HUGHES
An EchoStar Company

Hughes Network Engineering Support

BROCHURE

Global and regional communications networks require constant attention. The managers of cloud-based and bandwidth-intensive networks across hundreds of locations need applications to be available without interruption.

As Hughes, we have developed a global support network to ensure that our customers have the tools, knowledge and resources they need to keep their networks on-line around the clock. Our network support engineers speak a wide variety of languages and are stationed at strategic points around the globe to provide technical support when and where it is needed.

Griesheim, Germany
Milton Keynes, United Kingdom
Moscow, Russia
Haryana, India
Germantown, Maryland, United States
New Delhi, India
Mexico City, Mexico
Bogotá, Colombia
Rome, Italy
Quito, Ecuador
Sao Paulo, Brazil
Kuala Lumpur, Malaysia
Kinshasa, DRC
Jakarta, Indonesia
La Paz, Bolivia
Dubai, UAE
Lima, Perú
Pretoria, South Africa
Santiago, Chile

Hughes has engineers stationed to cover all time zones and can speak the following languages: English, Spanish, Arabic, Mandarin, Russian, Bahasa Indonesian, Bahasa Malaysian, Swahili, Afrikaans

Customer-Managed Engineering Support

In a typical network deployment, the customer assumes responsibility for routine ("Tier 1") support activities such as remote installations, attending to end-user calls and basic maintenance.

Customers have the option of outsourcing more involved network maintenance to Hughes. These "Tier 2" tasks include:

- Day-to-day adjustments to the network configuration to achieve optimal performance.
- Network status monitoring from the Hughes operations center.
- Network status and traffic reports on an ongoing basis.
- Software upgrades as needed.
- Quarterly network audits to identify ways to improve performance and lower costs.

At the highest level of support, Hughes Customer Assistance Center (CAC) offers "Tier 3" help desk service, including:

- Respond to network performance issues as they arise, with automatic escalation for critical problems.
- Meet with the customer bi-weekly to review network issues.
- Troubleshoot and fix any system-level issues that are reported.
- Coordinate with the development team to update software.
- Audit the network annually to identify software and/or hardware upgrades.
- Monitor network traffic growth and proactively suggest ways to manage that growth.
- Provide documentation of all changes to the network configuration and operation

Service		Responsibility
Tier 1	• Routine support activities	Customer
Tier 2	• Day-to-day network adjustments • Monitoring for optimal performance • Status and traffic reporting • Quarterly audits	Customer or Hughes
Tier 3	• On-call network issues response • Troubleshooting and fixes • Monitoring and growth management Configuration and operational documentation	Hughes
Security & Enterprise Networking		Hughes
Network Analytics		Hughes

Additionally, because network security is of paramount importance, Hughes offers a Security & Enterprise Networking support package, which covers activities such as:

- Assisting with developing network routing policies to avoid security breaches.
- Recommending a range of perimeter security steps.
- Developing and helping monitor firewall policies for users.
- Periodically reviewing all aspects of the network for vulnerabilities.

And finally, because no network remains static, Hughes offers a Network Analytics Package that includes:

- Analyzing network traffic to determine where operations can be optimized.
- Using integrated artificial intelligence and machine-learning algorithms to improve performance based on network states, capacity trends, and overall network performance.
- Making network traffic growth projections with recommendations on necessary network adjustments.

Drawing on lessons learned over decades operating the world's largest satellite network, Hughes has developed network management expertise unrivaled in the industry. Our engineers are available anywhere and anytime to help customers make the most of their network resources and to assist in monitoring all phases of network operations.

To arrange your custom network engineering support program from Hughes, contact **globalsales@hughes.com** or visit **Hughes.com**.

OUTSOURCE YOUR NETWORK OPERATIONS

Hughes can provide extended on site and/or ongoing operational support. For new networks, a customer may need this enhanced level of service for just a few months. Or a customer may want a complete managed network service, with Hughes engineers stationed on-site to support all phases of network operations. Hughes has the global scale and the network experience to provide any level of service needed, anywhere in the world.

TRAINING IN NETWORK MANAGEMENT

Over decades of designing and running networks, Hughes has developed a knowledge base that is available to customers through an 80-hour structured training program. Our experts provide insight into network design, hardware configuration, software installation and how artificial intelligence and machine learning can be used to optimize network performance.

Proprietary Statement

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