

Part II: How to Setup Multiple Ruckus Zoneflex 7372 for WAD Servers



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0. Introduction

This posting is an extension to the Part I - How to Setup Ruckus Zoneflex 7372 for WAD Servers. The readers are recommended to be familiar with the instructions given in the Part I.

Here we describe how to setup multiple Ruckus Zoneflex 7372 (Ruckus ZF 7372) access points to increase the customer logins or the Wi-Fi coverage area of a WAD server. We first describe the setup when the WAD server has its DHCP server enabled, and second when the WAD server has its DHCP server disabled.

In the first case, all Ruckus ZF 7372 access points will have their DHCP server disabled. There can only be one DHCP server in the network and it is in the WAD server. In the second case, one Ruckus ZF 7372 access point will have its DHCP server enabled, and the rest, disabled. This is again consistent that there can only be one DHCP server in the network and it is in one Ruckus ZF 7372 access point.

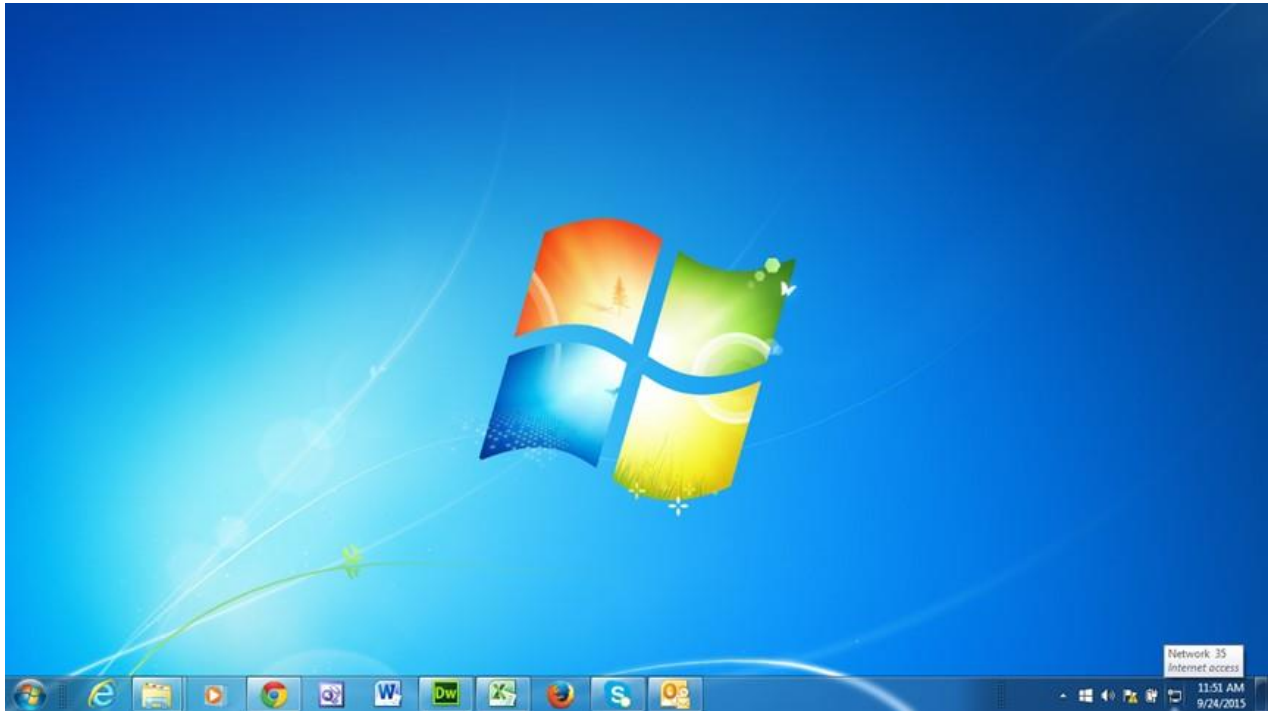
The WAD-104 server has no DHCP server inside. So when using the WAD-104, you would follow the instruction on how to setup the multiple Ruckus ZF 7372 for WAD with its DHCP server disabled.

