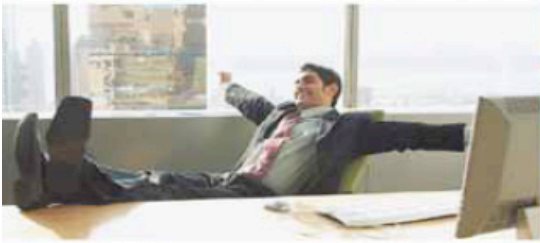


# Gaming Console Deployment Guide



[MERUNETWORKS.COM](http://MERUNETWORKS.COM)

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## 1. EXECUTIVE SUMMARY

Gaming consoles like the Sony PlayStation 3, Nintendo Wii, and Microsoft Xbox 360 are being increasingly used in wireless mode in enterprise environments like university dormitories. Testing in Meru's Interoperability Lab has shown that there are unique issues in connectivity with gaming system as compared to other mainstream Wi-Fi™ enabled devices. University IT personnel have to address how they will handle game console interoperability. This document shows the detailed configurations needed in Meru System Director 4.0 and 4.1 releases to support interoperability between Meru Networks controllers and APs with Sony PlayStation 3, Nintendo Wii, and Microsoft Xbox 360.

### 1.1 SONY PLAYSTATION 3

#### BACKGROUND

Sony Playstation 3 gaming console (like many common console systems) has both a wired Ethernet port and 802.11bg wireless network connectivity for online community access. While both of these interfaces have a MAC address, Sony utilizes one of them. During the process of associating to a wireless network the PS3 uses one MAC to probe for wireless APs and the other for the authentication portion of the association process.

#### INTEROPERABILITY DETAILS

Virtual Cell and Virtual Port features are enabled by default in 3.6.1 and newer versions of Meru System Director as well as on AP300 family access points. This allows for optimization of client association and seamless roaming. The Virtual Port feature uses the client MAC Address to create a Virtual Wireless Network (BSSID) specific to that client. A Virtual Port is assigned to the first MAC address. When the PS3 changes its MAC address during the association process, the second MAC address assignment is denied access.

PS3 can be connected by disabling the Virtual Cell and Virtual Port features in the ESS Profiles and in the AP300 radio settings. This would affect ALL ESS profiles on those APs and be suboptimal for all clients. With System Director 4.1, support for the AP1000 was added. The AP1000 can support Virtual Port and non-Virtual Port ESSes concurrently.

In Meru System Director 4.1, a feature called VCell Overflow was introduced. This enables the creation of a non-Virtual ESS Profile alongside existing ESS Profiles that are running Virtual Cell/Virtual Port on an AP300 radio in VCell Mode. The Sony PS3 has been successfully field tested in VCell Overflow on 4.1-39 and 4.1-55 versions of System Director.

#### CONFIGURATION OVERVIEW

To configure VCell Overflow ESSID for PS3, TWO ESS Profiles are required. In the example below, we will be presenting an ESSID to the community with an SSID of "GamingDevices."

For VCell Overflow to work there is a 'Parent' ESS Profile with VCell enabled from which the clients can overflow from. To keep non-PS3 clients from trying to associate to this VCell ESS Profile, we will set the "New APs join ESS" option to "NO." IF this is an existing ESS Profile, you need to set this to NO AND remove all ESS-AP entries. NOTE: This ESS will NOT be available to users.

VCell and VPort remain enabled  
New APs Join ESS is set to OFF  
SSID = GamingDevices  
Profile Name = GamingDevices\_VC

Next we are going to create the “Child” ESS Profile.  
VCell and VPort are set to OFF  
New APs Join ESS is set to ON\*  
Overflow FROM = GamingDevices\_VC  
SSID = GamingDevices  
Profile Name = GamingDevices\_Overflow

\* If you do not want the “GamingDevices” ESS Profile on ALL APs you can set “New APs Join ESS” to “OFF” and use the ESS-AP table to manage the radio list on which this ESS is broadcast. Make sure you ONLY use the OVERFLOW profile when doing this.

These ESS Profiles were created as a new profile. That ensures that all data rates are using the 4.1 DEFAULT settings. PS3 requires a minimum 11Mbps 11b data rate be available as a base AND transmit rate. The defaults are acceptable.

All Testing was done with Clear, WEP64 (ASCII & Hex), WEP128 (ASCII & Hex), WPA TKIP, and WPA2-PSK (AES) security.

