Solution Brief

Amdocs Cognitive RAN Automation

amdocs | make it amazing

Solution Brief

Amdocs Cognitive RAN Automation

Accelerating Automation

Automation is critical in today's highly dynamic radio access networks (RAN), addressing the need for operational scalability whilst delivering enhanced customer experience and increased service flexibility.
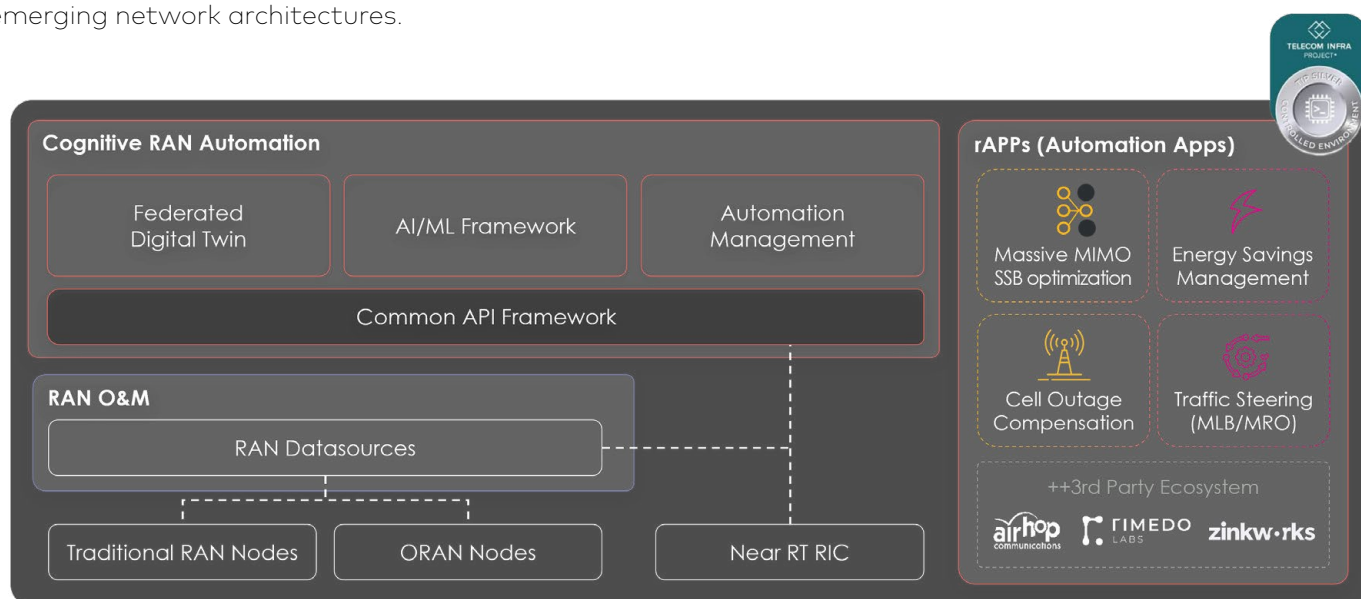
The RAN Intelligent Controller (RIC), defined by the O-RAN Alliance is at the forefront of this automation drive, providing a centralized point of control for the RAN, allowing for more flexible and efficient network operation.

Operators should choose a RIC that gives them the freedom to automate what they want through transparent RAN automation capabilities that are independent of their network equipment vendor and capable of supporting both existing and emerging network architectures.

Amdocs is uniquely placed to accelerate operators' automation journey through our combination of flexible, modular software, extensive SON experience and field proven advanced machine learning.

Amdocs Cognitive RAN Automation

Amdocs Cognitive RAN Automation is a true open automation platform, it is a fully containerized, microservices-based solution designed for RAN automation and intelligence. It provides a modular architecture that adheres to O-RAN standards, promoting flexibility and interoperability within multi-vendor RAN environments.

The foundation of Amdocs offering is an industrialised Non-RT RIC from the O-RAN Software Community (OSC), this ensures long-term alignment with O-RAN Alliance specifications, APIs and workflows. Amdocs pre-integrates and tests the OSC Non-RT RIC to ensure scalability, stability & security in production environments and provides extensions to support both traditional RAN and to simplify app development.

Key features of Amdocs Cognitive RAN Automation:

- **Microservices architecture** deployed within containers (Kubernetes or Docker), for increase performance, scalability and fault tolerance.

- **Modular design** aligned to the O-RAN Alliance's Non-RT RIC Framework that supports pragmatic use of existing operator platforms, including assurance and MLOps.

- **O-RAN standards compliance** for rapid integration with other O-RAN compliant components from various vendors.

- **Support for traditional RAN** to create a consistent platform for automation regardless of the vendor or technology.

- **Advanced visualization**, ad-hoc RAN analytics and open loop automation

- **Out of the box automation rApps** covering traditional SON use cases defined in 3GPP.

- **Embedded AI/ML framework** supporting app-initiated workflows for model training, model management & storage (repository) and model inference.

- **Pre-integration with Amdocs Service Management & Orchestration** (SMO) for true E2E automation.

- **Evolution path** from Amdocs' existing RAN automation capabilities (Amdocs Network Optimization Suite and Actix Call Trace Geolocation) to reduce the barrier to entry.

- **Flexible deployment models**, install on public/private cloud or on-premise.