1. How to setup the multiple Ruckus ZF 7372 for WAD with its DHCP server enabled

Following the Quick Setup Guide that comes in the package, connect each of the Ruckus ZF 7372, one at a time, to a laptop or a PC. We assume that each of the Ruckus ZF 7372 access point has the factory default settings. If not, please reset the Ruckus ZF 7372 access point to the factory default.

1.1

In your laptop or PC, go to the Internet Access icon in the right bottom corner of the Windows desktop.



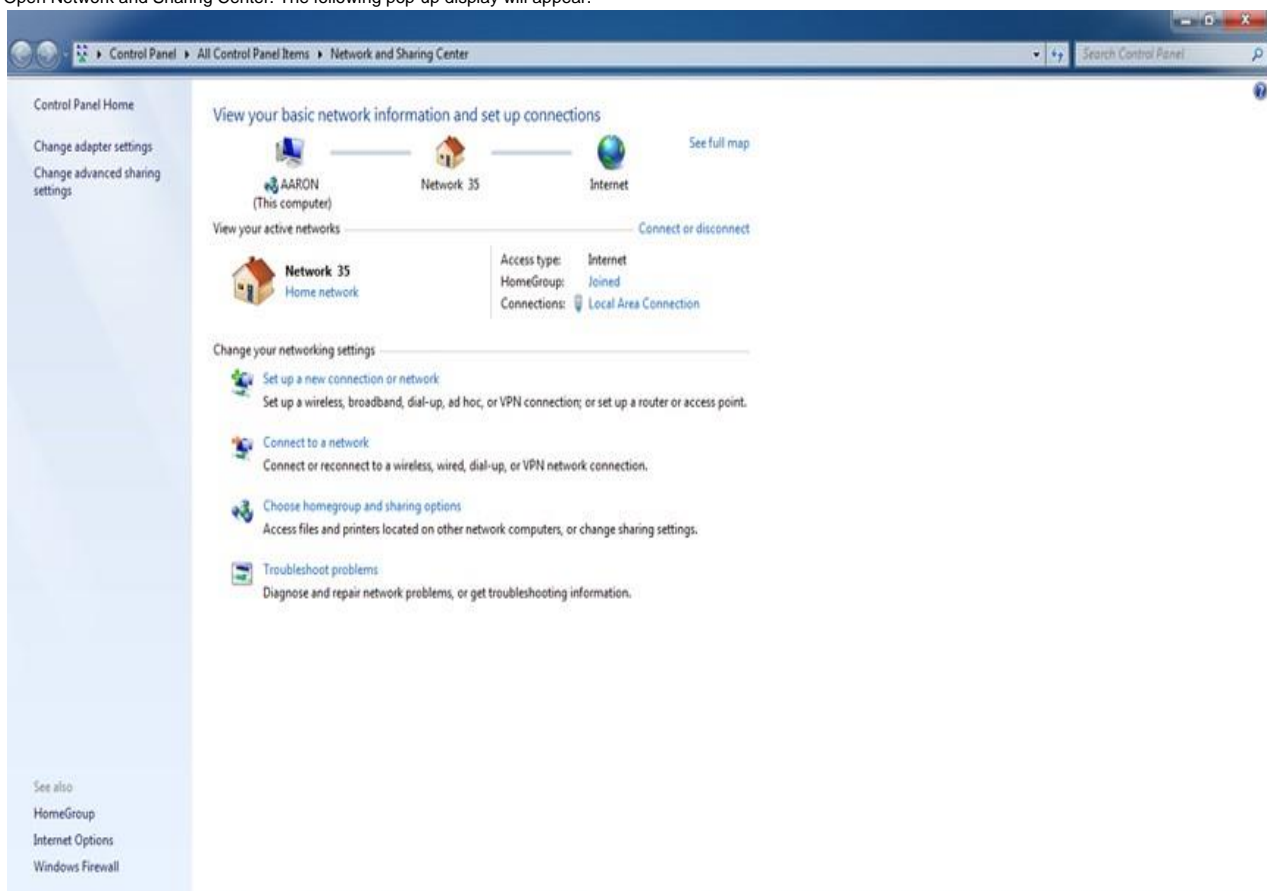
1.2

Click on the Internet Access icon and a pop-up display will appear.