## 1.2 NINTENDO WII

### BACKGROUND

Nintendo Wii is a gaming console which provides by default ONLY an 802.11bg wireless network interface for online access. There is a USB-Wired Ethernet adapter available.

The Wii does not work with the DEFAULT ESS Configuration created in current versions of Meru System Director. Modifications to the base transmit speeds must be made as outlined below.

### INTEROPERABILITY DETAILS

Nintendo Wii is compatible with Clear, WEP64 (ASCII & Hex), WEP128 (ASCII & Hex), WPA-PSK (TKIP) or WPA2-PSK (AES) security profiles.

It is recommended on AP300 to use Clear OR WPA2-PSK security.

Nintendo Wii also REQUIRES that 802.11b or 802.11b+g data rates are available.

### CONFIGURATION OVERVIEW

It is recommended that more data rates be made available for the Nintendo Wii gaming console by modifying the default ESS profile configuration.

If you have created a special ESS Profile for the PS3 using the System Director 4.1 VCell Overflow feature, that same OVERFLOW ESS Profile can be used for the Wii. Note that the Wii is fully compatible with Virtual Cell and Virtual Port and does not REQUIRE System Director 4.1 or VCell overflow.

In the Example below we will create and modify an ESS Profile Called “WiiConsole”

Profile Name = WiiConsole  
SSID = WiiConsole  
VCell and VPort remain On

Changes from default in the BGN Transmit Base Rates matrix are required if your BGN data rates assuming your 2.4 GHz Radios are in “bgn” mode. If your AP radio is in “bg” mode then make the modifications in the BG data rates.

The change made from the default is in the BGN Transmit Base Rates matrix where 1 Mbps, 2 Mbps, 5.5 Mbps and 11Mbps data rates are checked. In the default configuration, only 11Mbps is checked.

## 1.3 XBOX 360

### **BACKGROUND**

The Microsoft Xbox 360 has a built-in 802.11bgn wireless adapter. The Xbox 360 can run in Virtual Port mode or non-Virtual Port mode.

### **INTEROPERABILITY DETAILS**

Microsoft Xbox 360 is compatible with Clear, WEP64 (hex or ASCII characters), WEP128 (hex or ASCII characters), WPA-PSK (TKIP), and WPA2-PSK (AES) security profiles.

### **CONFIGURATION OVERVIEW**

Except for RADIUS authenticated ESSIDs, the Xbox 360 can associate to any network ESSID configuration in Virtual Port mode or non Virtual Port mode.

## 2. CONFIGURATION

### SUPPORT ALL 3 GAMING CONSOLES IN SYSTEM DIRECTOR 4.0

#### Summary of steps to configure a security profile and ESSID to support all 3 gaming consoles in System Director 4.0

1. Create a security profile or select an existing security profile.
2. Create an ESS profile or select an existing profile.
3. Optionally, create a VLAN.
4. Disable Virtual Port and Virtual Cell on the ESS profile.
5. Disable Virtual Cell on the AP300.

#### Detailed configuration

The screenshot shows the 'WLAN Management' interface with the 'Security Profile Table' displayed. The table contains the following data:

<input type="checkbox"/>	Security Profile Name	L2 Modes Allowed	Data Encrypt	Captive Portal	MAC Filtering	Firewall Capability	Firewall Filter ID	Passthrough Firewall Filter ID	Owner
<input type="checkbox"/>	default	Clear	None	Disabled	Off	none			controller
<input type="checkbox"/>	wpa2psk	WPA2 PSK	CCMP-AES	Disabled	Off	none			controller
<input type="checkbox"/>	welch	WPA2 PSK	CCMP-AES	Disabled	Off	none			controller
<input type="checkbox"/>	wep64-profile	Static WEP keys	WEP64	Disabled	Off	none			controller
<input type="checkbox"/>	wep128-profile	Static WEP keys	WEP128	Disabled	Off	none			controller
<input type="checkbox"/>	wep64-in-hex-profile	Static WEP keys	WEP64	Disabled	Off	none			controller
<input type="checkbox"/>	wep128-in-hex-profile	Static WEP keys	WEP128	Disabled	Off	none			controller
<input type="checkbox"/>	wpa2psk-profile	WPA PSK	TKIP	Disabled	Off	none			controller

1. Connect to the controller using an internet browser. The address is 'http://<IP address of controller>'. Log in with your controller username and password.
2. Click on the 'Configuration' tab on the upper left hand corner of the screen.
3. Scroll down to the 'Security' section and click on the 'Profile' button. The screen above will now be shown.

