

Hughes Network Systems Strengthens Managed SD-WAN with Zero-Touch Automation and Real-Time Optimization and Acceleration

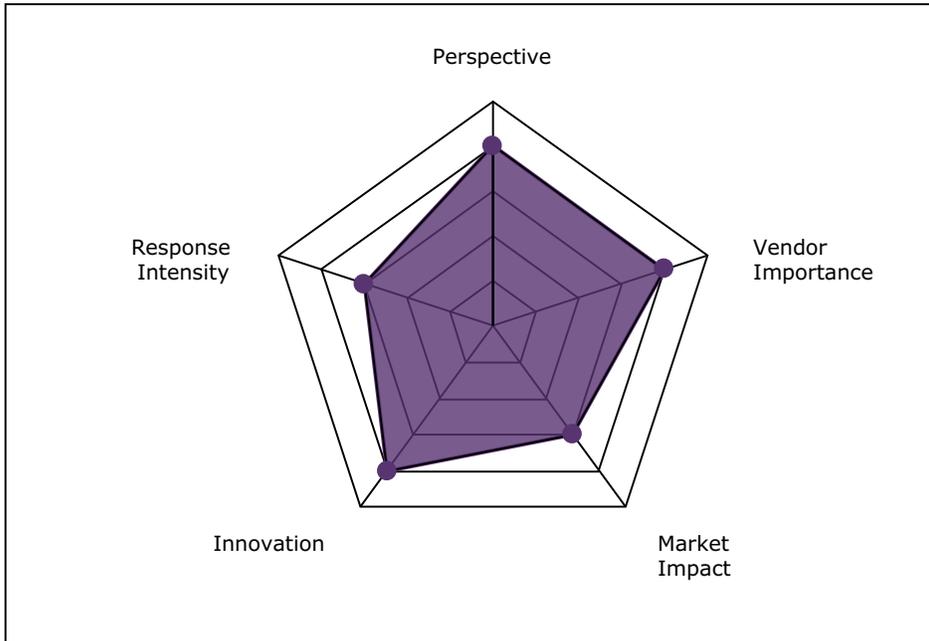
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INTELLIGENCE REPORT

QUICK TAKE

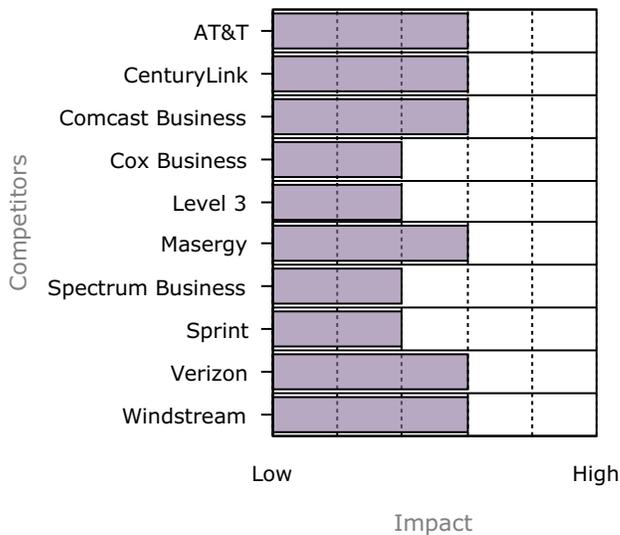
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Competitive Impact



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Competitive Positives

- The ability to deliver SD-WAN across all major transports, including by satellite, 4G, and microwave accesses, is unique in the market.
- Hughes' broadband aggregation supported by 70+ partners is an ideal fit for SD-WAN business models.
- Hughes SD-WAN ships with its own CPE, which includes the provider's compelling 'ActiveTechnologies' features.
- Hughes is incorporating intelligent automation capabilities into its software suite to enable zero-touch provisioning (ZTP), an attractive feature for widely distributed enterprises.
- ActiveCompression, ActiveQoS, and ActivePath integrate real-time network intelligence into Hughes' SD-WAN solution, freeing network managers to focus on broader operational issues.

Competitive Concerns

- Hughes' SD-WAN service is based on its own proprietary solution. This may limit the overall length and breadth of service compared with operators that have decided to partner with multiple SD-WAN platform developers.
- Hughes' legacy as a satellite service provider may overshadow its recent network service innovations with prospective customers.
- Differentiating on WAN optimization and application acceleration is challenging, as various aspects of these capabilities are available from several competing providers, though usually requiring additional equipment and significant costs.
- Tight integration between cloud SD-WAN providers and strong cloud and data center service companies poses a threat.
- Major global service providers such as AT&T have made open-source network APIs available for orchestration and management of virtual networking, a capability that Hughes does not currently market.

