



### Lab 10.2.7.1 Site Survey Active Mode

Estimated Time: 20 minutes

Number of Team Members: Students will work in teams of two.

#### Objective

In this lab, the student will determine the best placement and coverage, or overlap, for the wireless APs. This will be done through the use of the wireless client adapter site survey utility.

#### Scenario

A site survey provides detailed information about all of the following:

- Where the APs are to be located
- How they will be mounted
- How they will be connected to the network
- Where any cabling or power may need to be installed

The Aironet Client Utility (ACU) site survey tool operates at the radio frequency (RF) level and is used to determine the best placement and coverage, or overlap, for APs.

During the site survey, the current status of the network is read from the client adapter and displayed four times per second so network performance can be accurately gauged.

The feedback received can help to eliminate areas with low RF signal levels that can result in a loss of connection between the client adapter and its associated AP.

The site survey tool can be operated in two modes:

- **Passive Mode** – This is the default site survey mode. It does not initiate any RF network traffic. It simply listens to the traffic that the client adapter hears and displays the results.
- **Active Mode** – This mode causes the client adapter to actively send or receive low-level RF packets to or from its associated AP. It then provides information on the success rate. It also allows parameters to be set governing how the site survey is performed.

#### Preparation

The student will read and understand the material presented in FWL Chapter 10 prior to the lab.

- Perform the site survey when the RF link is functioning with all other systems and noise sources operational.
- Execute the site survey entirely from the mobile station.
- When using the active mode, conduct the site survey with all variables set to operational values.