**Security Profile Table - Add**

Security Profile Name:  Enter 1-32 chars., Required

L2 Modes Allowed:  Clear  802.1x  Static WEP keys  WPA  
 WPA PSK  WPA2  WPA2 PSK  MIXED  
 MIXED\_PSK

Data Encrypt:  WEP64  WEP128  TKIP  CCMP-AES  
 CCMP/TKIP  Clear

Primary RADIUS Profile Name: No Data for Primary RADIUS Profile Name

Secondary RADIUS Profile Name: No Data for Secondary RADIUS Profile Name

WEP Key (Alphanumeric/Hexadecimal):

Static WEP Key Index:  Valid range: [1-4]

Re-key Period (seconds):  Valid range: [0-65535]

Captive Portal:

802.1X Network Initiation:

Shared Key Authentication:

Pre-shared Key (Alphanumeric/Hexadecimal):

Group Keying Interval (seconds):  Valid range: [0-65535]

View Details:

OK Cancel

4. Click on the 'Add' button to add a security profile and the screen above will be shown.
5. Add the security profile name.
6. Select the allowed L2 mode.
7. Select the relevant data encryption mode.
8. Enter the WEP key or preshared key depending upon the L2 mode selected.
9. Click OK to locally save the security profile.

**VLAN Configuration (1 entry)**

<input type="checkbox"/>	VLAN Name	Tag	Fast Ethernet Interface Index	IP Address	Netmask	IP Address of the Default Gateway	Owner
<input type="checkbox"/>	gamers	1000	1	172.26.16.254	255.255.240.0	172.26.16.1	controller

Refresh Add Delete Settings View Details

10. Depending upon the design of the network, this step may be optional. If so, skip to step 19. Otherwise, scroll down to the Wired section and click on the VLAN button to create a VLAN. The screen above should appear.

**VLAN Configuration - Add**

VLAN Name:  Enter 1-32 chars., Required

Tag:  Valid range: [1-4094], Required

Fast Ethernet Interface Index:  Valid range: [1-2]

IP Address:

Netmask:

IP Address of the Default Gateway:

Override Default DHCP Server Flag:

DHCP Server IP Address:

DHCP Relay Pass-Through:

OK Cancel

11. Click on the Add button to add a VLAN. The screen above should appear.
12. Input the VLAN name.
13. Input the VLAN tag number.
14. Input the IP address of the VLAN.
15. Input the subnet mask.
16. Input the default gateway.
17. Depending upon the DHCP server configuration, input the IP address of DHCP server if it is on a different subnet.
18. Click OK to locally save the VLAN configuration.

**ESS Profile (2 entries)**

<input type="checkbox"/>	ESS Profile Name	Enable/Disable	SSID	Security Profile Name	SSID Broadcast	Tunnel Interface Type	Dataplane Mode	Owner
<input type="checkbox"/>	Proteus	Enable	proteus-demo	wpa2psk	On	No Tunnel	Tunneled	controller
<input checked="" type="checkbox"/>	gamers	Enable	gamers	wep128-in-hex-profile	On	Configured VLAN Only	Tunneled	controller

Refresh Add Delete Settings View Details

19. Scroll down to the Wireless section and click on the ESS tab to create an ESS profile. The screen above should appear.

The screenshot shows the 'ESS Profile - Add' configuration window in the WLAN Management software. The interface includes a navigation menu on the left with categories like Monitor, Maintenance, Configuration, System Config, Security, Wireless IDS/IPS, Wired, and Wireless. The main configuration area contains the following fields and options:

- ESS Profile Name: [Text Input] Enter 1-32 chars., Required
- Enable/Disable: **Enable** (dropdown)
- SSID: [Text Input] Enter 0-32 chars.
- Security Profile Name: **default** (dropdown)
- Primary RADIUS Accounting Server: No Data for Primary RADIUS Accounting Server
- Secondary RADIUS Accounting Server: No Data for Secondary RADIUS Accounting Server
- Accounting Interim Interval (seconds): **3600** Valid range: [600-36000]
- Beacon Interval (msec): **100** Valid range: [20-1000]
- SSID Broadcast: **On** (dropdown)
- Bridging:  AirFortress  IPv6  AppleTalk
- New AP's Join ESS: **On** (dropdown)
- Tunnel Interface Type: **No Tunnel** (dropdown)
- VLAN Name: **No VLAN** (dropdown)
- GRE Tunnel Profile Name: No Data for GRE Tunnel Profile Name
- Allow Multicast Flag: **Off** (dropdown)

Buttons for 'OK' and 'Cancel' are located at the bottom right of the configuration area.

