - Policy driven includes a full spectrum of interconnected policy functions
- Standards compliant architecture
  - Interoperability concerns with other network domains
  - Long term supportability
    - Multi-vendor options for critical network items
    - Open standards compliant software components
    - Support for future evolvability
  - Reliable, risk managed development and operation of the network

Key Requirements

- Support for multiple network and security domains
    - Terrestrial static and mobile users
    - VPN enabled users

- Support industry standards based signaling of network service use

- Provide provisioned use of network resources for users not signaling enabled

- Support network management operation and administration of the network services and resources

Approach
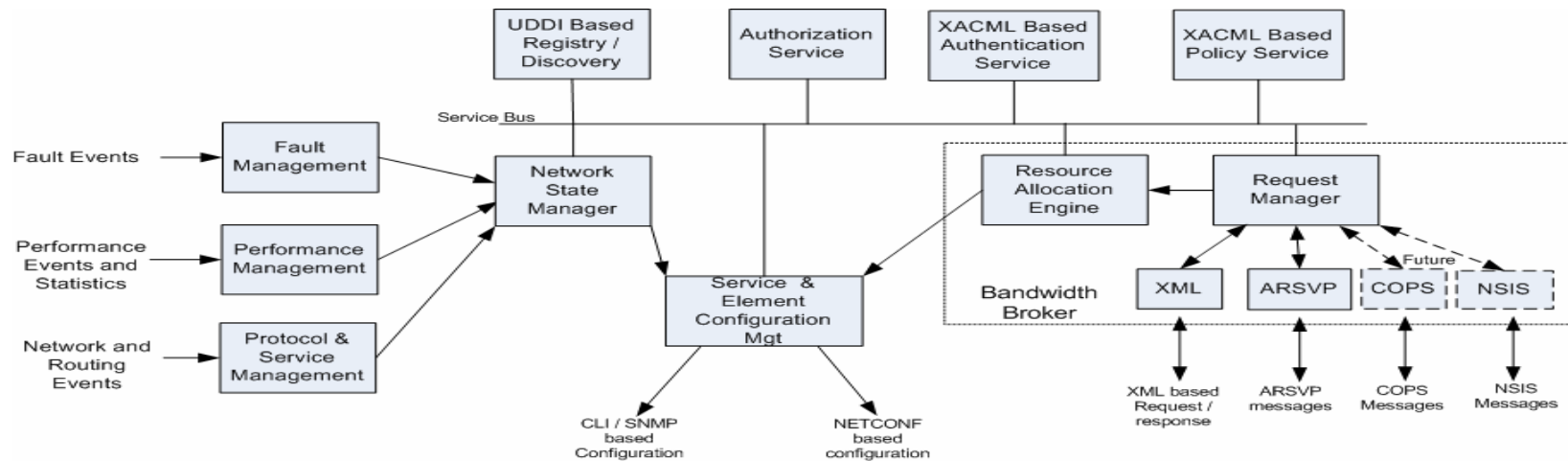
- Support textbook Web Service NM system architecture
- Develop and describe important components and syntax
- Use off the shelf, standards compliance commercial components
- Integrate new technologies such as routing analytics
- Architecture to support integration with Standards compliant protocols
- Extend and evolve to meet future standards

Next Steps

- Need for standards for diffserv control plane architecture, components, conventions, and syntax
  - Ensure user requirements are satisfied by standards
    - Architecture interoperability
    - Component diversity
    - Service interoperability
      - Service conventions
      - Syntax for services exchange
- Evaluate existing implementations for use
  - Cisco COPS architecture integration
    http://www.cisco.com/application/pdf/en/us/guest/products/ps2064/c1161/ccmigration_09186a008015 78d7.pdf
  - Operax Bandwidth and Service manager -
    http://www.operax.com/docs/operax_bandwidth_manager_product_sheetDC3.pdf
  - Allot "NetEnforcer" - http://www.allot.com/pages/products_index.asp?intGlobalId=2
- Evaluate Commercial support for key signaling protocol implementations
  - ARSVP, NSIS, SIP