

**D-Link**<sup>®</sup>



**Nuclias Cloud,**  
100% cloud-managed solution  
for network infrastructure

 **nuclias**  
cloud

Nuclias Cloud is a cloud-based managed services solution from D-Link designed for organisations of all sizes (SMBs, SMEs, large enterprises, etc.).

The NUCLIAS Cloud platform is designed to simplify deployments, daily administration, and monitoring through a secure, user-friendly interface for your network infrastructure (switches, Wi-Fi access points, security gateways)

## What is a managed services solution?

A managed network infrastructure service is a solution that allows a company to entrust the management of it to an external provider. The benefits of a managed service are many:

- It helps reduce costs associated with the purchase, maintenance, and software updates.

It provides better security and performance through the expertise and tools of the provider.

It frees up internal company resources, allowing them to focus on their core business and strategic projects.

It ensures service continuity, optimal network availability, and a reduction in configuration errors.

It facilitates adaptation to the evolving needs of the company, offering greater flexibility and responsiveness.»

## What is Nuclias Cloud

NUCLIAS Cloud is a comprehensive network connectivity solution in which devices like switches, Wi-Fi access points, and security gateways are controlled through a single platform hosted in the Cloud.

Management and monitoring tasks are carried out through the NUCLIAS platform from wherever you are. Automatic deployments (Zero-Touch Provisioning) ensure time savings and total daily flexibility.

Connect your devices and let them automatically download their configuration from the Cloud platform to be operational in a matter of minutes. It's as simple as that.



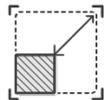
### Remote Management via the Cloud

Monitor and configure your networks anywhere and at any time.



### Zero-Touch Deployment

Fast deployments in a few minutes with automatic provisioning.



### Unlimited Capacity

Automatic provisioning enables unlimited scalability.



### Simplified Maintenance

Numerous monitoring, analysis, and alert tools for reduced acquisition and operational costs thanks to the Cloud.



### 99.9% SLA

Assurance of a high level of service and availability (99.9% SLA\*).

\*NUCLIAS Platform



### Multi-Tenants and Multi-Users

Multi-tenant and multi-user capability to easily manage your sites and delegate editing or viewing rights.



## Who needs Nuclias Cloud?

### SMBs/SMEs

NUCLIAS Cloud provides SMBs and SMEs with a reliable and flexible solution to fully meet their needs for digital transformation, remote work, and strategic workload performance.



### Hospitality

It helps hotels, restaurants, and cafes offer an optimal Wi-Fi experience while allowing for customisation of the organisation's branding.



### Retail Chains/Stores

It enables easy remote management and troubleshooting across multiple sites, effortless addition of new sites, and timely analytics and reports that can help you better understand your customers.



### Education

It provides robust Wi-Fi capability, easy management of all network sites, precise network monitoring and control, and an OPEX pricing model tailored to schools and other institutions.



# What Nuclias Cloud Offers

## 1/ End-to-End Solution

Nuclias Cloud is a comprehensive network infrastructure solution offering end-to-end control over all network devices and managed sites in the cloud.

It is an enterprise-grade solution that includes a variety of tools, allowing organizations to enjoy a network experience that is easy to deploy and manage.

## 2/ Cloud-Based Management

Managing a network from the cloud offers significant advantages in terms of control and convenience. With the zero-touch deployment capabilities of Nuclias Cloud, there's no need to perform repetitive and complex on-site configuration tasks.

Network administrators can access the platform and carry out their various tasks from any location with an online connection, without the need for complex dedicated software or hardware.