20. Click on the Add button and the screen above should appear.
21. Input the ESS profile name.
22. Input the SSID.
23. Input the security profile that was created earlier.
24. If a VLAN is to be used in this profile, change the Tunnel Interface Type to configured VLAN only.
25. At the VLAN pull-down menu, select the VLAN name that was previously created.

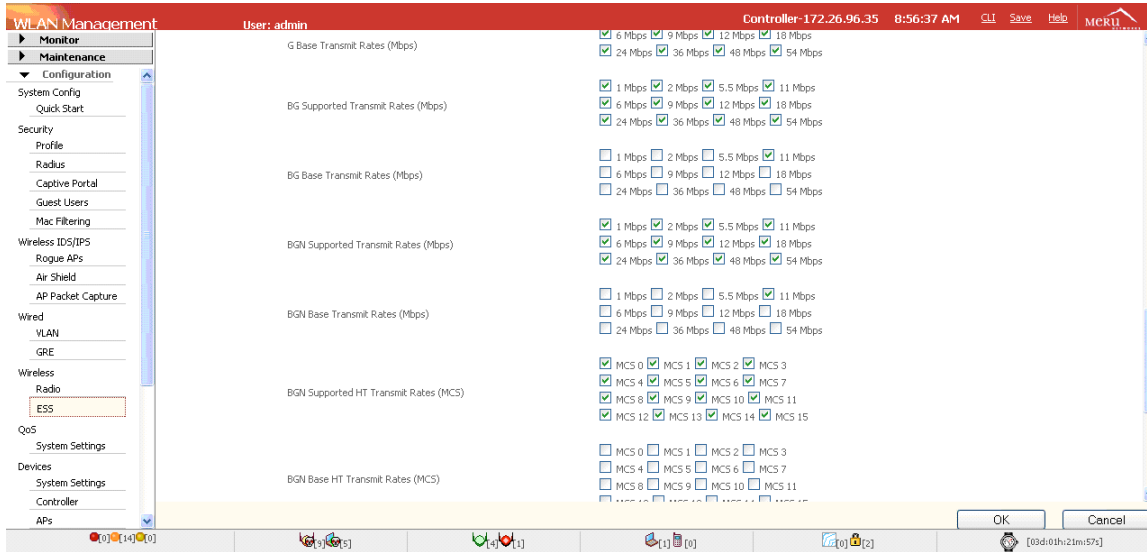
The screenshot shows the configuration window for various wireless settings in the WLAN Management software. The interface includes a navigation menu on the left and a main configuration area with the following fields and options:

- Silent Client Polling: **Off** (dropdown)
- Virtual Cell: **On** (dropdown)
- Virtual Port: **On** (dropdown)
- WMM Support: **Off** (dropdown)
- APSD Support: **On** (dropdown)
- DTIM Period (number of beacons): **1** Valid range: [1-255]
- Dataplane Mode: **Tunneled** (dropdown)
- AP VLAN Tag: **0** Valid range: [0-4094]
- AP VLAN Priority: **Off** (dropdown)
- Countermeasure: **On** (dropdown)
- Multicast MAC Transparency: **Off** (dropdown)
- Band Steering Mode: **Band Steering Disable** (dropdown)
- Band Steering Timeout(seconds): **5** Valid range: [1-65535]
- Expedited Forward Override: **Off** (dropdown)
- SSID Broadcast for Vport: **Disabled** (dropdown)
- B Supported Transmit Rates (Mbps):  1 Mbps  2 Mbps  5.5 Mbps  11 Mbps

Buttons for 'OK' and 'Cancel' are located at the bottom right of the configuration area.

