DUXNET

Best Practice Guide to Access Point Placement & Cloud Management

Put Wi-Fi where it works. Manage it where it matters.



WHY ACCESS POINT PLACEMENT IS ESSENTIAL

A good access point can still deliver poor Wi-Fi if it is installed in the wrong place.

Weak signal, dead zones, slow speeds, dropped connections, unstable roaming, and support calls often start with placement. Users usually blame the internet line, the router, or the device in their hands. In many cases, the real problem is that the AP was mounted where it was easiest to install, not where it works best.

Wi-Fi performance depends on more than AP speed. It is affected by walls, ceilings, distance, interference, user density, cabling, power, and post-installation network management.

Remember: stronger APs do not fix weak planning.

QUICK AP PLANNING REFERENCE

Use this as a quick reference during presales, planning, and installation.

Network Scenario	Planning Focus	Common Mistake to Avoid
Small office or retail site	Central placement, user areas, PoE access	Hiding the AP in a cupboard or behind a counter
School or campus	Coverage zones, roaming, user density	Expecting one AP to cover too many rooms
Warehouse or industrial site	Height, racking, metal, dust, and movement	Ignoring physical obstructions and interference
Outdoor area	Weather exposure, mounting height, coverage direction	Using an indoor AP in an outdoor environment
Multi-site branch network	Standardised setup, cloud visibility, naming	Managing each AP manually and inconsistently
Mesh extension	Coverage gaps and difficult cable runs	Using mesh to avoid proper cabling everywhere

WHAT CAUSES WI-FI PERFORMANCE PROBLEMS?

Wi-Fi issues are often created before the network goes live.

Common causes include:

- Mounting APs where cabling is convenient, not where users need coverage.
- Installing APs too close together or too far apart.
- Placing APs behind walls, beams, metal racks, ceilings, signage, or glass.
- Using indoor APs in outdoor or harsh environments.
- Forgetting to check PoE power and uplink capacity.
- Treating mesh as a replacement for proper network design.
- Ignoring user density in classrooms, meeting rooms, shops, or shared spaces.
- Failing to monitor AP health, client activity, and performance after installation.

Without proper placement and management, even capable APs can create an inconsistent user experience.

PRE-DEPLOYMENT CHECKLIST

Before installing APs, confirm the following:

- Where users actually need Wi-Fi coverage.
- Number of users and device types expected in each area.
- Building layout, wall materials, ceiling height, and obstructions.
- Whether the AP will be installed indoors, outdoors, or in a harsh environment.
- Available cabling, uplink speed, and PoE power.
- Whether mesh is required and where it makes practical sense.
- SSID, VLAN, and security requirements.
- Whether the network will need remote monitoring and support.
- Naming standards for APs across rooms, floors, buildings, or sites.
- Future growth, including higher device density and newer Wi-Fi standards.

Confirming these details upfront reduces rework, improves support, and helps avoid poor coverage after handover.

ACCESS POINT PLACEMENT TIPS

1. Start with coverage, not convenience

Do not choose the AP location only because it is easy to cable. Start with where users, devices, and applications need reliable connectivity. Offices, classrooms, meeting rooms, shops, warehouses, outdoor areas, and shared spaces all have different coverage requirements.

2. Choose the right AP for the environment

Indoor and outdoor environments are not the same. Outdoor areas need suitable APs, mounting, protection, and coverage direction. Industrial or warehouse environments may have dust, vibration, metal structures, high ceilings, or moving equipment that affect signal quality.

3. Keep APs clear of obstructions

Avoid placing APs inside cupboards, above metal ceilings, behind pillars, near large appliances, or close to thick walls. Wi-Fi needs a clear line of sight wherever possible. Physical obstructions can reduce coverage and create performance issues that are difficult to diagnose later.

4. Plan PoE and uplinks properly

Before installation, confirm that the switch can provide the correct PoE power and that the uplink can support the expected traffic. A well-placed AP still needs reliable power and backhaul to perform properly.

5. Use mesh where it makes sense

Mesh can help extend coverage where cabling is difficult or costly. It should not be used as a shortcut for every installation. Where possible, use wired backhaul for critical areas and reserve mesh for practical coverage extensions.

6. Manage the network after installation

Wi-Fi does not stop at installation. Cloud management helps resellers and support teams monitor AP status, client activity, performance, and faults across one or multiple sites. This makes support faster and helps identify issues before they become repeat callouts.

PRE-DEPLOYMENT CHECKLIST

- Plan coverage before deciding AP locations.
- Match the AP to the environment.
- Avoid cupboards, corners, metal barriers, and hidden mounting points.
- Check wall materials, ceiling height, and physical obstructions.
- Confirm PoE power and uplink capacity before installation.
- Use wired backhaul where performance is critical.
- Use mesh only where it solves a specific coverage challenge.
- Standardise AP names and locations for easier support.
- Test coverage and roaming after installation.
- Monitor AP health and client activity through cloud management.

PRO INSTALLER TIPS

- If users cannot see the AP, the signal may also struggle to reach them.
- Higher is not always better, especially in rooms with low user density or many obstructions.
- Do not mount APs directly next to large metal objects or electrical equipment.
- Label APs clearly by site, floor, room, or zone.
- Test Wi-Fi where users actually work, not only near the AP.
- Check PoE budget before blaming the AP.
- Use cloud monitoring after installation to spot weak coverage, overloaded APs, or recurring client issues.
- Leave room in the design for more devices and newer Wi-Fi standards.

REALITY CHECK

Most Wi-Fi complaints are not caused by the AP alone.

In many installations, the issue is placement, interference, poor cabling, insufficient PoE, weak uplinks, or a lack of visibility after handover. Good Wi-Fi depends on planning, installation, and ongoing management working together.

A strong AP in the wrong place still results in a weak Wi-Fi experience.

LET DUXNET SIMPLIFY AP DEPLOYMENT

DuxNet Premium access points, engineered by Duxbury Networking, are designed to support practical wireless deployment across indoor, outdoor, single-site, and multi-site environments.

With cloud management, mesh support, PoE deployment, and centralised visibility, DuxNet helps resellers plan, install, monitor, and support Wi-Fi networks more effectively.

Speak to our team for guidance on planning the right access point deployment for your network.