### Benefits

- » Ease of Deployment and Administration
- » Cutting-edge professional-grade network solutions (switches, Wi-Fi access points, and SD-WAN gateway)
- » Data privacy ensured through TRUSTe Privacy certification

### Benefits

- » Automated Remote Deployments
- » Unlimited Scalability
- » Multi-Tenant Management
- » 99.9% Availability Rate
- » Reduction in Configuration Errors

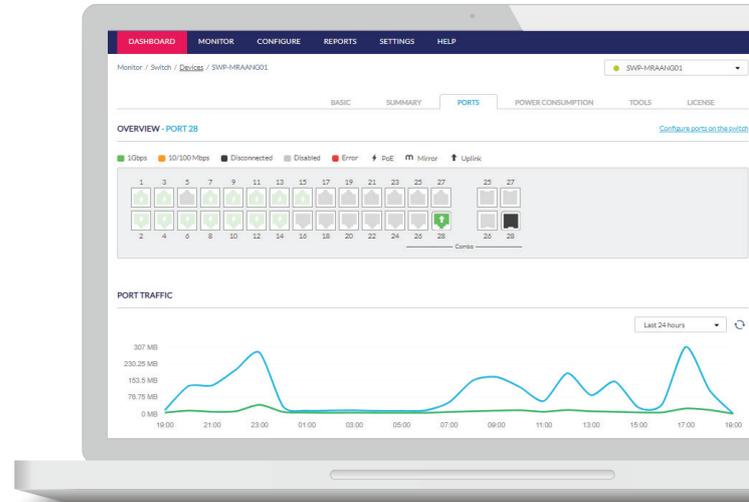


### 3/ In-Depth Analytics and Automated Reports

Nuclias Cloud enables a deep understanding of your networks and their users through traffic analytics and status reports that can be automated.

#### Benefits

- » Easy trend analysis for optimizing, anticipating, and adapting network infrastructures
- » Proactive maintenance to anticipate outages and detect potential cyber threats
- » Easier troubleshooting



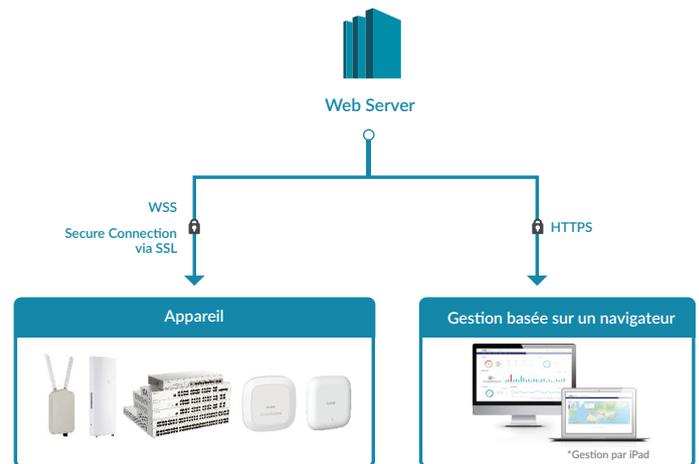
▲ Statistics - Network Hourly Activity

### 4/ Peace of Mind

The Nuclias Cloud platform comes with a 99.99% service availability guarantee (SLA), featuring autonomous operational backup for your equipment, encryption of communication data between devices and our servers, as well as the latest security technologies (SD-WAN, Web filtering, intrusion detection and prevention, WPA3, etc.). We also offer robust automation capabilities for network settings, alerts, reports, firmware updates, and much more.

#### Benefits

- » Service Continuity
- » Data Encryption
- » Robust Automation
- » Network Security



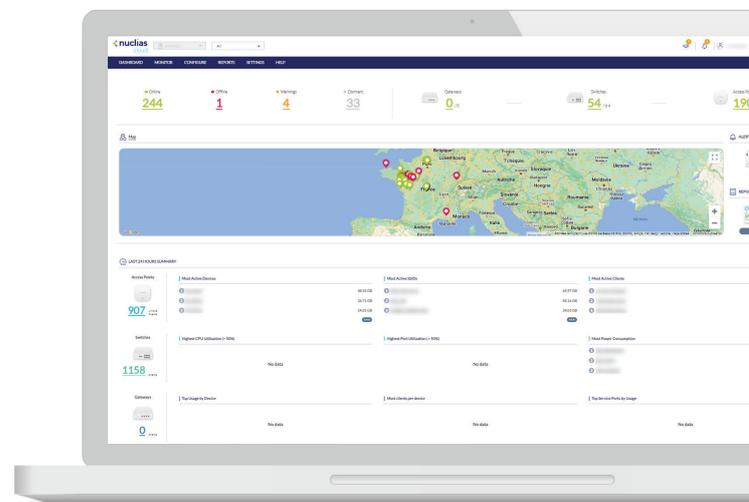
▲ End-to-End Encryption

### 5/ User-Friendly

Nuclias Cloud features an intuitive interface designed to minimize the time required to perform tasks, while providing a clear overview of what is happening on your networks at a glance.