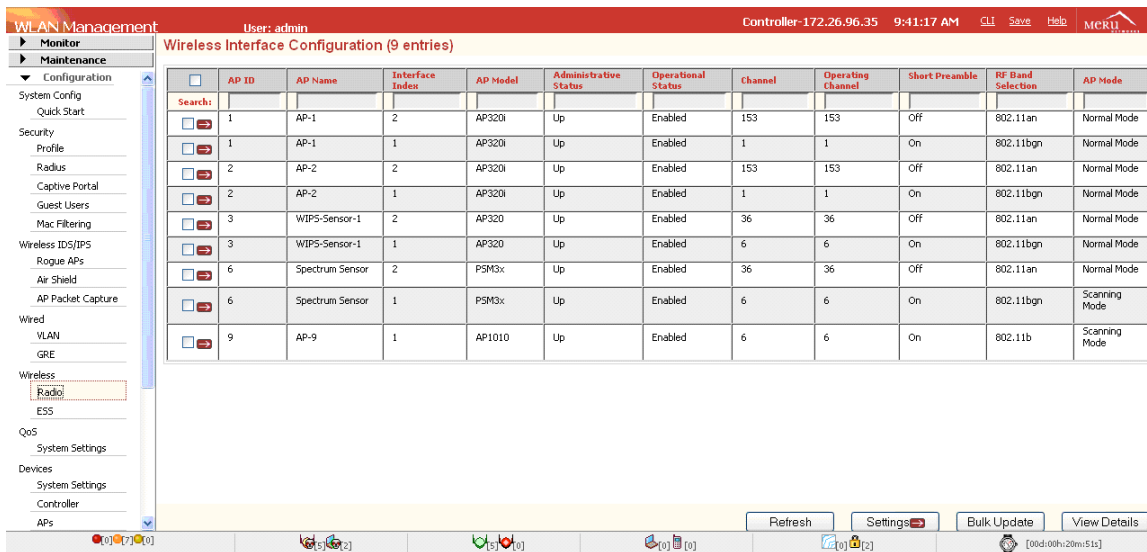
26. Scroll down the screen until the Virtual Cell selection menu appears on the top of the screen.
27. Turn off Virtual Port.
28. Turn off Virtual Cell.





29. The default mode of operation of the Meru APs in the 2.4 Ghz spectrum is 802.11bgn mode. The other possible modes are: 802.11b, 802.11g, or 802.11bg. By default, the base transmit rates are only set to 11mb for 802.11b, 802.11bg, and 802.11bgn. In order to support the Nintendo Wii, the base transmit rates must be changed to include 1mb, 2mb, and 5.5mb. This is done by checking the respective boxes in the respective mode sections.

30. Click the OK button to save the ESS profile locally.



31. If the wireless network has AP300s and/or AP300is, then click on the Radio button to make changes to the APs that are in the ESS-AP table for the ESS profile that will support gaming consoles. Otherwise, skip to step 37.

The screenshot shows the WLAN Management interface with the 'Maintenance' menu open. The 'Wireless Interface Configuration' table is displayed, listing 9 entries. The table has columns for AP ID, AP Name, Interface Index, AP Model, Administrative Status, Operational Status, Channel, Operating Channel, Short Preamble, RF Band Selection, and AP Mode. The 'AP Mode' column shows 'Normal Mode' for most entries and 'Scanning Mode' for two entries (Spectrum Sensor).

AP ID	AP Name	Interface Index	AP Model	Administrative Status	Operational Status	Channel	Operating Channel	Short Preamble	RF Band Selection	AP Mode
1	AP-1	2	AP320i	Up	Enabled	153	153	Off	802.11an	Normal Mode
1	AP-1	1	AP320i	Up	Enabled	1	1	On	802.11bgn	Normal Mode
2	AP-2	2	AP320i	Up	Enabled	153	153	Off	802.11an	Normal Mode
2	AP-2	1	AP320i	Up	Enabled	1	1	On	802.11bgn	Normal Mode
3	WIPS-Sensor-1	2	AP320	Up	Enabled	36	36	Off	802.11an	Normal Mode
3	WIPS-Sensor-1	1	AP320	Up	Enabled	6	6	On	802.11bgn	Normal Mode
6	Spectrum Sensor	2	PSM3x	Up	Enabled	36	36	Off	802.11an	Normal Mode
6	Spectrum Sensor	1	PSM3x	Up	Enabled	6	6	On	802.11bgn	Scanning Mode
9	AP-9	1	AP1010	Up	Enabled	6	6	On	802.11b	Scanning Mode

32. Check each radio that is in the ESS profile for which the gaming consoles will utilize.

33. Click on the Bulk Update button.

The screenshot shows the WLAN Management interface with the 'Bulk Update' dialog box open. The dialog box contains various configuration options for the wireless interface, including Channel, Short Preamble, RF Band Selection, Antenna Selection, Transmit Power High(dBm), AP Mode, Protection Mechanism, Protection Mode, Channel Width, MIMO Mode, 802.11n only mode, Virtual Cell, and Probe Response Threshold. The 'Virtual Cell' option is currently checked and set to 'On'. The dialog box also includes an 'OK' button and a 'Cancel' button.

