

Wireless Router Lab: CCNA and Beyond



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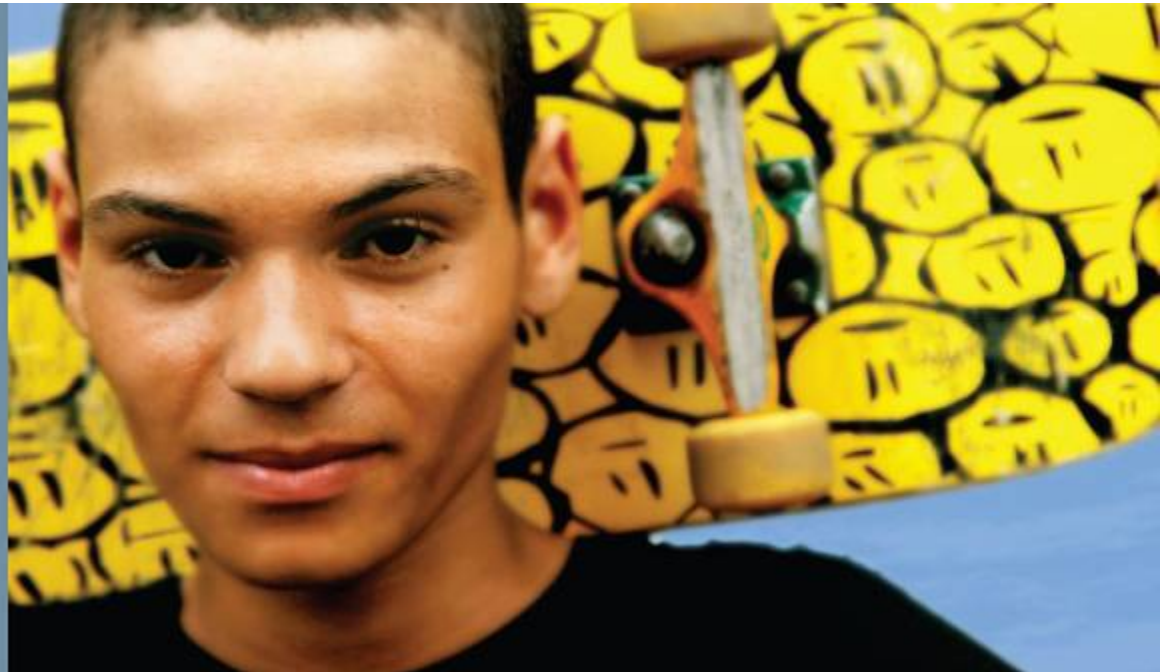
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Session Objectives and Agenda

Objective: Using Linksys with CCNA and Beyond

1. Different Linksys Models features and functions
Using different Linksys equipment to teach CCNA
2. Setting up Linksys[®] Wireless for CCNA[®] Instruction
(2) Labs
3. Additional Linksys Devices for Curriculum Enhancement
Video Surveillance Options for your classroom and beyond

Linksys Wireless Setup for CCNA Discovery and Exploration



Linksys Setup: Real World

Wireless Models and Features

WRT54g

802.11g, Basic Security



WRT150n

802.11n

Basic Security



WRT160n

New Model: More range than 150n

WRT300n

More range than 150n

Basic Security



WRT310n

New Model: More range than 300n

WRV200

802.11g

Advanced Security (VPN, etc)



Note: Blue/Black – Home Series; Silver/Black – Business Series

CCNA Equipment List Example: 10 Students

WRT54g	1	Wireless Router
WRT160n	1	Wireless Router
WRT300n	1	Wireless Router
WRT310n	1	Wireless Router
WRV200	6	Wireless Router
WAP200	1	Wireless Access Point
WUSB54G	5	Wireless Client Adapter
WUSB200	5	Wireless Client Adapter
RV042	1	Wired Router with Trend Micro Solution



Linksys: CCNA and Beyond

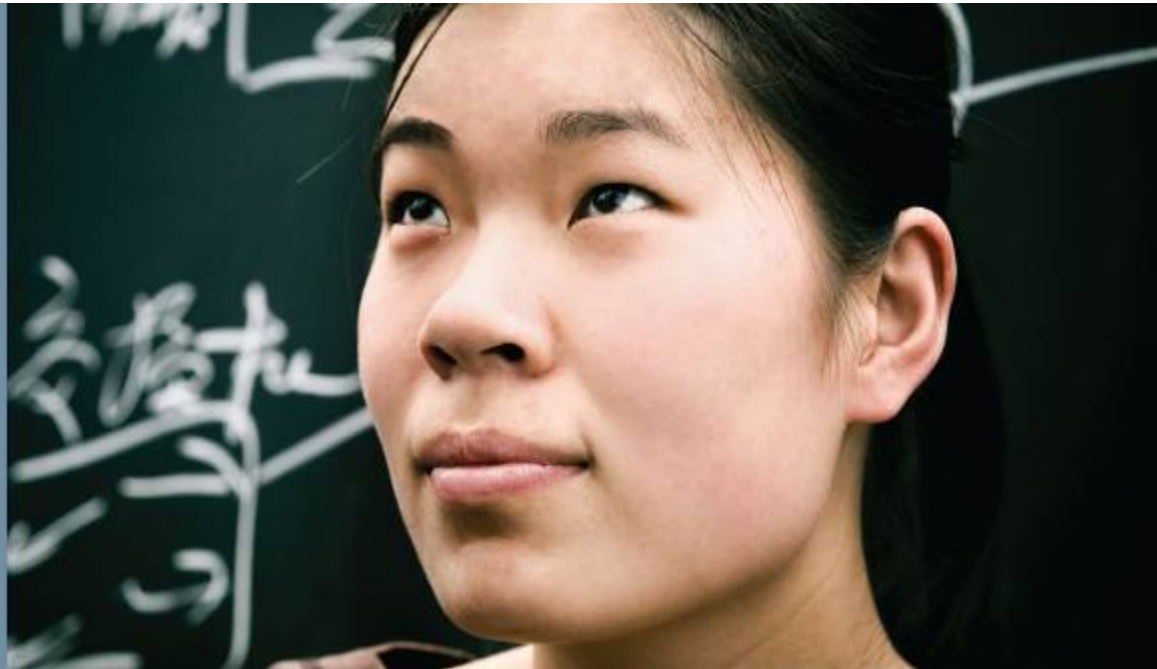
- Lab1 Handout: 7.2.5 Access Point (300n)
- Lab 2 Handout: 7.2.5 Access Point (WRV200)
- Models: WRT54G, WRT 160n, WRT300n, WRT310n, WRV200