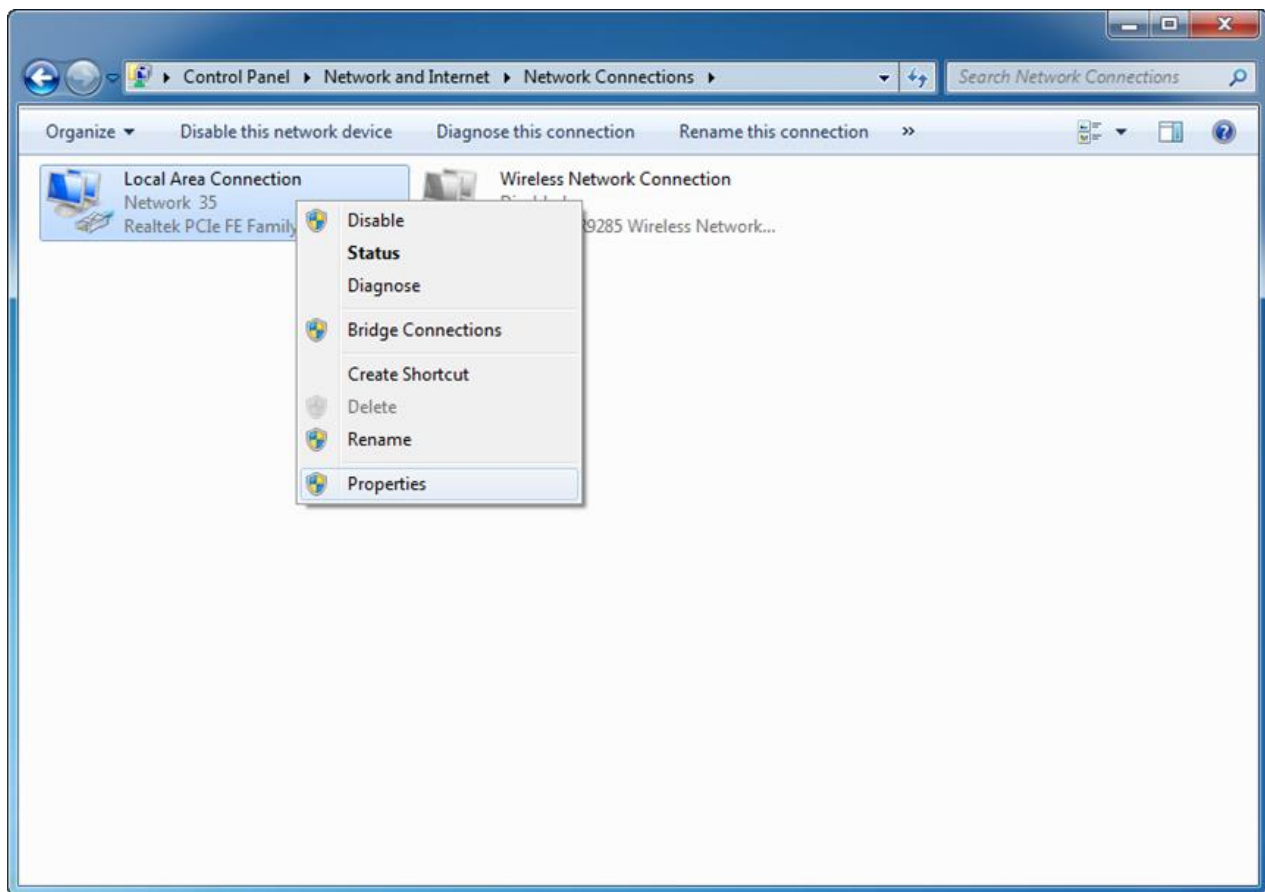
1.3

Click on the Open Network and Sharing Center. The following pop-up display will appear.



