



5 reasons to optimize your network with Red Hat and ZTE

Across many industries, AI has transformed processes, workflows, and solutions, and is poised to do the same for telecommunications service providers. Early adopters have used AI for network optimization, incident resolution, and predictive maintenance, and many service providers are now looking to AI to advance autonomous networks. This checklist outlines 5 considerations for—and benefits of—building autonomous networks with Red Hat and ZTE, which share an extensive history of collaboration, including deploying and maintaining 70+ Red Hat® OpenShift® clusters across 3,000+ nodes.

1 Find solutions that help automate network maintenance and operations

The initial step to creating autonomous networks is integrating automation and AI into network operations (NetOps) to help streamline network maintenance and operations, reduce manual work, and mitigate downtime.

Red Hat and ZTE can help you adopt and integrate AI and automation using:

- ▶ ZTE Inspector, which provides automated inspection and maintenance operations to improve your cluster health visibility.
- ▶ ZTE Red Hat Operation Center (ROC), which helps integrate platform and service layers and offers unified In-Service Software Upgrade (ISSU) capabilities.
- ▶ ZTE Auto Integration Center (AIC), which delivers full lifecycle management for Red Hat OpenShift clusters with out-of-the-box deployment capabilities, single-click operations, and cluster performance enhancement features.
- ▶ Red Hat Lightspeed, a gen AI-powered assistant embedded in Red Hat's hybrid cloud platforms to help address AI skill gaps in your organization.
- ▶ A GitOps-centric approach to full stack platform lifecycle management and application onboarding on Red Hat OpenShift.

Together, these solutions can help your organization minimize manual processes, optimize network resource use, increase efficiency by automating routine maintenance tasks, and improve scalability with automated processes that can accommodate growing infrastructures.

2 Access AI models that meet your specific needs

Service providers need to consider which type of AI model (or combination of models) is best to target their specific use cases with their select datasets.

Red Hat and ZTE can help your organization find the right AI model(s) for your unique needs by offering access to:

- ▶ Red Hat OpenShift AI, a platform for managing the full AI model lifecycle, including developing, training, and fine-tuning AI models.
- ▶ Certified and optimized open source AI models, including Deepseek, Qwen, Llama, and many others supported by Red Hat OpenShift AI.
- ▶ The Nebula Telecom Large Model developed and optimized for service provider use cases by ZTE.

3 Prepare for the future with a hybrid cloud platform

Many organizations use public cloud resources, but as they get to production, concerns about privacy, security, and sovereignty create a need for on-premise platforms.

Red Hat can help you prepare for this with:

- ▶ Red Hat OpenShift AI, which provides portability between public and private cloud environments.
- ▶ Red Hat's inference servers, which can be deployed across hybrid cloud infrastructure.

4 Build with governance and guardrails front of mind

Bringing AI into NetOps requires security and governance at every layer to safeguard sensitive data and operations.

Red Hat can help you build the required processes and guardrails, including:

- ▶ An AI operations (AIOps) approach—supported by Red Hat’s technology portfolio—to help make smarter decisions and incorporate compliance and privacy guardrails.
- ▶ A holistic “defense in depth” approach that enforces security at every layer, including hardware, platform software, and applications, to safeguard interfaces that extend attack surfaces.
- ▶ Automated security protocols and compliance checks that adapt to specific requirements and help improve your overall system security focus.
- ▶ Trusted software supply chain practices that help mitigate risk, supported by the built-in security and automation capabilities of Red Hat platforms and other solutions, such as Red Hat Advanced Container Security and Red Hat Quay.
- ▶ Protection and encryption for data collection and transmission.

5 Evolve your network for the future of 6G

The goal for 6G is fully autonomous networks that make intelligent decisions and dynamically adapt and optimize without manual intervention. This is currently supported by autonomous network standards and industry practice organizations—including TeleManagement Forum, Next Generation Mobile Networks Alliance, International Telecommunication Union, 3rd Generation Partnership Project, and European Telecommunications Standards Institute—but the advancement towards 6G will still require extensive collaboration with hardware, software, and integration vendors.

Red Hat and ZTE have prepared to support this by:

- ▶ Emphasizing the importance of an open source ecosystem for future industry innovation.
- ▶ Creating validated solutions that can help accelerate AI adoption and digital transformation in the telecommunications industry.
- ▶ Building extensive expertise working with service providers to help them successfully navigate their technology transformation journeys.

Start your AI and automation journey with Red Hat and ZTE

[Visit our catalog page](#) to learn more about the benefits of AI to your organization, or contact a Red Hatter to reserve your personalized AI proof of concept to test solutions in a real-world scenario, or get expert support for your implementation process.



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Red Hat helps customers standardize across environments, develop cloud-native applications, and integrate, automate, secure, and manage complex environments with [award-winning](#) support, training, and consulting services.

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