#### Benefits

- » Less time spent on repetitive tasks
- » Automated reports
- » Improved user experience



▲ Intuitive Dashboard Interface

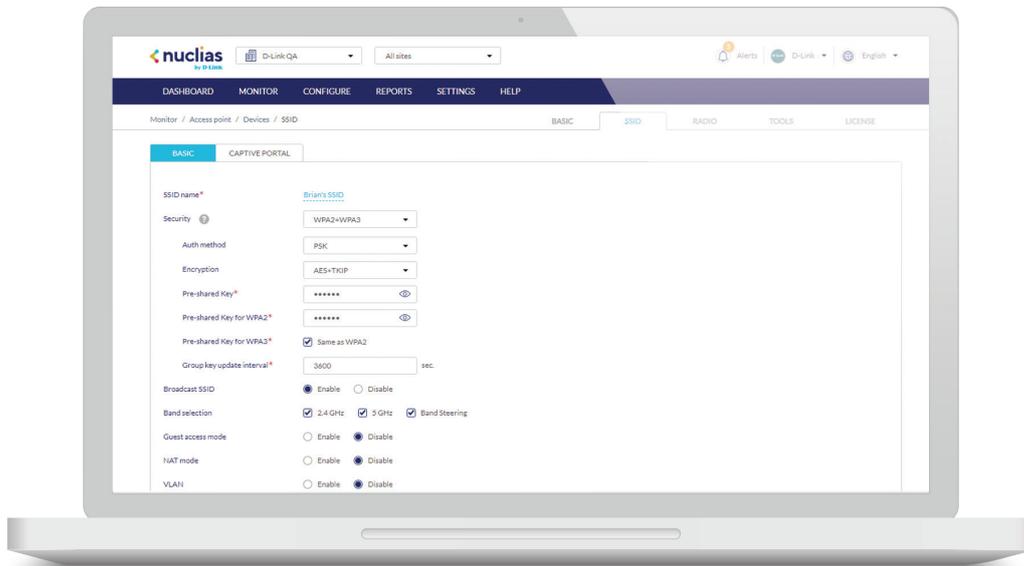
## Nuclias Cloud for Administrators

Nuclias Cloud supports multi-user and multi-tenant capabilities, allowing network administrators to grant localised management authority to network infrastructures. Administrators can provide and manage various distributed deployments, including creating and configuring administrator/user accounts for each organisation.

Nuclias Cloud enables automatic provisioning of network equipment through a profile-based operation. This profile-based operation allows for the application of the same configuration to a group of network equipment with minimal effort while retaining the ability to fine-tune equipment settings individually.

Advanced network infrastructure management allows administrators to ensure a high level of access control to organisational resources:

- » Switching: VLAN, ACL, QoS, Authentication, ...
- » Wi-Fi: Multi SSID, Captive Portal, Authentication, scheduling, ...
- » SD-WAN Gateway: Firewall, IPS/IDS, Web Content Filtering, Captive Portal, Site-to-Site/Multi-Site VPN, ...



## Key Features

- Intuitive Web Interface
- Automated and Remote Deployments
- Unlimited Scalability
- Reports and Analytics
- Multi-Site and Multi-Organisation Management
- Automatic Monitoring and Alerts
- Support for NAT mode, DHCP server users, and seamless roaming
- Automated or Scheduled Upgrades
- Advanced Security Features including IPS/IDS, Web Content Filtering, LDAP Authentication, RADIUS, WPA3, ...
- Role-Based Administration - Advanced User Management
- 99.9% Service Availability Guarantee

# Sizing Your Wi-Fi Deployment

Before deploying a Wi-Fi network, it's essential to define the requirements and conduct a coverage study (theoretical and ideally on-site). The area to be covered and the number of users are not the only factors to consider when determining the number of Wi-Fi access points.