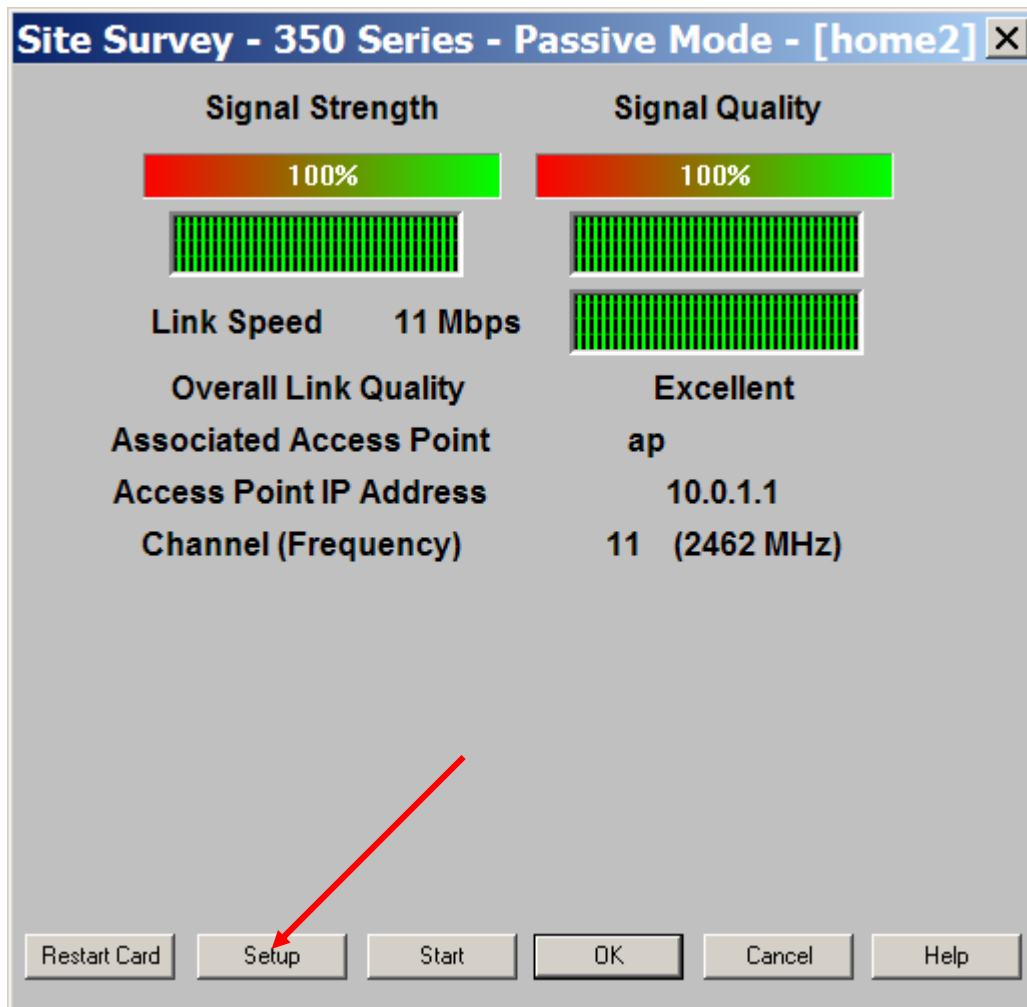
#### Tools and resources

The following tools and resources will be helpful with this lab:

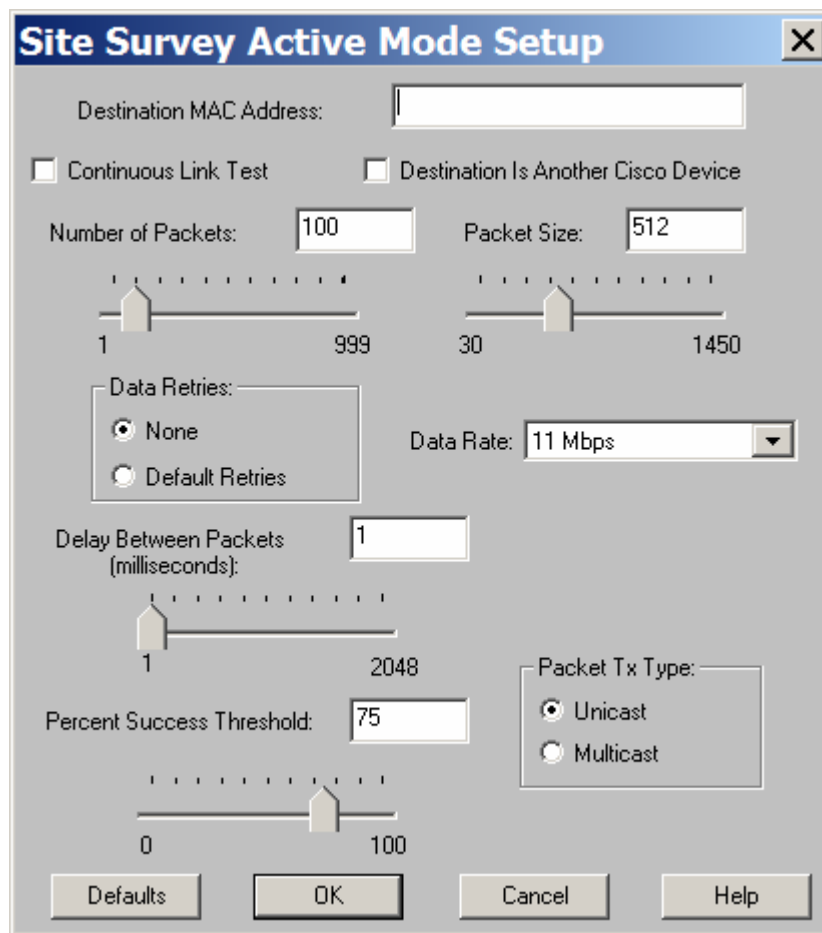
- An AP with a valid IP address
- PC or laptop with a client adapter and client utilities installed

## Step 1 Using Active Mode

Follow the steps below to activate the site survey active mode and obtain current information about the ability of the client adapter to transmit and receive RF packets.



