**MANAGED LAN** 

# ONSITE CONNECTIVITY – FROM A SINGLE SOURCE

Hughes Managed LAN Services include all the network hardware, software, installation, management, and support that you need for trouble-free connectivity between people and things in your distributed locations.



# BENEFIT FROM A UNIFIED SOLUTION

Hughes Network Systems Europe is a specialist in connecting people, places and things. This means we are the ideal choice for designing, delivering and supporting your LAN infrastructure. We understand the importance of providing reliable connectivity for the people and things in every building in every location. So whether you need fixed or wireless LAN solutions, we can provide a fully managed service, giving you the confidence that your employees and your customers will have the access they need whenever they need it.

## **QUICK AND EASY SETUP**

With Hughes Managed LAN you decide how much support you need and whether we should look after your network companywide as a comprehensive service combined with Hughes Managed WAN, or only in the branch sites where there are no dedicated IT personnel. We can also help you set up new locations quickly and easily – regardless of whether they are in another part of the city or at the other end of the world. We will always keep an eye on your LAN to ensure that it is working optimally.

## WITH A MANAGED LAN SOLUTION FROM HUGHES YOU CAN BENEFIT FROM:



## Ease of procurement

We provide all the hardware required for your local area network as part of the service package. This includes security devices, switches, and Wi-Fi access points (APs). We procure, take delivery, warehouse, and ship all the necessary hardware to your distributed locations, which means your employees do not have to handle any of the equipment at any point during the supply process. The entire provisioning process is carried out by our own inhouse teams, and specialist logistics companies.



## Dependable installation and rollout

All installation and configuration work necessary to provide the LAN service is carried out by Hughes network and field engineering teams and a network of trained and certified installation technicians. This includes cabling between the LAN switches and APs. To ensure speed, efficiency and your satisfaction, we create an installation specification that sets out exactly what happens when the installer arrives and how the installation is to be performed and verified. Upon completion, all aspects of the installation are documented and posted on the secure ServiceNow customer gateway. If you also require connectivity to the site, this can be provided via the Hughes Managed WAN service.



## **Expert project management**

Our own internal project management team works with you to manage your project from inception to completion according to your schedule and other constraints. A Lead Project Manager is assigned to the project as your single point of contact. Our project teams are based across our European locations and have extensive experience and expertise of challenging environments such as the high street and shopping centres.



## Service provider management

We handle all interactions with service providers through an appointed Service Manager, giving you a single point of contact for all services anywhere in Europe, so your employees never have to worry about which is the right company to contact. The Service Manager ensures that the contracted services are always maintained to the highest standards.



## **Excellent support**

In the event of an issue with the LAN service, the Hughes help desk team will identify the cause of the issue and either put a resolution in place directly or hand it to a network engineering team for resolution.

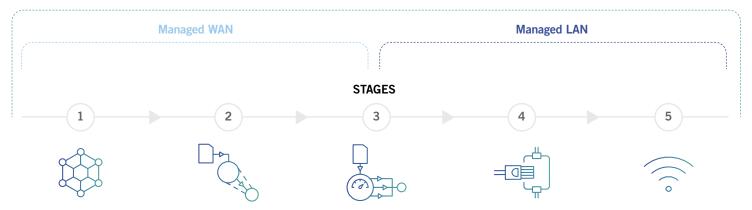


## **Excellent reporting**

As part of the service, we provide comprehensive reports according to your requirements, covering metrics such as overall availability by site and by country, performance against service level agreements (SLAs), speed of fault resolution, trend reports and regular quality audits.

## SYSTEM ARCHITECTURE

### Managed connectivity



#### Connectivity

The physical connectivity into a branch location will be dependant on the location type and circuit availability. For most locations the connectivity will either be ADSL or VDSL (FTTC), with fibre being an option for stores where there are either higher bandwidth requirements or broadband is not available with sufficient bandwidth. Resilience can be delivered with an additional terrestrial circuit or, for full diversity, a 4G mobile service.

#### **CPE/WAN** termination

For regulatory and standardisation purposes most Security/SD-WAN devices only come with Ethernet WAN ports. Therefore, to provide the gateway between the physical circuit and the SD-WAN port a CPE is required for all sites. For all terrestrial services this will be a Cisco router, the exact model being dependant on the circuit type. For 4G services, the CPE will be solution dependent, being either Cisco, Cradlepoint or Feenev Wireless.