## Step 1 : Key Questions to Ask

- Is this a new Wi-Fi installation or an extension of an existing network?
- Is there a plan or site map available?
- What are the areas to be covered?
- What Wi-Fi applications will be used? (VoWi-Fi, high-density, ultra-mobility, etc.)
- How many estimated Wi-Fi clients will there be?
- Is there existing cabling to connect the Wi-Fi access points?

## Step 2 : Coverage Survey

- Conduct a theoretical coverage study using our Wi-Fi Planner Pro tool (see page 9).
- Compare this theoretical study by conducting an on-site study and adapt it if necessary.

## Step 3 : Choose the Most Suitable Solution and Products

## Wi-Fi Standards

The first version of the 802.11 protocol was published in 1997, allowing speeds of up to 2 Mbit/s at the time. In 1999, the Wi-Fi Alliance® consortium was founded, primarily to ensure interoperability of 802.11 products, giving birth to the acronym Wi-Fi.

Today, the most recent and preferred standard is Wi-Fi 6. There are already Wi-Fi 6E-compliant devices available, but there are few advantages over Wi-Fi 6, especially in Europe, where access to the 6GHz frequency band is limited. Furthermore, the upcoming Wi-Fi 7 standard is expected by late 2023 or early 2024, so it may be advisable to skip Wi-Fi 6E.



	Wi-Fi 5	Wi-Fi 6	Wi-Fi 6E	Wi-Fi 7
Launch Date	2013	2021	2022	2024 (draft)
IEEE Standard	802.11ac	802.11ax	802.11ax	802.11be
Maximum Data Rate	3.5 Gbps	9.6 Gbps	9.6 Gbps	<b>46 Gbps</b>
Frequency Bands	5 GHz	2.4 GHz et 5 GHz	2.4 GHz, 5 GHz et 6 GHz	2.4 GHz, 5 GHz and 6 GHz
Channel Size	20, 40, 80, 80+80, 160 MHz	20, 40, 80, 80+80, 160 MHz	20, 40, 80, 80+80, 160 MHz	<b>Up 320 MHz</b>

## How to choose the right access points?

The choice of a professional Wi-Fi access point depends on several factors, such as the space area to be covered, the number of simultaneous users, the applications used, the security and the necessary functionalities.

Here are some criteria to consider when choosing a professional Wi-Fi access point:

- **Range:** Choosing an access point that offers sufficient range to cover the entire space is important.
- **Capacity:** It is essential to choose an access point that can handle a large number of users simultaneously, and that can support bandwidth-intensive applications.
- **Security:** The access point must offer robust security features, such as support for WPA2 or WPA3 encryption protocols, intrusion detection and access policy management.
- **Features:** The access point should offer advanced features such as support for multiple SSIDs, centralised management, quality of service (QoS), and guest network support.
- **Compatibility:** The access point must be compatible with the existing network and other network equipment.
- **Management:** Choosing an access point that can be easily managed and configured, preferably via a web interface and a centralised solution, is essential.

## Securing your Wi-Fi network

Securing a Wi-Fi network is essential to protect user data and prevent unauthorised network access.

Here are some of the important things to consider when securing a Wi-Fi network:

- **Using a strong password:** The first step in securing a Wi-Fi network is to set a strong password for the wireless network. This password must be complex, difficult to guess and be changed regularly.
- **Use of an encryption protocol:** Encryption protocols, such as WPA2 or WPA3, allow the data sent over the Wi-Fi network to be encrypted, which prevents any unauthorised person from intercepting and reading these data
- **MAC address filtering:** This feature limits access to the Wi-Fi network to specific pre-approved MAC addresses. MAC addresses are unique for each device, and this feature helps ensure that only authorised devices can connect to the network.
- **Using a guest network:** A separate guest network allows visitors to access the Internet without having access to corporate private network resources.
- **Ensuring network equipments are running latest software:** Network equipment, such as access points, must be regularly updated with the latest security patches to avoid any vulnerabilities.
- **Use of a firewall:** Using a firewall allows you to monitor and control traffic entering and exiting the network and block unauthorised connections.
- **Implement a network access solution (NAC):** The NAC controls access to company resources through the establishment of authorisations and the application of policies. It is based on the 802.1x authentication protocol (RADIUS)

It is essential to combine several security measures to strengthen the protection of the Wi-Fi network and minimise the risk of attacks.