34. Check the Virtual Cell menu and pull down the menu to set Virtual Cell to off.

35. Click OK. Now the APs will be rebooted and come up in non Virtual Cell mode.

36. When the APs are back up and running, go back into the ESS profile that will support the gaming consoles and check the ESS-AP table to ensure the AP radios are assigned to this ESS profile. If not, then add those radios back to the ESS profile.

37. Click on the save button to save the configuration to the flash drive of the controller.

38. You are now ready to configure and test the gaming consoles. Refer to the screens and documentation of each gaming console to configure the SSID and wireless encryption modes.

## SUPPORT ALL 3 GAMING CONSOLES IN SYSTEM DIRECTOR 4.1

### Summary of steps to configure a security profile and ESSID to support all 3 gaming consoles in System Director 4.1

1. Create a security profile or select an existing security profile.
2. Optionally, create a VLAN.
3. Create an ESS profile or select an existing profile.
4. Create an overflow ESS profile or select an existing profile.

### Detailed configuration settings

The screenshot shows the WLAN Management interface with the 'Security Profile Table (8 entries)' displayed. The table lists various security profiles with their configurations. The interface includes a navigation menu on the left, a top status bar, and a bottom toolbar with buttons for Refresh, Add, Delete, Settings, and View Details.

<input type="checkbox"/>	Security Profile Name	L2 Modes Allowed	Data Encrypt	Captive Portal	MAC Filtering	Firewall Capability	Firewall Filter ID	Passthrough Firewall Filter ID	Owner
<input type="checkbox"/>	default	Clear	None	Disabled	Off	none			controller
<input type="checkbox"/>	wpa2psk	WPA2 PSK	CCMP-AES	Disabled	Off	none			controller
<input type="checkbox"/>	welch	WPA2 PSK	CCMP-AES	Disabled	Off	none			controller
<input type="checkbox"/>	wep64-profile	Static WEP keys	WEP64	Disabled	Off	none			controller
<input type="checkbox"/>	wep128-profile	Static WEP keys	WEP128	Disabled	Off	none			controller
<input type="checkbox"/>	wep64-in-hex-profile	Static WEP keys	WEP64	Disabled	Off	none			controller
<input type="checkbox"/>	wep128-in-hex-profile	Static WEP keys	WEP128	Disabled	Off	none			controller
<input type="checkbox"/>	wpa2psk-profile	WPA PSK	TKIP	Disabled	Off	none			controller

1. Connect to the controller using an internet browser. The address is 'http://<IP address of controller>'. Log in with your controller username and password.
2. Click on the 'Configuration' tab on the upper left hand corner of the screen.
3. Scroll down to the 'Security' section and click on the 'Profile' button. The screen above will now be shown.

The screenshot shows the 'Security Profile Table - Add' configuration window. The fields and their values are as follows:

- Security Profile Name: [Empty text box]
- L2 Modes Allowed:  Clear  802.1x  Static WEP keys  WPA  WPA PSK  WPA2  WPA2 PSK  MIXED  MIXED\_PSK
- Data Encrypt:  WEP64  WEP128  TKIP  CCMP-AES  CCMP/TKIP  Clear
- Primary RADIUS Profile Name: No Data for Primary RADIUS Profile Name
- Secondary RADIUS Profile Name: No Data for Secondary RADIUS Profile Name
- WEP Key (Alphanumeric/Hexadecimal): [Empty text box]
- Static WEP Key Index: 1 (Valid range: [1-4])
- Re-key Period (seconds): 0 (Valid range: [0-65535])
- Captive Portal: Disabled
- 802.1X Network Initiation: On
- Shared Key Authentication: Off
- Pre-shared Key (Alphanumeric/Hexadecimal): [Empty text box]
- Group Keying Interval (seconds): 0 (Valid range: [0-65535])

4. Click on the 'Add' button to add a security profile and the screen above will be shown.
5. Add the security profile name.
6. Select the allowed L2 mode.
7. Select the relevant data encryption mode
8. Enter the WEP key or preshared key depending upon the chosen L2 mode.
9. Click OK to locally save the security profile.

The screenshot shows the 'VLAN Configuration (1 entry)' table with the following data:

VLAN Name	Tag	Fast Ethernet Interface Index	IP Address	Netmask	IP Address of the Default Gateway	Owner
gamers	1000	1	172.26.16.254	255.255.240.0	172.26.16.1	controller

10. Depending upon the design of the network, this step may be optional. If so, then skip to step 19. Otherwise, scroll down to the Wired section and click on the VLAN button to create a VLAN.

