

**Cisco Long Reach
Ethernet (LRE) / Building
Broadband Services
Manager (BBSM)
Cisco University**

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Student Lab Guide

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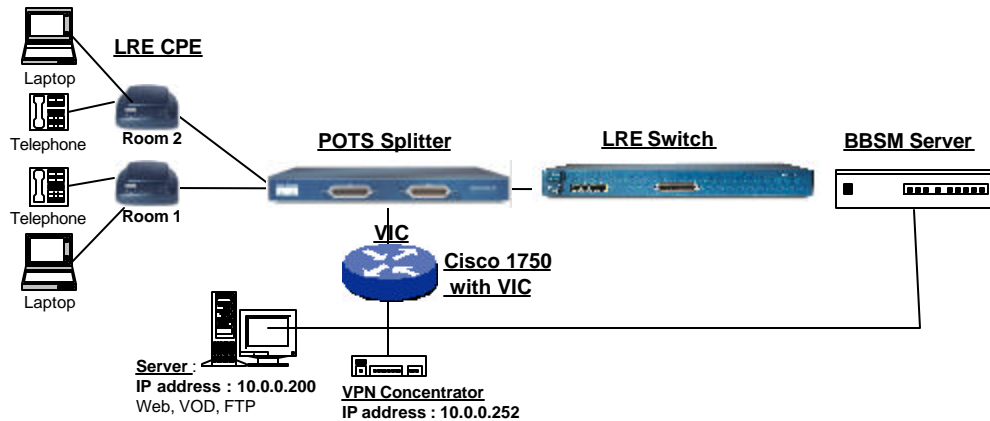
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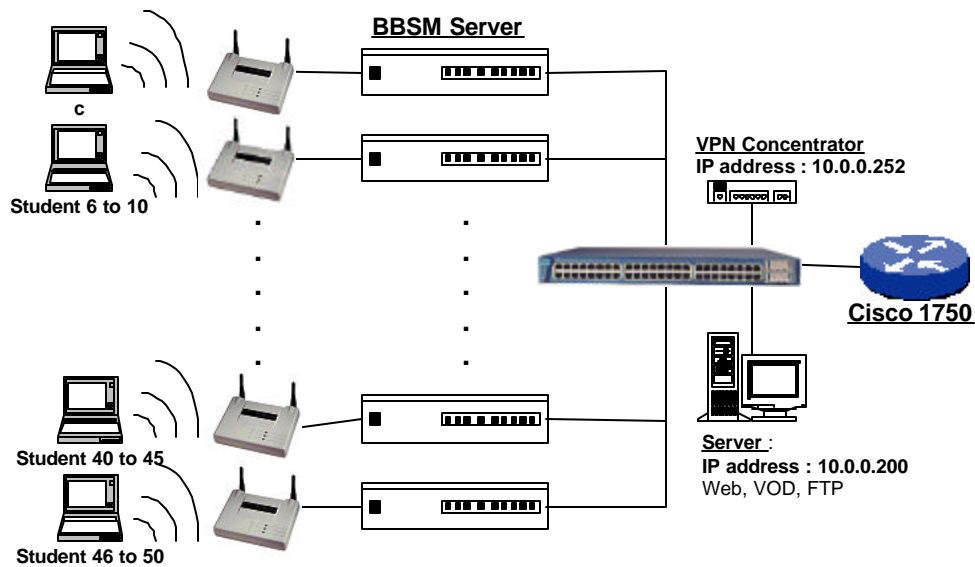
INTRODUCTION: Basic Lab Setup and Wiring Diagram

The following diagram shows the lab layout.

Cisco U LRE/BBSM Network Demo Setup



Cisco U LRE/BBSM Class Setup



IP address Scheme

1. Router **HOTEL** :

Interface eth0 10.0.0.253 mask 255.255.255.0

2. VPN Concentrator : 10.0.0.252 mask 255.255.255.0

3. Radius, VOD, Web and FTP Server : 10.0.0.200 mask 255.255.255.0

Setting up the Lab

- Pair up yourself according to the below arrangement :

Student1 and Student2 : Aironet Access Point **1** and BBSM **1**

Student3 and Student4 : Aironet Access Point **2** and BBSM **2**

Student5 and Student6 : Aironet Access Point **3** and BBSM **3**

Student7 and Student8 : Aironet Access Point **4** and BBSM **4**

Student9 and Student10 : Aironet Access Point **5** and BBSM **5**

5. BBSM and Aironet Access Point IP address assignment

	BBSM Internal NIC (TOP)	BBSM External NIC (BOT)	Aironet Access Point	Aironet Access Point SSID
Group 1	10.10. 1 .1	10.0.0. 1	10.10. 1 .2	group1
Group 2	10.10. 2 .1	10.0.0. 2	10.10. 2 .2	group2
Group 3	10.10. 3 .1	10.0.0. 3	10.10. 3 .2	group3
Group 4	10.10. 4 .1	10.0.0. 4	10.10. 4 .2	group4
Group 5	10.10. 5 .1	10.0.0. 5	10.10. 5 .2	group5
Group 6	10.10. 6 .1	10.0.0. 6	10.10. 6 .2	group6
Group 7	10.10. 7 .1	10.0.0. 7	10.10. 7 .2	group7
Group 8	10.10. 8 .1	10.0.0. 8	10.10. 8 .2	group8
Group 9	10.10. 9 .1	10.0.0. 9	10.10. 9 .2	group9
Group 10	10.10. 10 .1	10.0.0. 10	10.10. 10 .2	group10

- **Default Gateway for Aironet Access Points : 10.10.x.1 (TOP NIC of BBSM servers)**
- **Default Gateway for BBSM Servers : 10.0.0.253**
- **All Subnet mask : 255.255.255.0**
- Connect RJ45 cable from the RJ45 port of the Aironet Access Point to the TOP NIC of the BBSM server.

Note : The TOP NIC of the BBSM is the Internal network to the LRE switch and the CPEs.

- Connect another RJ45 cable from the BOTTOM NIC of the BBSM server to the Catalyst 3524 Switch.

Note : The BOTTOM NIC of the BBSM is the External network which connects to the Internet.

- The following servers are connected to the Catalyst 3548
- Server running Web, Streaming Video , Radius and FTP services (**IP address : 10.0.0.200**)
- Cisco 1750 Ethernet port (**IP address : 10.0.0.253**)