# Take out the guess work with Wi-Fi Planner PRO

Wi-Fi Planner PRO (WFP) is a 100% free tool available to all partners, allowing Wi-Fi coverage planning from floor plans.

By taking into account construction materials (walls, doors) and obstacles (logistics storage), WFP provides a visual simulation of wireless signals (heatmap), allowing you to provide a comprehensive visualisation of the Wi-Fi environment before actual deployment (type and number of access points and their positioning) to meet the needs of

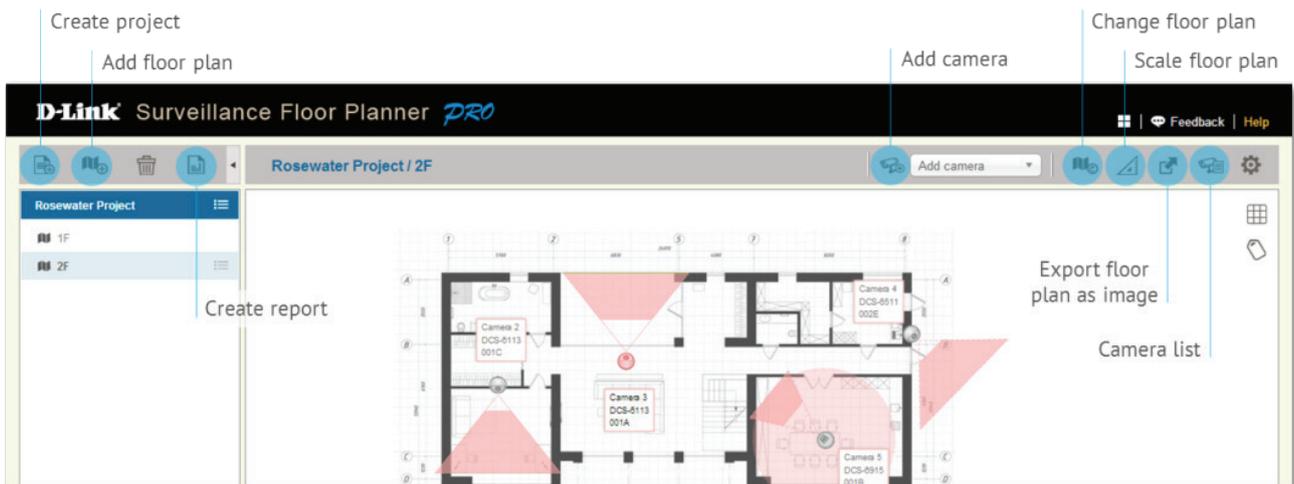
your customers.

Partners can save all planning proposals for different Wi-Fi projects in the cloud and export the reports for your clients.

## The advantages of using Wi-Fi Planner PRO



- **Time-saving:** Quick and easy to get started (free training on demand)
- **Realistic:** By informing the nature of the different materials, you ensure the most realistic theoretical coverage possible
- **Reliable:** The tool guarantees you the most reliable simulation possible depending on your design and the choice of Wi-Fi access points
- **Professional:** Automated simulation export, including coverage areas (heatmap)
- **Cloud storage:** All your projects are saved on the VIP+ partner portal
- **Reports:** Record of access point types, inventory, locations and heatmap



# Nuclias Cloud: Wired Network Equipment and SD-WAN Gateway

## – Network Switches



### L2 Switches

#### DBS-2000 Series

- Full Level 2 Features (VLAN, QoS, ACL, LACP, etc...)
- 8, 24, or 48 Gigabit Ports
- 2 or 4 SFP Combo Ports
- Up to 370W PoE Budget
- 1-Year License Included with Each Product