**VLAN Configuration - Add**

VLAN Name:  Enter 1-32 chars., Required

Tag:  Valid range: [1-4094], Required

Fast Ethernet Interface Index:  Valid range: [1-2]

IP Address:

Netmask:

IP Address of the Default Gateway:

Override Default DHCP Server Flag:  ▾

DHCP Server IP Address:

DHCP Relay Pass-Through:  ▾

OK Cancel

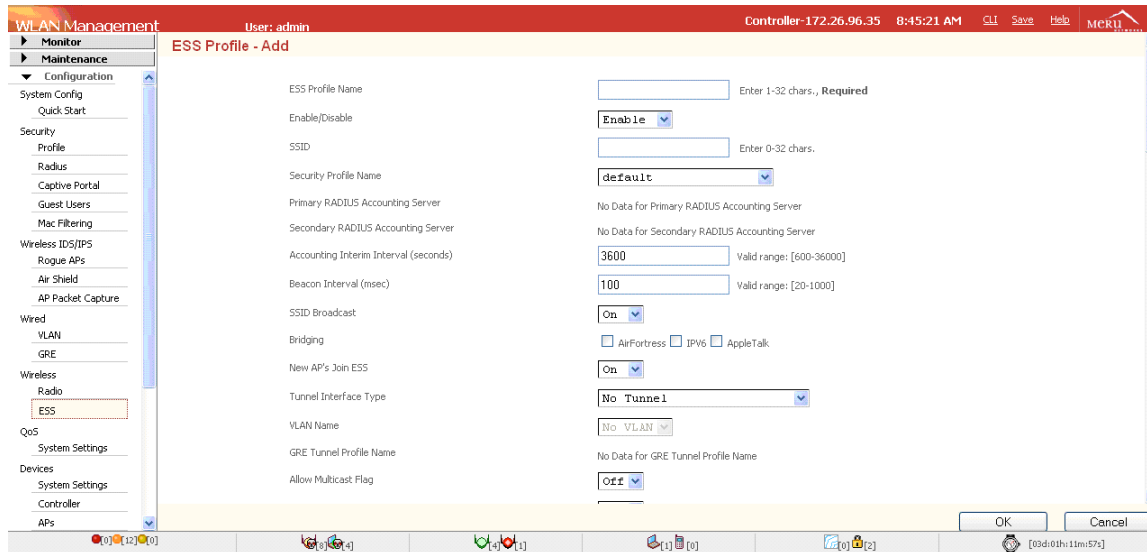
11. Click on the Add button to add a VLAN. The screen above should appear.
12. Input the VLAN name.
13. Input the VLAN tag number.
14. Input the IP address of the VLAN.
15. Input the subnet mask.
16. Input the default gateway.
17. Depending upon the DHCP server configuration, input the IP address of DHCP server if it is on a different subnet.
18. Click OK to locally save the VLAN configuration.

**ESS Profile (2 entries)**

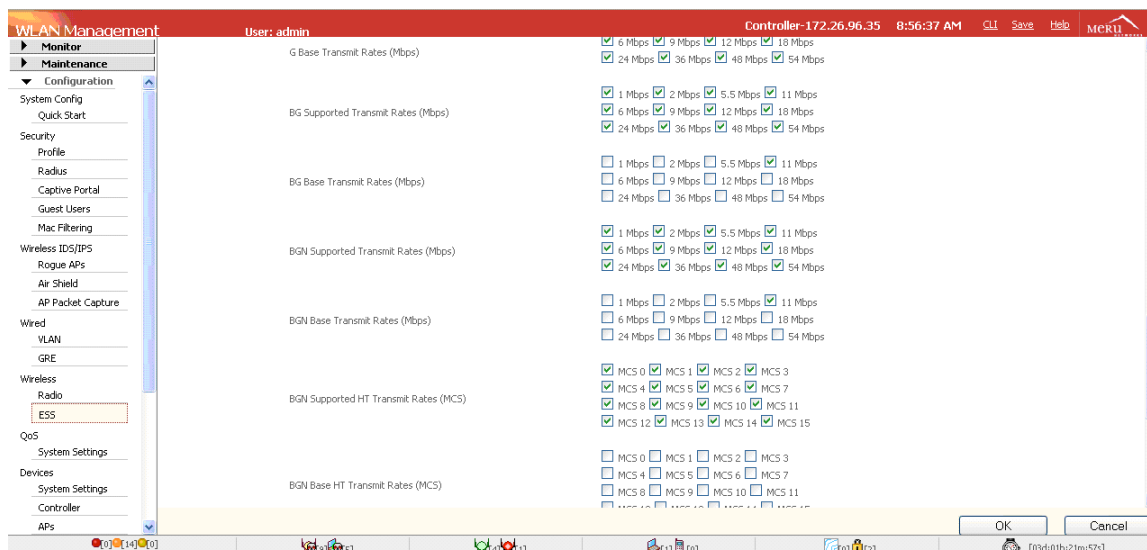
<input type="checkbox"/>	ESS Profile Name	Enable/Disable	SSID	Security Profile Name	SSID Broadcast	Tunnel Interface Type	Dataplane Mode	Owner
<input type="checkbox"/>	Proteus	Enable	proteus-demo	wpa2psk	On	No Tunnel	Tunneled	controller
<input type="checkbox"/>	gamers	Enable	gamers	wep128-in-hex-profile	On	Configured VLAN Only	Tunneled	controller

