Draft: "sonata" - "nfvrg" - "devops" - "gatekeeper"

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The Components for NFV DevOps

- **Catalogues**
  - Storing static information regarding network functions and services
  - Private catalogues of service developers
  - Service platform catalogues made available to authorized service developers
  - Public catalogues storing artifacts developed and maintained by third parties

- **Service Development Kit**
  - Provides a service programming model and a development tool-chain
  - Supports developers in defining and testing complex services
  - Facilitates custom implementations of individual network functions

- **Service Platform**
  - Receives the service packages implemented and created with the help of the SDK
  - Responsible for placing, deploying, provisioning, scaling, and managing the services on existing infrastructures
  - Provides direct feedback about the deployed services to the SDK

- **Underlying Infrastructure**
  - Uses information provided by the SO for execution and lifecycle management of services
The SDK and the Gatekeeper

• The new elements to support DevOps
  – The focus of this draft

• The others are required for any conceivable NFV model
  – Therefore discussed in sufficient deep elsewhere

• Working with packages
  – A consistent unit for service deployment
The SDK

• Supports the service programming model and provides a development tool-chain
• Pre-validation
  – Gatekeeper acceptance
• Offline testing and emulation
  – Supporting model-driven development and deployment
• Packaging
  – Build deployment units
• Service platform interaction
  – Package management
  – Data access
The Gatekeeper

• Mediating element
  – Validates the services submitted to the platform and schedules the necessary operations

• User authentication and authorization
  – All roles: Admin, developer, provider, customer...

• Package verification and attestation
  – Syntax & semantics, testing, licensing...

• Secure access to internal interfaces
  – Related to the lifecycle of packages and their components

• Monitor data transfer
  – As a pure forwarder, once AuthN/AuthZ are used to establish the data view
Mediated DevOps

- An NFV DevOps approach need a trustworthy cycle
  - Accountability in all its aspects
- The SDK supports validation and consistent interaction with the NSP environment
  - In any collaboration scenario
- The gatekeeper mediates interactions and can be applied not only to VNF and NS management
  - Extensible management
  - Recursion