Support for O-RAN Interfaces:

- **R1 Interface** providing APIs for rApps to interact with the non-RT RIC platform and utilize its services.

- **SDK & App Ecosystem** an rApp SDK simplifies the development and porting of third-party rApps onto the platform.

- **RAN O&M Services** for consistent access to configuration, performance (live & historical), alarm and trace data regardless of the source: O1 termination or Amdocs / third-party mediation platforms.

- **A1 Interface** with support for policy management (A1-P), ML model management (A1-ML), and enrichment information (A1-EI).

- **O2** including inventory and provisioning.

- **Secure Communication** with the near-RT RIC and SMO through secured A1 and O1 interfaces.

The Cognitive RAN Automation is part of Amdocs RAN automation offerings that also include:

- **Systems Integration Services** to embed the non-RT RIC within your existing operational systems and processes.

- **Legacy Automation Migration** that takes existing use cases and moves them to the non-RT RIC platform.

- **Custom Use Case Development** for automation specific to your business needs and network goals.

- **Creation of CI/CD/CT pipelines** to streamline app development, testing, certification, and production onboarding.
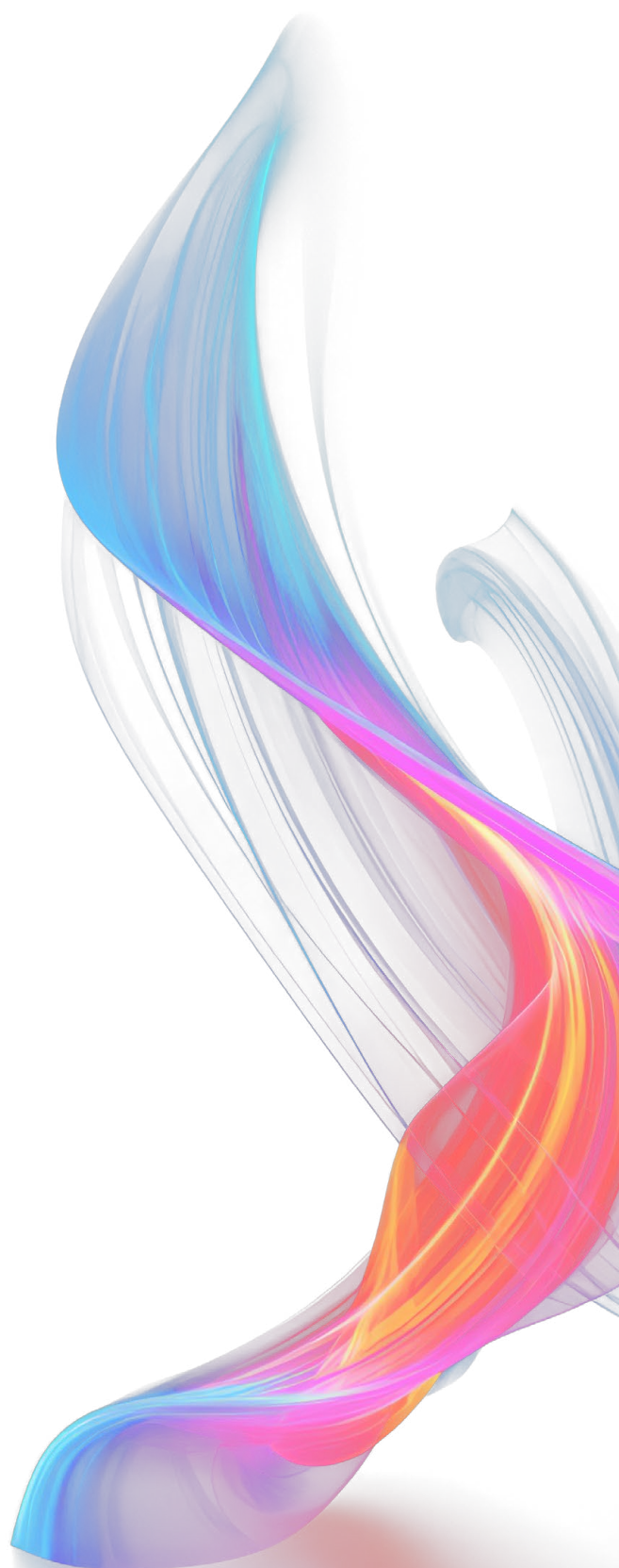
Machine Learning Automation Apps

Amdocs Cognitive RAN Automation provides an open platform for advanced AI/ML powered automation apps built by ecosystem third parties, Amdocs, or the operators themselves.

Leveraging our experience in native AI led SON, Amdocs is focused on delivering high impact consumer centered use cases through the combination of powerful geolocated data sets, advanced AI/ML and external enrichment data. Amdocs rApps for user centered cluster-based Coverage & Capacity Optimization (CCO), massive MIMO SSB optimization and Energy Savings Management (ESM) have been deployed, tested, and badged in Telecom Infra Project led ARIANE & ARI-5G engagements.

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

Amdocs is the largest vendor neutral RAN automation supplier with over 20 years delivering closed loop automation use cases in operators. We take a pragmatic approach to automation working with you existing infrastructure and integrating software automation aligned with the latest industry blueprints.

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 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 $5.00 billion in fiscal 2024.

For more information, visit www.amdocs.com

a· amdocs

make it
amazing