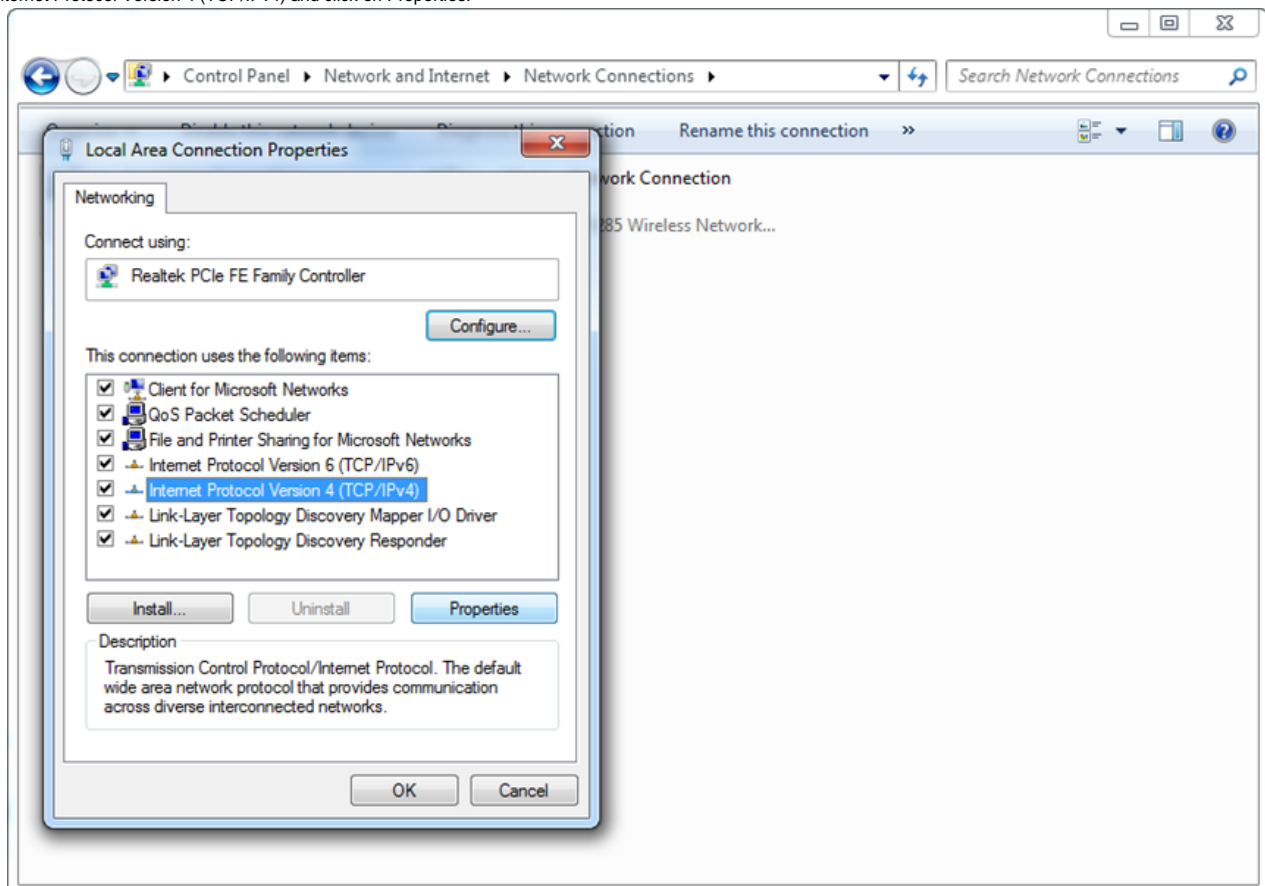
1.4

Click on the Change adapter settings. The following pop-up display will appear. Right-click on the Local Area Connection and select Properties.