Refresh Add Delete Settings View Details

19. Scroll down to the Wireless section and click on the ESS tab to create an ESS profile. A similar screen above should appear.



20. Click on the Add button and the screen above should appear.
21. Input the ESS profile name.
22. Input the SSID.
23. Input the security profile that was created earlier.
24. Turn off 'New APs Join ESS'.
25. If a VLAN is to be used in this profile, change the Tunnel Interface Type to configured VLAN only.
26. Select the VLAN name from the VLAN name pull down menu.



27. Scroll down the page until the screen looks like the above screen shot.
28. The default mode of operation of the Meru APs in the 2.4 Ghz spectrum is 802.11bgn mode. The other possible modes are: 802.11b, 802.11g, or 802.11bg. By default, the base transmit rates are only set to 11mb for 802.11b, 802.11bg, and 802.11bgn. In order to support the Nintendo Wii, the base transmit rates must be changed to include 1mb, 2mb, and 5.5mb.
29. Click the OK button to save the ESS profile locally.
30. Click on the save button to save the configuration to the flash drive of the controller.
31. Complete the following steps to create the Virtual Cell overflow ESS profile. Go to the Wireless section and click on the ESS button.

32. Click on the Add button and the screen above should appear.
33. Input the ESS profile name. This profile name must be different from the name entered in step 21.
34. Input the same SSID that was entered in step 22.
35. Input the security profile that was created earlier.
36. If a VLAN is to be used in this profile, change the Tunnel Interface Type to configured VLAN only.

37. Scroll down the page until the screen looks like the above screen shot.
38. Click on the 'Overflow from' pull-down menu and select the ESS profile that was created in step 21.
39. Click on the OK button to save the ESS profile locally.

WLAN Management admin@172.26.96.35 level:15 11:36:51 PM CLI Save Logout Help MCRU

ESS-AP Configuration (4 entries)

ESS Profile	AP ID	AP Name	Interface Index	Channel	Admin State	Max Calls	BSSID
Search: <input type="text"/>							
<input type="checkbox"/> <input type="checkbox"/> gamers	1	AP-1	1	1	Up	0	00:0c:e6:eb:72:24
<input type="checkbox"/> <input type="checkbox"/> gamers	1	AP-1	2	153	Up	0	00:0c:e6:47:a4:98
<input type="checkbox"/> <input type="checkbox"/> gamers	2	AP-2	1	1	Up	0	00:0c:e6:eb:72:24
<input type="checkbox"/> <input type="checkbox"/> gamers	2	AP-2	2	153	Up	0	00:0c:e6:47:a4:98

Refresh Add Delete Settings View Details

40. Click on the ESS button on the left side.
41. Select the Virtual Cell overflow ESS profile by clicking on the adjacent red arrow box.
42. Click on the ESS-AP Table tab to add the APs to this ESS profile if the APs are not in the ESS-AP table. The screen above should appear.
43. Click on the save button to save the configuration to the flash drive of the controller.
44. You are now ready to configure and test the gaming consoles. Refer to the screens and documentation of each gaming console to configure the SSID and wireless encryption modes.

### 3. SUMMARY

This deployment document outlined the configuration steps required to support gaming consoles on Meru Networks controllers and access points. To support the Sony Playstation 3, ESS profiles must have Virtual Port and Virtual Cell disabled due to its unique MAC address change during the AP association phase. To support the Nintendo Wii, transmit data rates must be added. To support both of the Nintendo Wii and Xbox 360, Virtual Port can be enabled or disabled.