From the Client Utility Site Survey Passive Mode screen click the Setup button. The Site Survey Active Mode Setup screen looks like the example below.



**Site Survey Active Mode Setup**

Destination MAC Address:

☐ Continuous Link Test      ☐ Destination Is Another Cisco Device

Number of Packets:       Packet Size:

1 ————— 999      30 ————— 1450

Data Retries:

☒ None      Data Rate:

☐ Default Retries

Delay Between Packets (milliseconds):

1 ————— 2048

Percent Success Threshold:

0 ————— 100

Packet Tx Type:

☒ Unicast

☐ Multicast

Defaults    OK    Cancel    Help

## Step 2 Using Passive Mode

After setting any parameters, click OK to save the settings. The Site Survey Passive Mode screen appears.

Note the information on the Passive Mode screen:

a. What is the signal strength?

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b. What is the signal quality?

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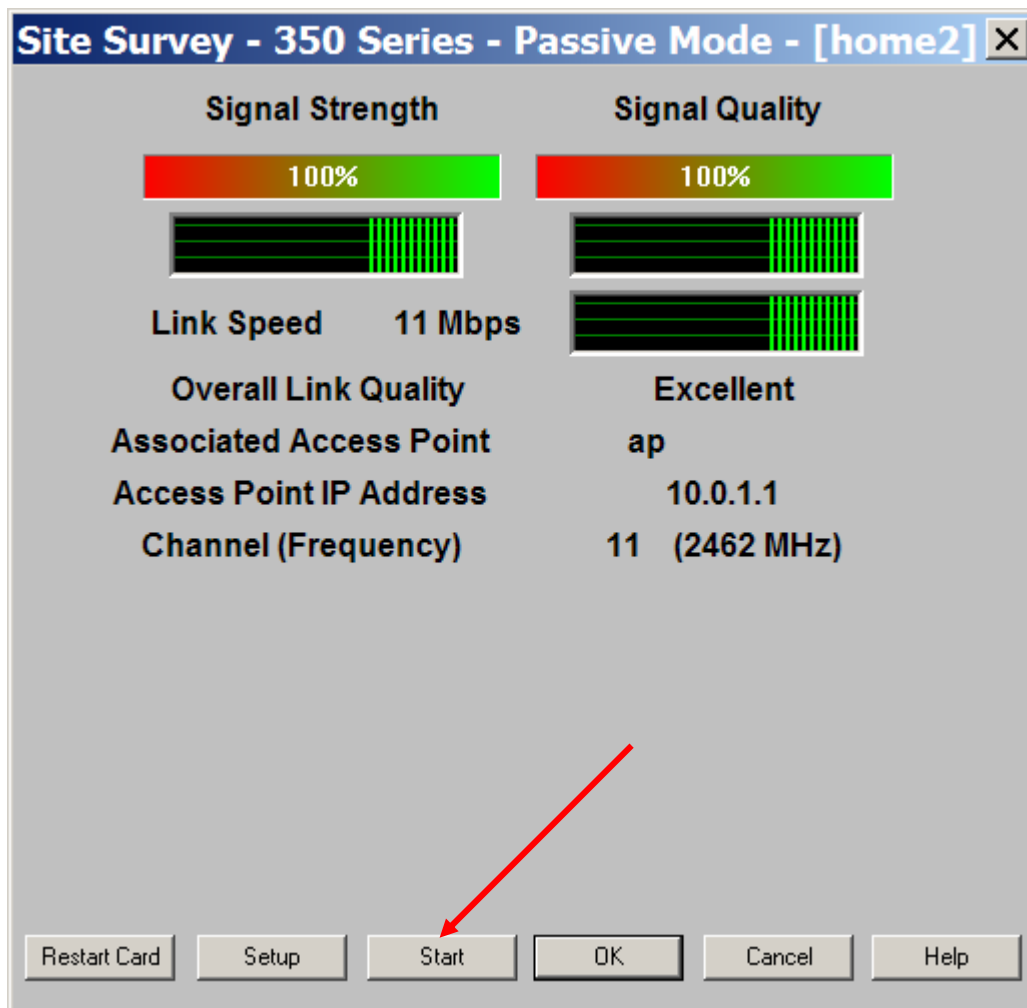
c. What is the link speed?

