

Dynamic Programmable Service Management & Orchestration for NFV, SDN, Cloud and traditional networks

Chameleon SDS™ Datasheet

Introduction

Service Providers need to address a growing customer demand for instant-on, elastic, pay-per-use Cloud & Network services. Virtualization of network, compute, storage & software resources (e.g. NFV, SDN & Cloud Computing) provides flexible, dynamic infrastructure, but significant challenges still exist for Service Providers as they seek to exploit these technologies in the services they offer. The existing Operational Support Systems (OSSs) are too slow, cumbersome and costly to support the service velocity that is needed in the Cloud era.

Chameleon SDS™ solves this problem by introducing a completely new software system architecture for Service Management & Orchestration, which is *run-time programmable* based on a dynamic, model-driven service catalogue. It takes advantage of the massive scaling offered by cloud computing, and supports the full service lifecycle automation in a single unified platform.

Thanks to the dynamic *meta-model-driven architecture* and a set of generic, pre-built management & orchestration modules, the platform is fully customizable and extensible on-the-fly at runtime. It uses meta-data to model services and technologies. New and updated models of services and technologies only require updating of the meta-data (i.e. XML descriptors) – no code has to be written, changed or tested.

Furthermore, the platform provides an auto-generated, model-driven RESTful API, comes with a pre-built protocol adapter library with a variety of formats (XML, SOAP, SNMP, CLI, Java/RMI), and a rapid framework for support of any other protocol.

By adopting Chameleon SDS™, Service Providers acquire an agile, rapidly customizable platform that enables them quickly and cost-effectively to manage services over any combination of physical and virtual resources. More importantly, it provides a fast means for Service Providers to migrate to the virtual world!

The result for Service Providers is the ability to cut their time to new service introduction from the current months to just days, as well as to provide on-demand provisioning and greatly simplified operations for complex services. This translates to significant time-to-market gains, in addition to CAPEX and OPEX savings.



Benefits

Rapid Service Velocity

- rapid new service introduction
- on-demand provisioning
- on-demand operations

Service agility for physical & virtual resources

- standards-based service & resource layer abstraction
- multi-vendor, multi-service, multi-technology
- full customization & extension without costly software development cycles
- seamless integration into existing environment

Simplicity & cost-effectiveness

- single, unified service-centric orchestration platform
- single service & network API
- rapid deployment & maintenance
- greatly reduced integration

Chameleon SDS™ - Solution Overview

Chameleon SDS™ is a vendor- and technology-agnostic, runtime programmable & model-driven Software-Defined Service Orchestration solution that recognizes the pivotal changes, which Service Providers need to face in order to remain competitive:

- *the industry is pushing for virtualization & automation*, and there is a need for a software system that supports both, physical and virtual resources, and the smooth migration from one to another
- *the cloud era customers are becoming more demanding*, and meeting their expectations requires a software product optimized for rapid introduction of new service types, their on-demand provisioning, and full management and operation

Service Design

- + Dynamic service catalogue customizable & editable without code
- + Fine-grained, hierarchical design with support for the most complex services

Service Discovery

- + Configurable discovery workflows
- + Policy-controlled discovery and sync of all service and resource components

Service Provisioning

- + Template-based, single-click, multi-stage provisioning engine
- + Runtime, dynamically rendered GUI
- + Fully automated provisioning with on-demand and scheduled options

Service Inventory

- + Full inventory of services & components
- + Service-to-resource mappings
- + Discovered vs. configured inventory
- + Rich browsing, navigation & topology GUI

Service Management

- + True service layer abstraction
- + Standards-based, multi-vendor, multi-technology service model
- + Full service life-cycle automation (design, provision & operate)
- + Full support for all service types (CE 2.0, IP/MPLS, Optical, NFV, SDN, Cloud)

Service Assurance

- + Service-centric performance & fault
- + Detailed Service Analysis Window
- + Real-time and historical data collection, graphing and reporting
- + Live updates and GUI status reporting
- + Fully configurable severities

Service OAM (Network)

- + End-to-end configuration, monitoring and reporting of device capabilities, e.g. Y.1731, 802.1ag, 802.3.ah
- + Template-driven OAM Performance and Fault Management
- + Zero-click template-based end-to-end OAM activation
- + On-demand loopback and link trace
- + Proactive OAM performance, fault configure, monitor & report
- + Point-and-click configuration of OAM MEPs and MIPs
- + Point-and-click enable / disable of individual SOAM operations (tunneling, CC, AIS, Test, Loss/ Delay/ Jitter measurements, APS, Lock)

Resource Discovery & Inventory

- + Policy & workflow controlled, automatic discovery
- + Initial discovery & periodic rediscovery
- + Physical / logical inventory with browsing, reporting and filtering capabilities

- + Discovered versus configured inventory characteristics

Resource Performance

- + Template-based, runtime extensible model
- + Historical & real-time performance and usage collection
- + Graphing, dashboards and reporting in various formats (HTML, PDF, CSV, XML)

Resource Fault

- + Configurable fault severity

- + Faults monitoring and configuration
- + Faults reporting and filtering
- + Alarm views and dashboards, views for troubled devices and services
- + Real-time status on maps, topology views, chassis & list screens

Resource Configuration

- + On-demand, scheduled & bulk firmware and configuration database management (backup, restore)
- + Individual and bulk resource configuration

Platform: Chameleon OS™ carrier-grade platform is the core of the Chameleon SDS™ solution, built on the latest Java Enterprise Edition (JEE) technologies for high availability, scalability and performance. The platform includes a comprehensive range of pre-built and pre-integrated model-driven management modules, and a plug-in framework for custom modules and extensions.

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Amartus is a leading developer of dynamically programmable, NFV, SDN and Cloud ready service orchestration and management solutions for traditional and software-defined networks.

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