

ORINOCO AP-4000 ACCESS POINT

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1) What is Automatic Channel Selection? What happens when there are no more non-overlapping channels?

Automatic channel selection is the ability of the AP to search the available bands and select the least crowded band. In the 2.4 GHz band (for both .11b and .11g) there are only 3 channels, so you will encounter overlap if you have closely spaced APs. In this case, the AP selects the LEAST crowded band based on scanning the RF environment and listening for the RF activity (signal strength) level.

2) What is Load Balancing? Is it supported on the AP-4000 and if so how does this work?

Load balancing is not available on the AP-4000. True throughput based load balancing requires the AP to have knowledge of each client's throughput activity and the total throughput of nearby APs. In true throughput based load balancing, if the AP is too heavily loaded, it could assess if moving certain clients off of it to nearby APs would help balance out throughput.

All load balancing solutions claimed today should be examined carefully. First, most 'load balancing' solutions are not THROUGHPUT based, but simply look at the NUMBER of wireless clients attached

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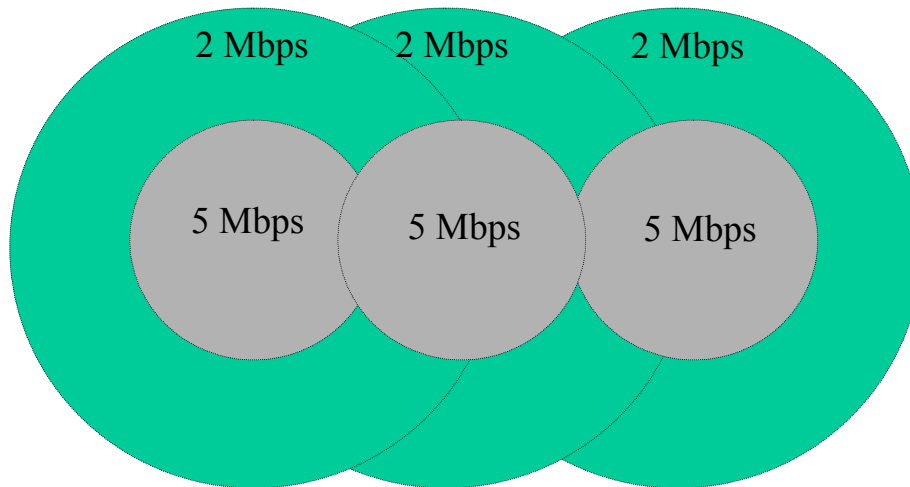
to an AP, independent of throughput. Secondly, there is no IEEE standard to 'ask' the client to move to another AP. So, load balancing solutions that are promoted today are proprietary and dependent upon a specific client implementation. This is typically not effective because of the heterogeneous nature of Wi-Fi clients that are brought into the enterprise, i.e. laptops with embedded Wi-fi, including Centrino, Atheros and Broadcom solutions, laptops with external PC cards, Apple laptops, Linux-based laptops, PDAs, legacy data collection equipment, etc. With the numerous types of client devices using different Wi-Fi technology, until a IEEE standard is available, most proprietary load balancing solutions are not feasible to implement.

Proxim supports the concept of load balancing, but believes that to be effective, it needs to be addressed through a standards body. IEEE is beginning to look at this through an upcoming standard IEEE 802.11k which is Radio Resource Management. This will implement a standards based way to get client information. A corollary group which is going to take this measurement information is being formed to address capabilities like load balancing which requires APs to take information from the clients.

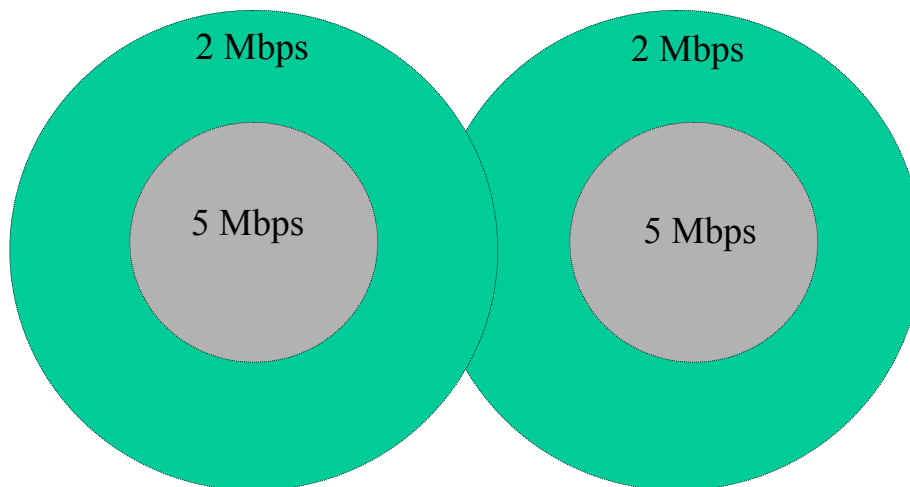
3) What is Hot Standby? Does the AP-4000 support it and how does this work?

No, the AP-4000 does not support hot standby. This is an expensive way to support mission critical applications as it requires doubling up the AP infrastructure by having a 2nd AP in the same physical place as the primary AP, connected by Ethernet to the primary AP, but not allowing any client associations. If the primary AP fails, then the secondary AP takes over.

This is overkill for most environments. Most of our customers (including mission critical environments like hospitals), implement overlapping AP coverage such as depicted in the diagram below. This significantly reduces infrastructure investment, but allows client connectivity in the unlikely case of an AP failure (MTBF on the AP-4000 is 100,000 hours). Clients will connect at a lower data rate, but will maintain connectivity to the network.



Client Coverage before AP Failure



Client Coverage After AP Failure. Note that client connectivity is still maintained at a lower datarate.

4) What is Mobile IP? Does the AP-4000 support it and how does this work?

Mobile IP support is the ability to allow APs to be placed on different Ethernet subnets and allow mobile clients to roam across those subnets seamlessly. Mobile IP allows the clients to maintain a single IP address and to have their traffic tunneled back to their home network. This capability requires what is called 'home' and 'foreign' agents on each subnet that you place Access Points. To enable this capability with Cisco, you must have a complete Cisco wired infrastructure as it requires Mobile IP configuration (quite extensive) in their routers to enable the home and foreign agents.

Proxim access points support this capability in conjunction with our partner NetMotion. NetMotion is a long standing partner (over 10 years in business) with IP mobility software. With NetMotion, the configuration is simpler and no specific manufacturer's hardware is required in your wired network.

5) Does the AP-4000 act as a DHCP server?

Yes.

6) Does the ORiNOCO AE Power Injector that supported the AP-1000 and AP-2000 work with the AP-4000?

Yes, the Active Ethernet Power injector will power the AP-4000.

7) How many standard encryption keys are supported?

Three standard encryption keys are supported: 64, 128 and 152. The encryption types that are supported include WEP, TKIP and AES.

8) What is IAPP? Is this the same as Mobile IP?

No, IAPP is not the same as Mobile IP. IAPP is the IEEE 802.11f recommended practice that allows clients to roam between different manufacturer's APs ON THE SAME SUBNET. Mobile IP is specifically to address mobile client roaming across subnets. IEEE views 802.11f as a 'recommended practice,' not a required standard. In practice most enterprise infrastructure is from a single vendor, so this standard has not been implemented widely.

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