

# Not all Wi-Fi solutions are equal: What you need to know



## Centralised versus distributed architecture

### Does the Wi-Fi solution use a centralised (controller) or distributed architecture?

There are different types of networks and it's important to understand the main differences.

**A controller-based network** has intelligence in one place. All traffic passes through a controller which can create potential bottlenecks and traffic delays. Controllers will support a limited number of access points and will require upgrade when the limit is reached. It is also a single point of failure unless duplicated.

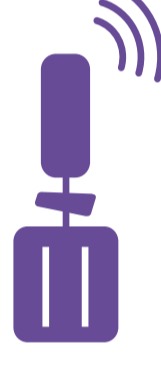


**A distributed architecture network** spreads the intelligence across all access points with each access point making decisions about air-time fairness, band-steering, auto-channel selection, and auto-power selection. This reduces the potential for bottlenecks, there is no single point of failure and the network is scalable by just adding access points. A distributed network will generally have a lower total cost of ownership.

## Cloud/On premises management options and evolution

### Does the solution have an on premises and cloud management option with the same access points and management software?

Digital transformation across all public sector organisations is happening fast and changes are likely to be required. By investing in a solution that can be managed on premises or in the cloud, a change can be made with minimal disruption or commercial impact, protecting and future proofing your investment. In addition, a cloud-based solution can facilitate a quick roll out to branches that have internet only connectivity.



## Range of APs

### Does the solution have a range of access points that extends the corporate Wi-Fi to remote workers and outdoor locations?

Having a range of access points that cover different types of location is important for security and operational management. Remote working, hybrid working, and social distancing are all words that are familiar to us now. All have an impact on how we deploy Wi-Fi for the future. Having the ability for remote workers to use the corporate Wi-Fi and the flexibility to extend the corporate Wi-Fi to outside spaces all secured and managed by the IT team protects the network.



## Consistent user experience

### Do the access points have a dedicated radio for Radio Frequency (RF) scanning?

Most access points have two radios and scan the RF spectrum every few milliseconds to perform interference and intrusion detection.



While the access points are scanning, transmission/reception of user traffic is paused until the scan is completed potentially impacting the quality of real-time communications. Some radios have voice aware scanning. In this instance, while the radio is being used for voice, the RF scanning is paused and RF interference and intrusions won't be detected.

Access points with a third radio dedicated to RF scanning continues with the traffic service levels and also continues to scan for interference and intrusion detection.

## Configuration and management

### How does the solution deal with onboarding and configuration of Internet of Things (IoT) devices?

IoT devices will continue to provide innovative enhancements to public sector services, the prediction is this technology will continue to grow at an exponential rate.



Simplicity will be key to ensuring security and manageability of IoT devices. The network needs to have the ability to automatically recognise the IoT device and drop the device into the correct network segment which has been configured with the correct policy and role. This function needs to be simple and without the complexity of additional IT equipment to manage.

### Does the solution support other IoT protocols?



With the IoT explosion there is an exponential growth of devices that connect to the networks using other wireless protocols beyond Wi-Fi, such as BLE or Zigbee. WLAN solutions that natively support several IoT protocols make the integration and enablement of IoT deployments easier.



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