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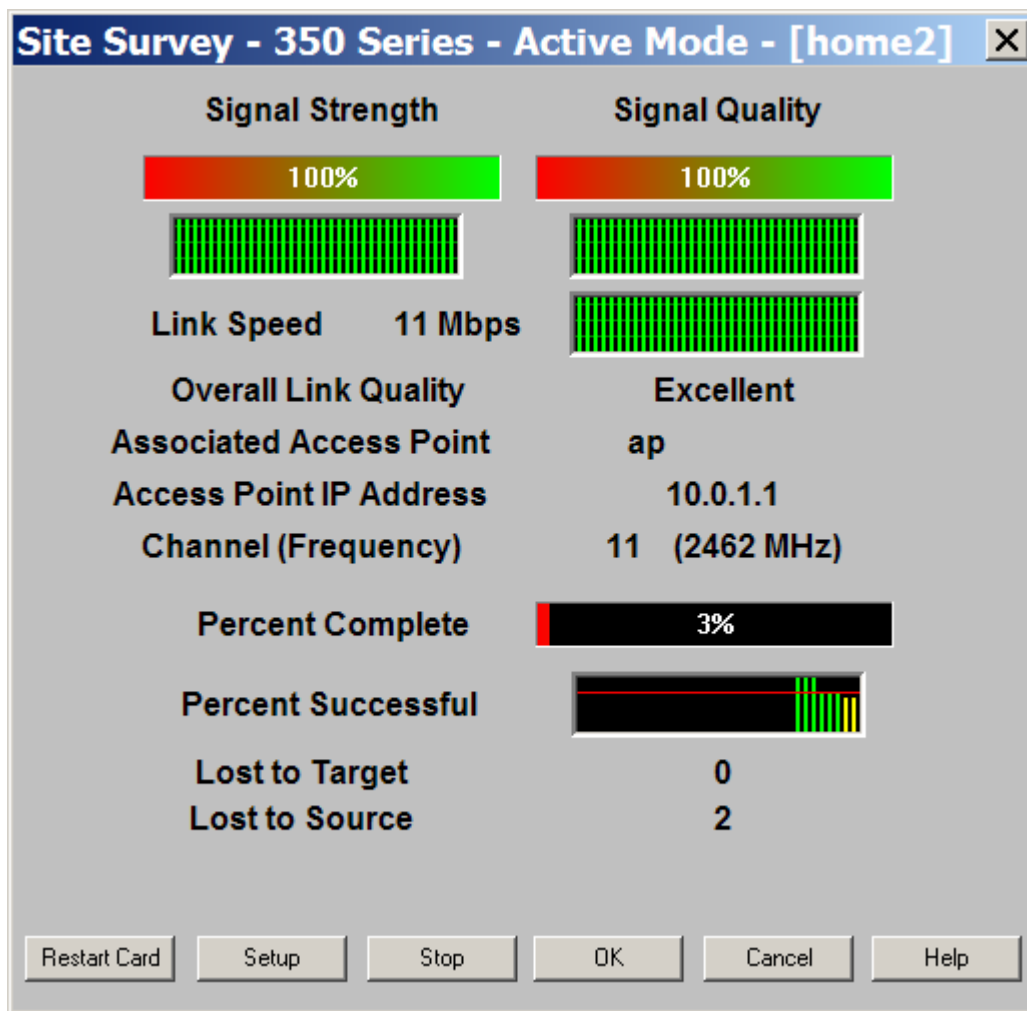
d. What is the overall link quality?

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### Step 3 Run Site Survey test



Click the Start button to run the site survey test.



The Site Survey Active Mode screen appears.