July 24, 2017 – Hughes Managed SD-WAN incorporates CPE from Hughes and is broadband access type agnostic. The service features the following: 'ActivePath' (dynamic path selection), 'ActiveQoS' (dynamic adjusting of priorities and queues as available bandwidth changes, essential to broadband), 'ActiveClassifier' (dynamic traffic classification based on flow behavior) and 'ActiveCompression' (for improvements in application performance leveraging multi-stage data compression and caching).

ANALYTICAL SUMMARY

Perspective



- Positive on Hughes' SD-WAN solution, because the provider is in a sweet spot for managed SD-WAN demand: strong in the retail vertical and specializing in multi-provider broadband aggregation. The company is also sensibly leveraging a compelling innovation set based on its ActiveTechnologies basket of unique value-adds. Hughes can present its managed SD-WAN services as drawing on its long and stable CPE track record, as most of its ActiveTechnologies features have been around since before its new service launch; the operator adds dynamic path selection to pre-existing applications management and acceleration features. In a market where many vendors and technologies are new, Hughes SD-WAN is based on a mature, proven platform.

Vendor Importance



- High to Hughes, because the provider needed a response to the managed SD-WAN services being rolled out by many other managed service providers. The provider introduced ActiveClassifier for optimizing traffic flows in 2013; ActiveQoS and ActiveCompression date back to 2009-2011; the ActivePath feature is new for 2017. Hughes ties all these together and repositions the net offer (correctly) as managed SD-WAN capability, backed by Hughes' ability to source terrestrial wireline/wireless broadband services from 70+ providers nationwide. This conservative, evolutionary option should appeal to Hughes' existing enterprise customers that want to minimize risk.

Market Impact



- Moderate on business services market, because Hughes is in synch with the many providers that have announced managed SD-WAN services of their own, including Verizon, CenturyLink, AT&T, EarthLink, MetTel, Sprint, and most recently, Windstream. Many of these providers are initially teaming with SD-WAN vendor VeloCloud, so Hughes can draw feature differentiation specifically between its platform features and those on VeloCloud's platform. But, other managed service providers are under pressure to differentiate their products, and the ecosystem will build on product/service variations and options that, in sum, can potentially outpace Hughes' development efforts in the long term.

COMPETITIVE STRENGTHS

Competitive Positives

- Hughes is a broadband aggregator with 70+ partners, a good fit for SD-WAN business models. The bulk of its managed connections are terrestrial wireline/wireless. Few competing service providers can match the company's proven experience with delivering SD-WAN services supported by satellite, 4G, and microwave accesses.
- Hughes SD-WAN ships its own CPE with ActiveTechnologies features – applications management, WAN

optimization, acceleration/compression, dynamic path selection – features born from the company’s unique expertise with integrating and managing multiple broadband access types and developing intelligent network platforms.

- SD-WAN appeals to cost-sensitive enterprises running many branch offices (e.g., retail), which is Hughes’ primary customer success vertical and its managed services sweet spot.
- Hughes is inherently differentiated from other managed SD-WAN solutions by virtue of developing/owning its own technologies and platform. A determined focus on zero-touch provisioning (ZTP) will hold great appeal to prospects that need managed services for branch sites that do not have major IT skillsets on location.
- Hughes Networks’ ActiveCompression and ActiveQoS put intelligence into the company’s SD-WAN solution by deciding on the fly what to compress and by how much based on traffic queues. These features also apply traffic shaping that flexes up or down as needed to prevent bottlenecks.

COMPETITIVE WEAKNESSES

Competitive Concerns

- Major telco competitors typically partner with a number of SD-WAN platform developers such as Viptela, VeloCloud, Nuage Networks (a Nokia company), and others. This strategy broadens the choices customers have while shopping around for an SD-WAN service. In contrast, Hughes Networks’ offering is proprietary, and despite some inherent benefits, this may put some clients off if, for example, they have concerns about becoming locked into any single vendor.
- Even though Hughes is mainly a managed services provider today, its brand is still strongly linked to satellite services. While Hughes has developed a solid portfolio of managed network services delivered over multiple network technologies, it may not be on prospective clients’ radar if satellite broadband isn’t a service component.
- WAN optimization and application acceleration are table stakes within currently available SD-WAN portfolios. Indeed, many solutions currently tout intelligent/dynamic path selection to help prevent traffic congestion by application. Some solutions leverage partnerships with vendors such as Riverbed, InfoVista, and Akamai, whilst others have been assembled in-house. Hughes can counter these objections with the unique point that its value-added features are a complete solution in a box, without the need to source and deploy additional hardware and software appliances from multiple vendor partners.
- Companies with major cloud fabrics are also focusing strongly on serving cloud infrastructure with dedicated links to the major cloud providers (AWS, Salesforce, etc.) accompanied with messages that their SD-WAN offerings are dedicated to high performance and agile virtualized IT estates. This activity raises challenges for Hughes to differentiate its own WAN optimization and application acceleration capabilities.
- AT&T’s ECOMP open-source software platform initiative taps into a potentially massive developer pool to harness skills to pursue its overall network virtualization goals for orchestration and management. Colt is a partner, while Orange and Amdocs are testing the platform. Progress with open-source coding for network virtualization at this scale will threaten Hughes’ proprietary solution unless Hughes can open up its solutions to other developers and operator partners underpinned by open-source network APIs.

