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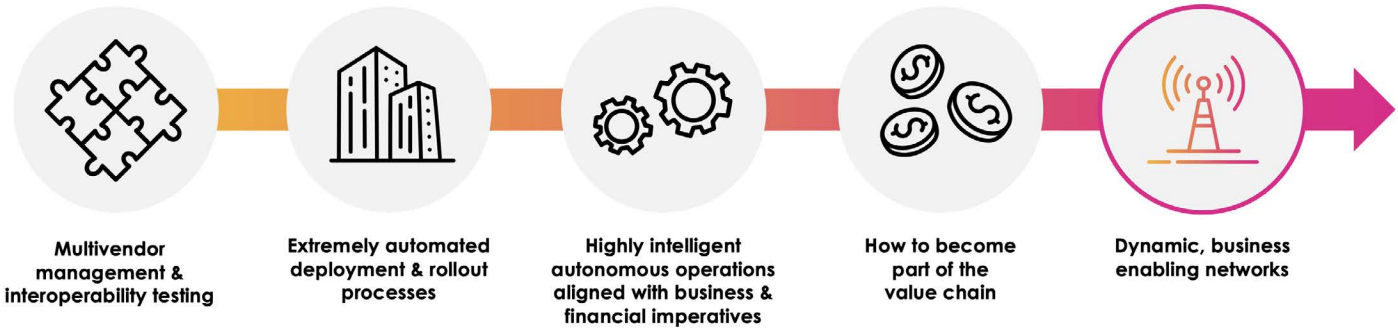
Data Sheet

Amdocs Open RAN SMO

Introduction

Service Management and Orchestration (SMO) is a key component of Open RAN architecture, designed to make traditional radio networks more open, flexible, and interoperable. By overseeing the orchestration and management of resources and services, SMO enables service provisioning, resource allocation, performance monitoring and network slicing support. It's also central to vendor neutrality, ensuring standardized interfaces and protocols, while improving the management of evolving wireless network demands and helping to reduce operational expenses and increase profitability.

Resolving challenges on the path to Open RAN



The integration of multi-vendor components into an efficient RAN presents several challenges, particularly with the shift to cloud-based implementations. SMO answers the need for seamless interaction between these components as follows:

- Serving as a cornerstone for both vRAN and Open vRAN, it provides an automation platform supporting dynamic network service deployment, resource allocation and flexible network management of the multi-vendor RAN.
- With specific management of the RAN NSSMF, it plays a critical role in network slicing, utilizing automation to facilitate cross-domain service lifecycle management.
- The RAN Intelligent Controller (RIC), responsible for controlling and optimizing RAN functions collaborates with applications and leverages machine learning (ML) to build a detailed picture of organic network demand.
- The advent of 5G and network slicing presents new revenue opportunities, with SMO playing a vital role in accelerating Open RAN rollouts and enabling monetization reducing Time to Market (TTM).

Amdocs Open RAN SMO

Amdocs Open RAN SMO leverages Amdocs End-to-End Service Orchestration solution through a set of rich network automation capabilities enabling rapid rollout of radio sites starting from bare-metal servers and ending with RAN xNFs and commissioning of a new site.

Amdocs Open RAN SMO provides a comprehensive suite for onboarding, orchestrating, activating, configuring, and assuring any managed element, including rApps. Beyond these functionalities, it enables zero-touch operations and closed-loop automation, making it a cornerstone for modern network management.

Amdocs Open RAN SMO automation capabilities enhances ongoing network management and optimization to improve performance while reducing manual effort. Driven by customer experience metrics derived from geolocated Cell Trace data, it goes beyond mere automation by identifying network optimization possibilities.