## Security/SD-WAN

For smaller locations, the next three stages could be consolidated into a single device which will provide security, switch ports and wireless connectivity. For larger locations, the Security/ SD-WAN device would be a standalone device. It would provide features such as identity-based firewall with intrusion prevention and content filtering, with Auto VPN functionality for secure connectivity between sites. This is typically Cloud Managed.

### Switching

The site switching requirements will be dictated by the site size, the number of non-wireless devices that require physical connectivity and the level of resilience required. The switches would typically provide a minimum of 24/10/100/1000 Ethernet ports with stackable capability and redundant power options. Depending on the overall design, the switches can also be fully Cloud Managed.

#### Wireless

The site Wireless AP requirements will be dictated by the site size and layout. The standard Wireless AP is a tri-radio 802.11ac access point with internal antennas and comes with a Cloud Management subscription and support. It provides high capacity 802.11ac wireless connectivity with powerful location analytics and application visibility and control.

The connectivity of a distributed location (such as a retail store) is built on five stages. Stages 1 and 2 provide connectivity into the location (e.g., from a head office or the Internet) as the Managed WAN.

The Managed LAN solution is then made up of any or all of Stages 3, 4 and 5 and in certain cases may be combined into a single platform:

#### Security/SD-WAN - Stage 3

The Security/SD-WAN (software-defined WAN) device sits between the Managed WAN and the Managed LAN, and therefore may be provided as part of the Hughes Managed SD-WAN service. In most cases the Security/SD-WAN appliance is a single device able to provide both functions and depending on the connectivity type also able to terminate the WAN circuit.

## Switching – Stage 4

Where the Security/SD-WAN appliance doesn't provide enough LAN ports for local connectivity the additional LAN ports are provided by a separate LAN switch.

### Wi-Fi - Stage 5

Whilst a number of the Security/SD-WAN devices can provide Wi-Fi this can be restrictive in its capabilities. Installing stand-alone Wi-Fi devices will provide better coverage and improved functionality.

## **VENDOR INDEPENDENCE**

Hughes is unique in the European market as a multi-vendor and independent managed service provider (MSP) able to support most of the major vendors and their platforms as part of service provision to its customers. This means we will select the equipment that best serves your needs.

LAN platforms each have their own unique strengths and weaknesses that we match against your requirements in terms of cost, performance and security. We do this within the context of equipment choices you have already made, protecting your existing investments as far as practical, and working with you to implement the solution in the best possible manner.

We continuously assess the benefits of new technologies and solutions coming to market and identify which have the greatest potential to bring you additional value, based on an understanding of your needs and business strategy.



# OUR MANAGED SERVICE FOR NETWORK CONNECTIVITY

Managed from our 24x7x365 Network Operations Centre in Frankfurt and supported by our customer support helpdesks in the UK and Germany, we continuously monitor and manage customer networks to identify potential issues that may arise and deal swiftly and effectively with any outages that might occur.



## WANT TO KNOW MORE? GET IN TOUCH







#### **About Hughes Network Systems**

Hughes Network Systems, LLC (HUGHES) is the global leader in broadband satellite technology and services for home and office. Its flagship high-speed satellite Internet service is HughesNet®, the world's largest satellite network with over 1.3 million residential and business customers across the Americas. For large enterprises and governments, the company's HughesON™ managed network services provide complete connectivity solutions employing an optimized mix of satellite and terrestrial technologies. The JUPITER™ System is the world's most widely deployed High-Throughput Satellite (HTS) platform, operating on more than 20 satellites by leading service providers, delivering a wide range of broadband enterprise, mobility, and cellular backhaul applications. To date, Hughes has shipped more than 7 million terminals of all types to customers in over 100 countries, representing approximately 50 percent market share, and its technology is powering broadband services to aircraft around the world. In Europe alone, where we have been helping our customers to achieve optimal value from their network infrastructure for more than 30 years, we manage 55000 sites, across 28 countries supporting more than 5 billion transactions every year. Headquartered outside Washington, D.C., in Germantown, Maryland, USA, Hughes operates sales and support offices worldwide, and is a wholly owned subsidiary of EchoStar Corporation (NASDAQ: SATS), a premier global provider of satellite operations. For additional information about Hughes, please visit www.hughes.com and follow @HughesConnects on Twitter.

#### About EchoStar

EchoStar Corporation (NASDAQ: SATS) is a premier global provider of satellite communication solutions. Headquartered in Englewood, Colo., and conducting business around the globe, EchoStar is a pioneer in secure communications technologies through its Hughes Network Systems and EchoStar Satellite Services business segments. For more information, visit echostar.com. Follow @EchoStar on Twitter.

