

Predicting network failures before they happen using Artificial Intelligence.

Red Hat Software Partner



"Containers and OpenShift are driving new deployment architectures for telecom networks, providing reliability, scalability and versatility. Our Red Hat partnership supports the rollout of Avanseus' network failure prediction and performance applications seamlessly across the technology stack."

AI based Predictive Assurance software for NFV and Hybrid Networks.

Avanseus[™] Cognitive Assistant for Networks (CAN) is an offline, non-intrusive solution, that predicts faults and performance degradation for mobile, fixed, IP/MPLS backbone, transmission networks and enterprise IoT across NFV and Hybrid Networks. Technology and network vendor agnostic, CAN is suitable for Communication Service Providers, Managed Services Providers, Tower Companies, Broadband Providers and enterprises using IoT. More importantly, CAN helps in smooth 5G evolution by enabling automated & agile operations.

Executive summary

Avanseus CAN is a powerful prediction engine providing unprecedented levels of prediction coverage and accuracy. The Red Hat partnership supports CAN's ease of implementation and scalability by certifying the containerized software and micro-services with Red Hat frameworks across cloud platforms. It also enables plug and play installation of CAN software for Red Hat OpenShift Container Platform users.

Product profile

Avanseus CAN predicts potential network failures & service degradations and recommends preventive measures to help proactively manage the NFV & Hybrid Networks. VNFs, CNF's, and Network slices are monitored automatically for performance and resources adjusted to make sure the agreed SLA is delivered. It helps detect service degradation or poor network performance signals that cannot be identified by existing network monitoring systems and uses advanced machine learning to continuously extract ever improving information from Network functions and resources to proactively configure the network resources for meeting SLA.

Rajendra Panda Head of Strategy & Business Development, Avanseus



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AI/ML Predictive Maintenance – Product Diagram

Alarm]> >	Un Modern	avanseus	Un Modern	
PM KPI	- 	iversal / API laye	Cognitive Assistant for Networks	iversal / API laye	
Syslog / Device Counter]>	Universal API Layer & API Modern API layer to expose colle	Predictive maintenance based on AI-ML Universal prediction engine	Universal API Layer & Modern API layer to expose	1
Configuration Management	} →		Red Hat OpenShift Container Platform	& API Ga	Ľ
Network Inventory		API Gateway Management collect and transform information	Red Hat Enterprise Linux	API Gateway Management collect and transform information	
Policy / Intent / SLA	↓	Mana		Mana	
		n info	Any Infrastructure	n info	
Customer Complaints	 ∙−−−•	ent prmatior	Physical Virtual	ent prmatior	
Ext - Weather Forecast	}>	-	Private Cloud Public Cloud	-	

Maintenance are retrofitted to various persons and systems

Correlated and augmented information about Predictive

> Field NOC Engineers

- Automated Actions based on predefined scenarios are ran: • TT Booking
- Capacity Provisioning/De-
- provisioning • Field Services Management
- Field Services Manage
 Spare Management
- Soft reset/restart of
- equipment, processes etc. • Traffic Re-routing

"Customers are looking to migrate their applications to the cloud leveraging containers as the deployment model," said Mike Werner, Sr. Director, Global Technology Partners, Red Hat. "Red Hat container certification assures a supportable platform for all types of customer deployment models. Red Hat is thrilled to work with software partners like Avanseus, resulting in the world's largest commercial ecosystem for containers."

> **Mike Werner, Sr.** Sr. Director, Global Technology Partners, Red Hat

Product benefits

Avanseus CAN delivers a range of technical, operational and financial benefits:

- **Multi-domain, multi-vendor, multi-technology.** CAN works with virtually any technology domain, vendor equipment and network type, is non-Intrusive and can be implemented quickly and easily. It is future ready for virtualized network environments.
- Increases network uptime and drives down OPEX. Fixing network failures before they happen increases network uptime and network integrity. Network operating costs are driven down together with manpower efficiency increases.
- **Improved customer satisfaction and revenue.** Less network downtime improves enduser satisfaction, brand image (reduces churn) and can help increase revenues.

Use cases

Avanseus CAN helps improve network operations through:

- **Prediction of network incidents in advance.** The platform automatically predicts future faults in the network 7 to 30 days in advance (configurable) and recommends the root cause of the failure.
- **Predicting KPI degradation.** The platform automatically predicts network performance KPIs and identifies the potential threshold violation cases.
- Health index monitoring and predictions of VNFs & CNFs. The platform provides continuous monitoring of services (health index), prediction of rare faults, and a very fast prediction engine to cater for increasing network complexity and capacity provisioning.

Learn more

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Resources

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About Avanseus

Avanseus develops Artificial Intelligence driven enterprise applications. The Company was founded in 2015 and is headquartered in Singapore with its Research and Development centre in Bengaluru, India. Avanseus has also established entities in the US and Europe, and has a network of partners across key global markets. Avanseus specializes in building enterprise solutions driven by Artificial Intelligence and Cognitive Computing. The Company's current focus is Predictive Maintenance software, especially in the telecom, industrial IoT, and manufacturing sectors.

About Red Hat

North America

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Red Hat is the world's leading provider of enterprise open source software solutions, using a community-powered approach to deliver reliable and high-performing Linux, hybrid cloud, container, and Kubernetes technologies. Red Hat helps customers integrate new and existing IT applications, develop cloud-native applications, standardize on our industry-leading operating system, and automate, secure, and manage complex environments. Award-winning support, training, and consulting services make Red Hat a trusted adviser to the Fortune 500. As a strategic partner to cloud providers, system integrators, application vendors, customers, and open source communities, Red Hat can help organizations prepare for the digital future.



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