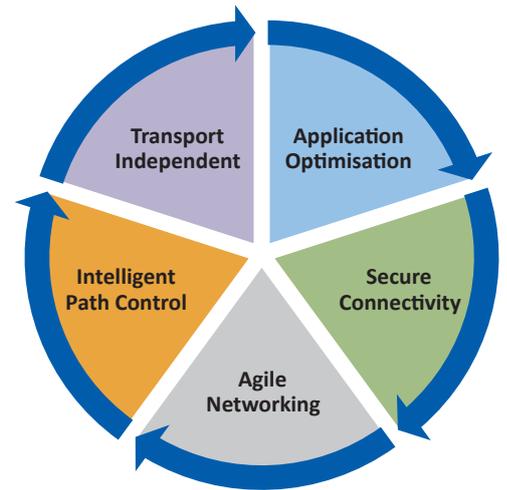


Agile Networking with Predictable Application Performance and QoS with Hughes SD-WAN

With organisations demanding more flexible, open, cost-effective, and Cloud-based WAN technologies to enable new business apps innovation, handle social media, mobile devices, and Cloud-computing, which are pushing traditional networks to their limits, network engineers, operations personnel, and administrators need to have the flexibility and agility in their network to rapidly deploy new applications, services, and infrastructure to quickly meet changing business goals and objectives, but still provide predictable application performance and Quality of Service (QoS) across the network.

Hughes Software-defined WAN (SD-WAN) is a suite of features designed to allow the network to dynamically adjust to changing WAN conditions without the need for manual intervention by the network administrator via a centralised control console. By providing granular control over how certain traffic types respond to changes in WAN availability and performance, SD-WAN can ensure optimal performance for critical applications and help to avoid disruptions of highly performance-sensitive traffic, such as VoIP.



HUGHES SD-WAN

Services and solutions developed with Meraki and Hughes own ActiveTechnologies™ to meet the demands of the network evolution.

Transport Independent	Traffic distribution over multiple pathways (DSL, 3G/4G, satellite) with load balancing and automatic failover capabilities for optimum use of available bandwidth and increased reliability.
Application Optimisation	Centralised Layer 7 visibility and control of applications running across the network with QoS and bandwidth management. By providing granular control over how certain traffic types respond to changes in WAN availability and performance, Hughes SD-WAN can ensure optimal performance for critical applications and help to avoid disruptions of highly performance-sensitive traffic, such as VoIP.
Secure Connectivity	Secure connectivity at the edge with inbuilt Firewall, AES encryption, and IPSec to ensure secure links and data privacy, protecting the customer and the brand.
Agile Networking	Centralised templates allow configurations to be done from a single point and pushed to selected devices with a simple click of a button. Allows new apps and services to be quickly deployed with real-time control over available bandwidth capacity.
Intelligent Path Control	Dynamic Path Selection for QoS control and predictable application performance, with traffic path chosen per application based on loss, latency, and jitter, and assigned based on source, destination, or application.

HughesON™

HughesON is a suite of innovative, Cloud-ready network and digital media solutions designed for the unique needs of distributed enterprises in industries such as retail, hospitality, and retail petroleum.

Hughes ActiveTechnologies

To meet the challenges in today's network, Hughes has developed using patented State-of-the-Art WAN optimisation features combined with configuration automation for reduced management complexity, real-time QoS becomes practical over best-effort broadband connections transforming them into highly reliable enterprise-grade WANs. This allows enterprises to deploy real-time and business-critical apps over broadband connections with high reliability and performance, while still allowing Cloud apps and guest Wi-Fi services to be delivered over the same connection. The core features in this suite are Hughes ActiveQoS™, ActiveClassifier™, ActiveCompression™, and ActivePath™.

<p>ACTIVECompression™ <i>Increased virtual capacity to branch sites</i></p>	<p>Hughes ActiveCompression technology dramatically increases the “virtual” or effective bandwidth available at branch locations by improving throughput and application performance without incurring the expense of increasing the access link speed.</p>
<p>ACTIVEQoS™ <i>Dynamic end-to-end QoS control over broadband</i></p>	<p>Hughes ActiveQoS intelligently monitors and manages the end-to-end network capacity over the WAN, while Hughes ActiveClassifier dynamically classifies traffic flows into eight different traffic classes in real time. Real-time traffic is optimally routed over the WAN without queuing delays while all other traffic is appropriately balanced among strict priority queues with starvation protection. This intelligent balancing of different traffic types over the broadband connection effectively mitigates congestion.</p>
<p>ACTIVEClassifier™ <i>Automatic flow and website classification</i></p>	<p>Hughes ActiveClassifier is an IP flow-based packet classifier that works both in the upstream and downstream directions independently and eliminates the administrative overhead of defining rules or ACLs in any type of network. It intelligently classifies traffic according to its QoS needs, ensuring that real-time and interactive applications receive the appropriate prioritisation automatically, while new applications being added to the network are effortlessly blended in. ActiveClassifier classifies IP flows into four top-level classes: real-time, light-interactive, heavy-interactive, and bulk, each defined by specific characteristics of the different classes. Heavy-interactive and bulk are further broken down into three separate classes for more granular control and a total of eight traffic classes are available.</p>
<p>ACTIVEPath™ <i>Intelligent use of multiple WAN connections (SD-WAN)</i></p>	<p>Hughes ActivePath uses Intelligent Multipath Replication (IMR) technology to automatically replicate mission-critical application traffic across the available WAN paths. This allows ActivePath to eliminate the impact that brownout and blackout conditions have on sensitive applications, such as VoIP.</p>
	<p>As well as developing ActiveTechnologies to provide performance optimisation of the WAN network, Hughes has built the platform on the Fortinet Enterprise Firewall Solution to deliver end-to-end network security with unified policy management via a single pane of glass to provide the best protection against the most advanced security threats and targeted attacks. Combined they provide the security at the branch required today to protect the customer and the brand as well as provide the enquired levels of network performance that businesses, staff and customers expect from today's connectivity. The Fortinet 60 series appliances that the Hughes HR4700 is built on deliver up to 3.5 Gbps of firewall throughput, plus multiple, integrated 1 GE ports. This combination of performance, port density, and consolidated security features offers an ideal platform for distributed enterprises.</p>

Discover all the benefits of the Hughes solutions and experience the Hughes difference. Visit www.hugheseurope.com or call us at +44 (0) 1908 425 355.

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