RESPONSE & RECOMMENDATIONS

- Hughes Networks can consider a marketing campaign that highlights several unique selling points and compelling reasons for prospects to buy its SD-WAN solution. Key strengths to emphasize include unmatched experience in integrating multiple broadband access types, including satellite, microwave, and 4G, with an SD-WAN solution and proven real-time and intelligent compression and QoS features that are a part of its ActiveTechnologies suite.
- Additional features to bring to the fore include Hughes' single CPE device shipped for SD-WAN deployments, which supports ZTP and is backwards-compatible with all versions of the company's WAN platform, the HR4700. The company will assist clients with the evolutionary pathway from WAN optimization to a SD-WAN solution.
- Competitors are advised to build counter-messages concerning skills with integrating multiple broadband access types with SD-WAN services. ZTP is also a desirable item on the IT manager's shopping list for SD-WAN services. Meanwhile, competitors can point to existing capabilities in the areas of dynamic path selection, WAN optimization, and application acceleration, stressing that the Hughes SD-WAN offering comes with standard value-added features, as opposed to truly differentiated features.
- AT&T can seek to develop support for multiple SD-WAN vendor options in order to make its SD-WAN menu broad. The carrier can also explore making its SD-WAN proposition available with FlexWare NFV and tie bandwidth controls back to its WAN.

BUYER ACTIONS

- Customers that need to connect multiple branches over a variety of available broadband access types, spanning from satellite to microwave and including, for example, 4G, can consider the Hughes SD-WAN offering. The company has proven credentials in delivering integrated services to meet exactly this requirement profile.
- Customers can ask Hughes about its ZTP capabilities, because the company's managed SD-WAN offerings can be very easy to set up for branch sites that do not have on-location IT departments with WAN connectivity and configuration experience. The Hughes SD-WAN is a complete solution in a box: once the CPE is shipped and plugged in it will self-discover and establish the SD-WAN environment automatically. Clients should push Hughes for details about self-management tools via an online portal, as well as a list of VNFs that are available today and/or on the future roadmap. For example, does the company offer a virtual firewall that can be quickly and easily spun up similar to a VM in cloud computing?
- Clients should shop around and contact other operators to assess the various offers in the marketplace. Clients should be seeking to avoid a vendor lock-in situation with their SD-WAN and seek open solutions that will be compatible with multiple vendors. Prospects should also ask about integration with the main cloud platforms including MS Azure, Salesforce, and AWS, to see how easily and quickly cloud apps can be integrated with the SD-WAN service. Several providers offer existing links to the main cloud platforms with considerable data center density and inter-data center connectivity to help support apps served from within hybrid clouds running over the SD-WAN.

ANALYTICAL PERSPECTIVE

Innovation

The Hughes SD-WAN product rates highly in terms of innovation due to a list of enhancements over the

competition, such as being able to deliver its SD-WAN over satellite, 4G, wireline, and microwave accesses. Hughes has continually improved its ActiveTechnologies suite in the pursuit of intelligent automation, which has resulted in compelling ZTP for clients.

The Hughes ActiveTechnologies platform adjusts network parameters on the SD-WAN in real-time, via the following components:

- ActivePath:** A key underpinning technology for the Hughes SD-WAN service is its 'ActivePath' feature. ActivePath leverages intelligent path control to maximize applications availability at branch sites by routing applications over the best performing path and at the same time utilizing multiple paths in an active-active fashion for mission critical applications.
- ActiveCompression:** A mechanism that automatically chooses the degree of compression required based on queue levels, applying more compression as queues build and reducing compression as the queues recede.
- ActiveQoS:** The ActiveQoS function senses network bandwidth many times per second and develops a performance map that will then adjust traffic flow and prioritization each and every second without demanding human intervention for configuring and setting rules.
- ActiveClassifier:** This feature views traffic size, volume, frequency, and other criteria, and using a heuristic algorithm identifies the type of traffic without using DPI. This traffic 'fingerprinting' takes place once again without requiring human interaction, and will refine classifications over time based on traffic patterns.

Response Intensity

Hughes' competitors need to be aware of the capabilities of the company's SD-WAN product. Key salesforce personnel need to understand how Hughes is positioning its SD-WAN with go-to-market messages, including understanding underlying benefits in order to be able to respond with counter-messaging in conversations with prospects. By way of example, Verizon's sales teams can talk about how the company has signed up hundreds of Ethernet NNIs worldwide, and is in a good position to add other broadband aggregation agreements to offer a wide range of SD-WAN access options. Additionally, Verizon can highlight thought leadership in the field of virtual network services, with differentiation points based on its ability to support SD-WAN as a virtual network function.

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