Position the Laptop PC in various locations relative to the AP.

Note the changes in the indicator field values listed below:

a. What is the signal strength?

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b. What is the signal quality?

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c. What is the link speed?

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d. What is the overall link quality?

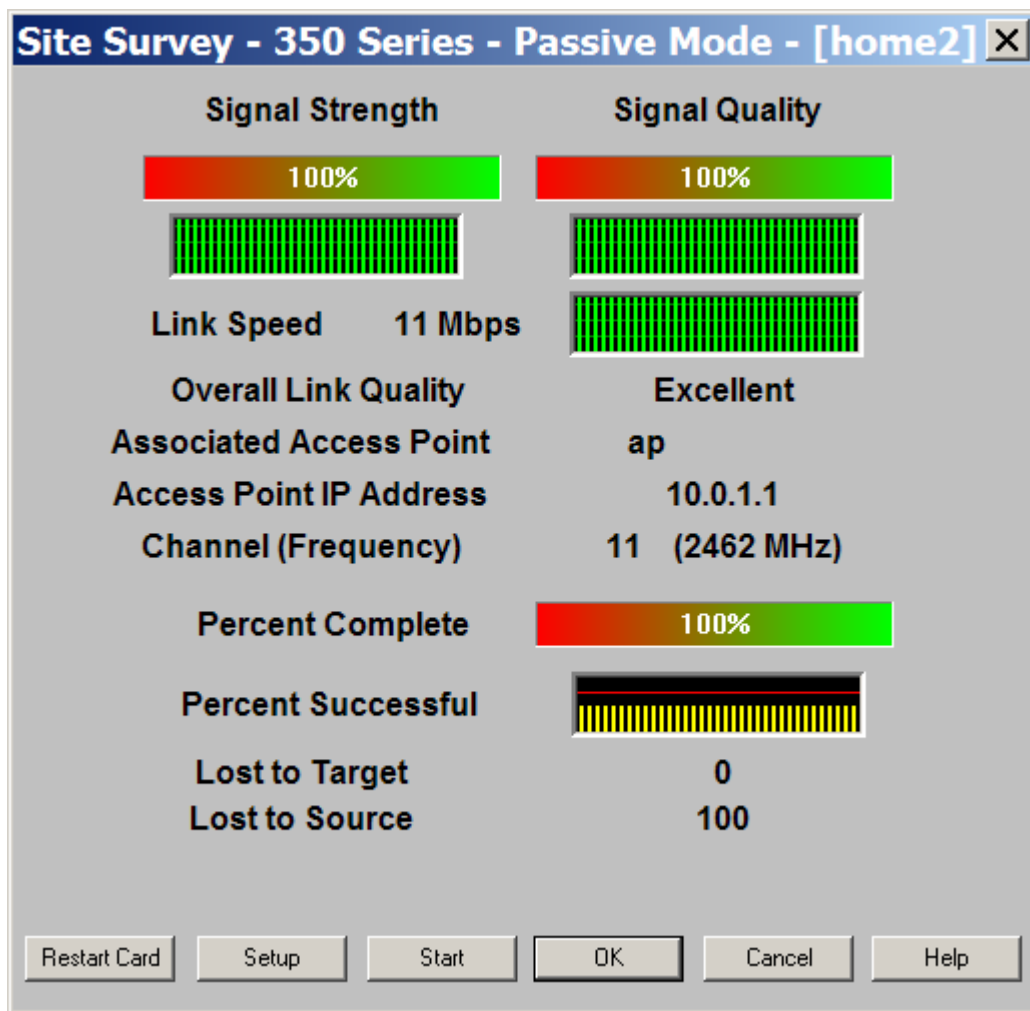
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e. How many packets were lost to target?

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f. How many packets were lost to source?

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When the Stop button is clicked or the Percent Complete reaches 100%, the active mode changes back to the passive mode.

Click **OK** or Cancel to exit the site survey application.