	DBS-2000-10	DBS-2000-10MP	DBS-2000-28	DBS-2000-28P	DBS-2000-28MP	DBS-2000-52	DBS-2000-52MP
Number of Ports	8 Gigabit	8 Gigabit PoE/PoE+	24 Gigabit	24 Gigabit PoE/PoE+	24 Gigabit PoE/PoE+	48 Gigabit	48 Gigabit PoE/PoE+
SFP	2 SFP	2 SFP	4 combo SFP	4 combo SFP	4 combo SFP	4 combo SFP	4 combo SFP
Switching Capacity	20 Gbps	20 Gbps	56 Gbps	56 Gbps	56 Gbps	104 Gbps	104 Gbps
PoE/PoE+	-	Port 1-8: 802.3af/at	-	Port 1-24: 802.3af/at	Port 1-24: 802.3af/at	-	Port 1-48: 802.3af/at
PoE Budget	-	130 W	-	193 W	370 W	-	370 W

## – Security Gateway



### SD-WAN Security Gateway

#### DBG-2000

	DBG-2000
Number of WAN/LAN Ports	1 x Gigabit WAN 3 x Gigabit LAN/WAN
Firewall Throughput	1.8 Gbps
VPN Throughput IPSec SSL	450 Mbps 200 Mbps
Maximum VPN Tunnels	200

- Security gateway with firewall, VLAN, Bandwidth Control features
- Multi WAN, SD-WAN, and VPN functionalities
- Intrusion detection and prevention **SNORT**
- WEB filtering **ContentKeeper**
- Traffic monitoring and application control
- Captive Portal
- 1-Year License Included with Each Product

# Nuclias Cloud: Wireless Equipment

## – Wi-Fi Access Points

### Wi-Fi Access Points



#### DBA Series

- Indoor and outdoor PoE models compliant with Wi-Fi 5 or Wi-Fi 6 Certified standards
- Speeds up to 3.6 Gbps
- Client capacity up to 250 clients\*
- Fast roaming
- Captive Portal
- Log collection for Public Wi-Fi networks\*\*
- Limited lifetime warranty\*\*\*
- 1-Year License Included with Each Product



	DBA-1210P	DBA-2520P	DBA-2820P	DBA-X1230P	DBA-X2830P	DBA-3621P
<b>Wi-Fi Standard</b>	● ———  ——— ●					
<b>Maximum Speed</b>	1200 Mbps	1900 Mbps	2600 Mbps	1800 Mbps	3600 Mbps	1300 Mbps
<b>Latency</b>	Average	Average	Average	Low	Low	Average
<b>Recommended Client Capacity*</b>	50	100	150	150	250	100
<b>Use</b>	Indoor	Indoor	Indoor	Indoor	Indoor	Outdoor
<b>Typical Applications</b>	Office Hospitality/ Healthcare VoWi-Fi (Voice over Wi-Fi)	Office Advanced Hospitality/ Healthcare VoWi-Fi/ Streaming	Office Advanced Hospitality/ Healthcare VoWi-Fi/ Streaming	Office Advanced Hospitality/ Healthcare VoWi-Fi/ Streaming	Advanced Office Hospitality/ Healthcare VoWi-Fi/ Streaming High-Density	Camping Logistics VoWi-Fi
<b>Fast Roaming</b>	Yes	Yes	Yes	Yes	Yes	Yes
<b>Log Collection**</b>	Yes	Yes	Yes	Yes	Yes	Yes

\*\* Requires a syslog server

## – License Options

	Free License	License Extension	Products
<b>Wi-Fi Access Points</b>	Yes, 1 year	1 year - DBA-WW-Y1-LIC 3 years - DBA-WW-Y3-LIC	DBA Series
<b>Switches</b>	Yes, 1 year	1 year - DBS-WW-Y1-LIC 3 years - DBS-WW-Y3-LIC	DBS-2000 Series
<b>SD-WAN Gateway</b>	Yes, 1 year	1 year - DBG-WW-Y1-LIC 3 years - DBG-WW-Y3-LIC 5 years - DBG-WW-Y5-LIC	DBG-2000

Each NUCLIAS Cloud product comes with a complimentary 1-year operating license on the platform (which is free to access). Additional licenses can be stacked, separated, and transferred for all equipment within the same NUCLIAS Cloud instance.

Without an operating license, network equipment will continue to operate with their last configuration (except specific features), but administrative, monitoring, and notification capabilities will no longer be active.

**D-Link<sup>®</sup>**