

## Veris Aerospond Wireless Sensors: Dynamic vs. Static IP Addressing

Proper IP addressing is essential for establishing communications among devices on a network. Just as every house on a street requires a unique number, every network device on a network must have a unique IP address. IP addresses are expressed by four numbers separated by dots.

IP addresses can be assigned dynamically (on an as needed basis), or statically (permanent basis). Veris Wireless products support both dynamic and static IP addressing.

To create dynamic IP addresses, the network must have a Dynamic Host Configuration Protocol (DHCP) server configured and operating. The DHCP server assigns an unused IP address to all devices connecting to the network. Using DHCP is advantageous for network administrators because it automates the task of assigning IP address to each device on the network. A device receiving a DHCP assigned address does not necessarily keep the same address forever.

Static assignment of IP addresses is used to provide a consistent IP target. A static IP is useful for servers and network printers. A network administrator must keep track of each statically assigned device to avoid using that IP address again. Static IP addresses allow network devices to retain the same IP address at all times.

In a Veris Wireless sensor network, the sensors are transmitters, so their IP addresses can be either statically or dynamically assigned. Receiving devices, such as JACE boxes and the Veris Wireless Gateways, require statically assigned IP addresses so the sensors can send data to a fixed address.

When statically assigning an IP address to a Wi-Fi device, it is also necessary to assign the Subnet Mask (a filter to identify which IP addresses are on the local network) and the Default Gateway (the IP address that connects the local network to the other networks). When IT departments assign static IP addresses for devices, they also supply these values.

For ease of deployment, Veris recommends sensor nodes use DHCP IP addresses and receiving devices set to static IP address. Some IT departments require static IP addresses for all devices on the network.

For more details information on IP addresses and DHCP vs. Static assignment see:

<http://computer.howstuffworks.com/internet/basics/question5493.htm>

*For more information about the Veris Aerospond products, see VWP15, VWP17, and VWP18.*

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*The information provided herein is intended to supplement the knowledge required of an electrician trained in high voltage installations. There is no intent to foresee all possible variables in individual situations, nor to provide training needed to perform these tasks. The installer is ultimately responsible for ensuring that a particular installation remains safe and operable under the specific conditions encountered.*