Unpackage equipment and confirm:

1. CD
2. Power cable
3. Ethernet Cable

**If missing anything, please call speaker over.

Using Linksys Within CCNA and Beyond: CCNA Labs





Linksys Wireless CCNA Setup

Steps 1–3 **Review** (should already be done)

Step

1	Computer Ready
2	Open Linksys Access Point Box
3	AP Box Items Checklist

- Required Equipment—
One each of the following:
 - Access Point (AP)
 - Computer
 - Wireless Client Hardware
- Checklist:
 1. Unit
 2. CD-ROM: User Guide and Setup Guide
 3. Ethernet Cable
 4. Power Adapter (1 pc)
 5. Quick Installation Book

*We will be using two different client models: Linksys WUSB54G and WUSB200. We will also help connect attendees' client PCs if they have different WLS client hardware.

Linksys Wireless CCNA Setup

Step 4

Step

Installation Guide Step: Connecting the Router (Layer 1 Only)

4

- Connect Ethernet cable and plug from switchport on router to your NIC

DO NOT connect wirelessly to manage the router!

Linksys Wireless CCNA Setup

Step 5

Step

5

Usually use CD to go through easy install. (**Skipping**)

PC Configuration as per Installation Guide: Explore Variables, "What Can Go Wrong..."

1. Many APs create a lot of noise
2. Some APs can manage over the wireless out of box but should only manage through hardwired connection; **DO NOT connect wirelessly** to manage the router!
3. SSIDs are the same on all Linksys; we want to change in the beginning of the lab
4. All routers use the 192.168.1.1 address; reassign IP address based on what given by speaker
****After changing SSID and IP, disconnect and reconnect to router**
5. As long as SSIDs are changed, overlapping DHCP scope should not be a problem
6. Some Windows desktops loose their network connections and/or SSID broadcast; this is a Windows issue
7. WUSB clients CD out of the box does not work with VISTA; CD setups do not work with Macintosh
8. Internet Explorer should be used for all the management



Linksys Wireless CCNA Setup

Step 6 – Lab 7.2.5

Step

6

Router Configuration

Before beginning, everyone reset the “firmware” button on the router

- Follow along lab 7.2.5
- Reminder: Do not use wireless connection for management

Menu

- Generally Main menu – black bar
sub menu – blue bar
- Menu tour

Lab details in 7.2.5

- Network Mode
- SSID (change to last name)
- Radio Band
- Wide Channel
- Standard Channel
- SSID Broadcast
- Change IP Address
 - Presenter gives out IP addresses to each wireless router
- Other Options: Different Linksys Technology Offerings

Linksys Wireless CCNA Setup

Step 7 - Lab 7.2.6

Step

7

Wireless Client Configuration

- Follow along lab 7.2.6
- or
- For advanced users, use time to investigate product menus

Lab details in 7.2.6

- Finding APs
- Finding SSID
- Signal strength

Linksys Wireless CCNA Setup

Step 8

Step

8

Basic Wireless Features

- Highlighting key points

- Radio Band
- Wireless Network Name
- Wireless Mode
- Wide Channel
- Standard Channel
- Security
- Authentication
- Network Type
- IP Address
- Subnet Mask
- Default Gateway
- DNS1
- MAC Address filtering

Equipment Needed

- Wireless Client Adapter WUSB54G or WUSB200 for standalone PCs. ****Reminder:** Vista users need upgraded driver



Linksys Wireless CCNA Setup

Step 9

Step

9

View differences WRV200 to WRT300N

- Join another router's SSID and insure web management is enabled
- Compare home series vs business series for differences and similarities

Questions? Comments? Concerns?

Linksys Wireless CCNA Setup

Overview of Discovery 1 and Exploration 3

- The wireless labs in Discovery 1 are basic step-by-step lab activities
- The wireless labs in Exploration 3 include a basic lab activity, a challenge lab activity and a troubleshooting lab activity

Curriculum Enhancement Tools: Linksys and Video Surveillance (VS)



Video Surveillance Solution Components

SRW208P	1	10/100/1000 Desktop POE 8-Port Gigabit Switch
NSS4100	1	4-Bay Gigabit Network Storage System Chassis With 1.0TB RAID
RVL200	1	4-Port SSL/IPSec VPN Router
WVC200	1	Wireless-G PTZ Internet Video Camera with Audio
WVC2300	1	Wireless PTZ Internet Video Camera with Audio
PVC2300	1	PoE PTX Internet Video Camera with Audio

Video Surveillance (VS)

Glenn Quesenberry: Linksys Video Surveillance Solution

Q and A



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