Amdocs RAN Automation key features include:

- C-SON use cases / rApps to automate common network use cases include: ANR, COO, PCIO, RSIO, RSI, ICC
- Open loop and closed-loop operational modes
- Multi-vendor by design
- Cluster management to reflect ownership in different teams, separate triggers per area
- Network stabilization through parameter and cell freezes and blacklisting
- User-definable triggers, thresholds, scheduling and timing
- Short and long-term impact analysis with rollback criteria

Aligned with the O-RAN architecture, Amdocs Open RAN SMO ensures seamless integration with Open RAN interfaces and APIs, including well-defined O1 interfaces leveraging 3GPP standards, as well as being aligned with the evolving O2 and R1 and A1 interfaces. Leveraging Amdocs' extensive orchestration and assurance solutions, it has an open architecture that not only allows for interoperability with third-party RAN entities but also positions it as an effective network slicing manager, embracing the roles of CSMF/NSMF/NSSMF. This adaptability ensures CSPs can effortlessly manage multi-vendor environments, thereby promoting innovation and efficiency across networks.

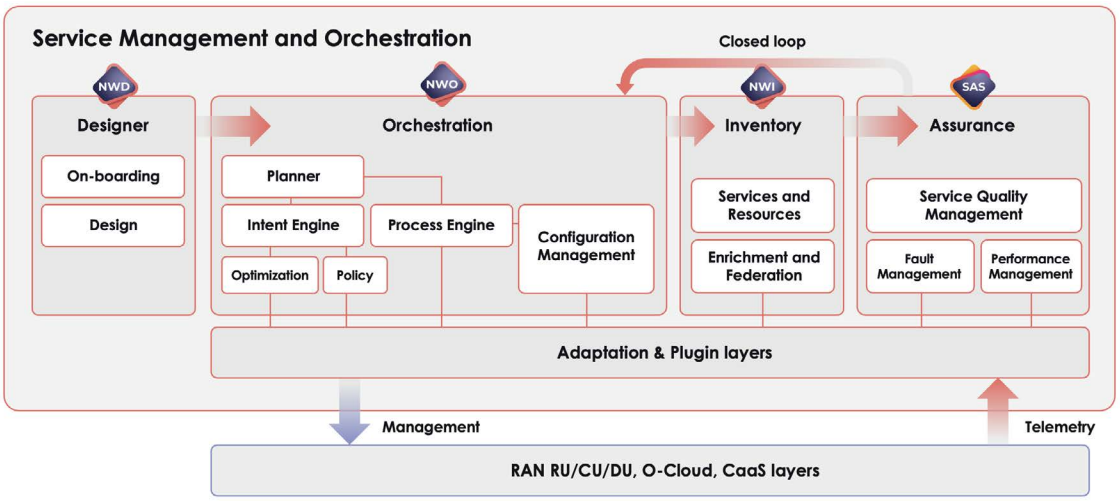


Figure 1: Amdocs Open RAN Service Management and Orchestration

Amdocs Open RAN SMO components

Amdocs Network Design: Facilitates onboarding of artifacts from CT/CD (Continuous Testing/ Continuous Delivery) processes, enabling reuse of services and resources that provide necessary metadata for SMO workloads.

Amdocs Network Orchestration: Manages lifecycle processes from creation to decommissioning for O-Cloud resources, Network Functions (NF) workloads, radio sites and services, ensuring efficient service transitions.

Amdocs Network Inventory: Automates processes with precise data, managing resources and service elements in multi-technology, multi-vendor networks, and integrating data from third-party systems.

Helix Service Assurance Suite: Delivers fault, performance and service quality management, including:

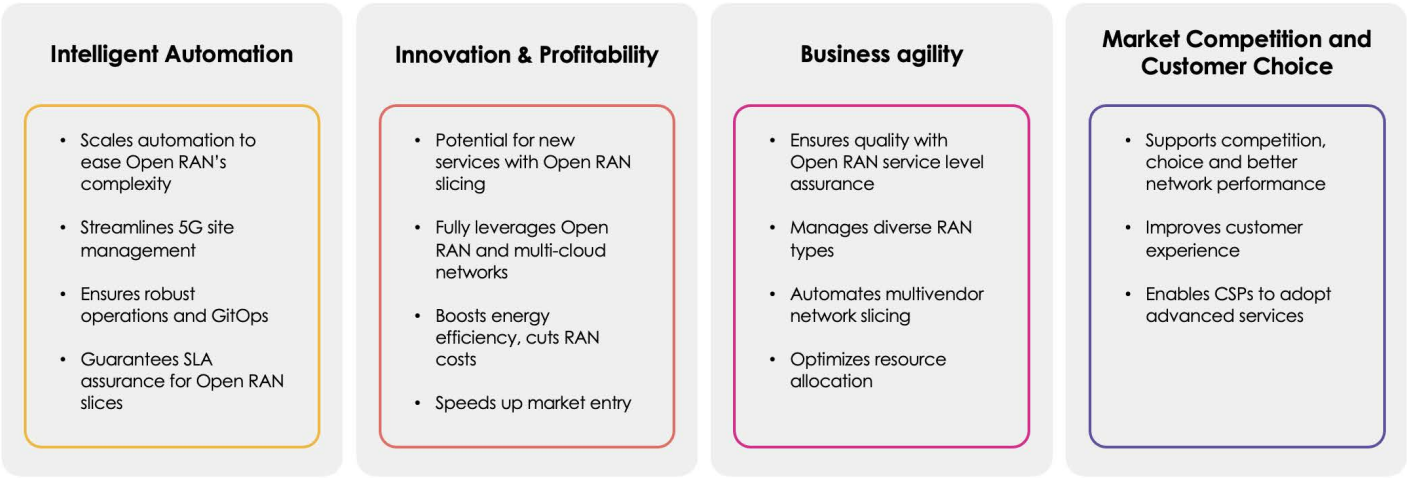
- **Fault management:** a system for centralized fault and alarm management in complex networks.
- **Performance management:** a carrier-grade solution optimizing network and service performance.
- **Service quality management:** a platform for monitoring service-level performance and identifying any service performance or quality deterioration.

Solution capabilities

Amdocs Open RAN SMO provides a wide range of capabilities to streamline and enhance network functionality:

- Automates and optimizes mobile network operations, for networks based on the Open RAN architecture, facilitating adaptive and robust service delivery across multi-layer, multi-vendor environments.
- Coordinates and controls various RAN components from multiple vendors, such as radio units (RU), distributed units (DU), centralized units (CU) and RAN intelligent controllers (RIC) with RAN applications, enhancing efficiency and reliability of network operations.
- Employs artificial intelligence (AI) and machine learning (ML) for optimal workloads placement, service assurance, enabling proactive issue detection and resolution, resource optimization, cloud waste reduction, and the improvement of customer experience and service quality.
- Supports innovative use cases and business models, including network slicing and personalized SLAs, enabling CSPs to leverage new technologies like edge computing and to transition smoothly from 4G to 5G and beyond.

Business benefits



Why Amdocs

Amdocs develops, delivers and operates service and network automation solutions for CSPs worldwide, leveraging decades of deep domain knowledge and actively contributing to standards development organizations such as TM Forum, 3GPP and O-RAN. Our commitment to standards and extensive experience enables us to provide comprehensive automation solutions that simplify operations while ensuring flexibility and avoiding vendor lock-in. Our holistic approach combines cutting-edge software and services, guided by a vendor-agnostic, standards-aligned philosophy, to seamlessly integrate with your existing ecosystem, empowering you with the agility to execute diverse business strategies.

About Amdocs

Amdocs helps those who build the future to make it amazing. With our market-leading portfolio of software products and services, we unlock our customers' innovative potential, empowering them to provide next-generation communication and media experiences for both the individual end user and enterprise customers. Our approximately 30,000 employees around the globe are here to accelerate service providers' migration to the cloud, enable them to differentiate in the 5G era, and digitalize and automate their operations.

Listed on the NASDAQ Global Select Market, Amdocs had revenue of $4.89 billion in fiscal 2023. For more information, visit www.amdocs.com

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