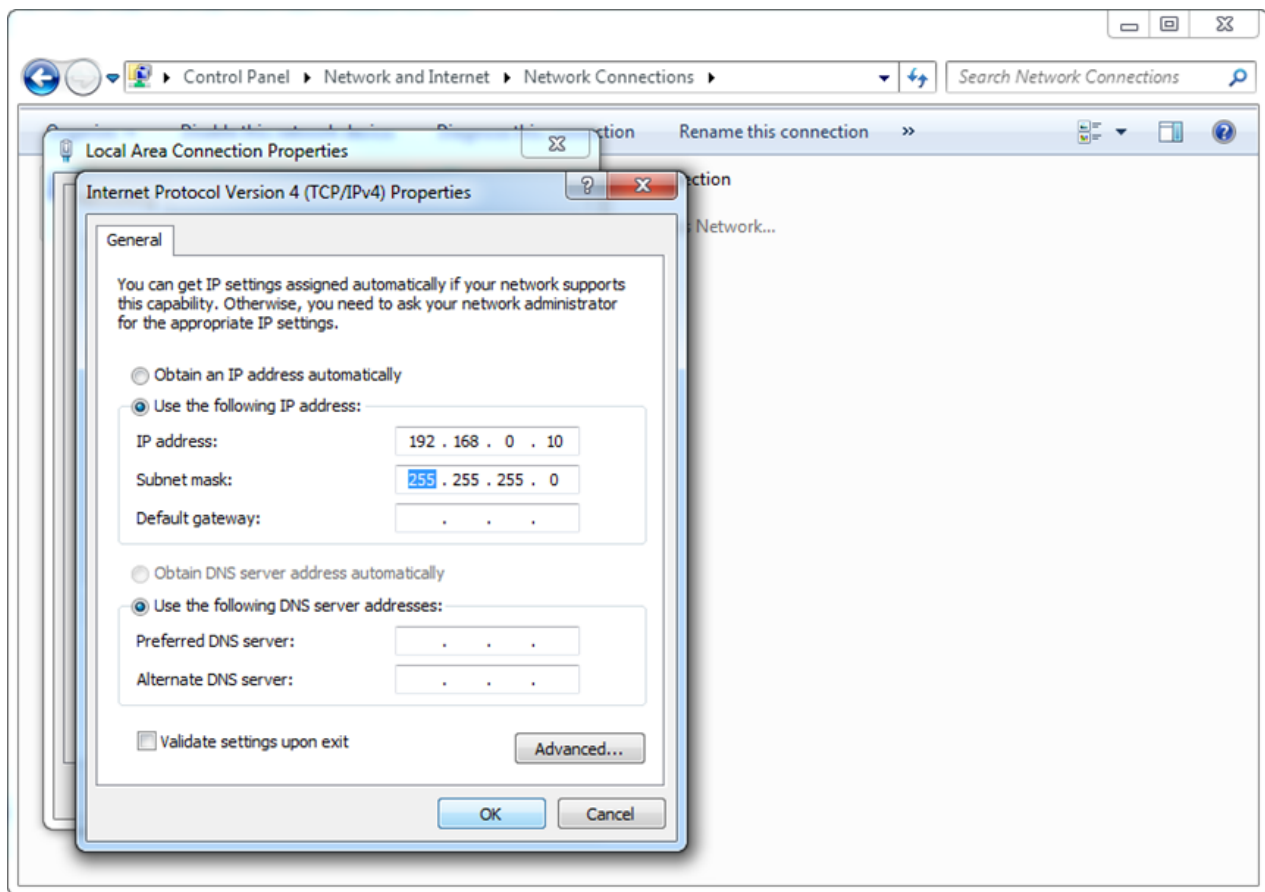
1.5

Select the Internet Protocol Version 4 (TCP/IPv4) and click on Properties.

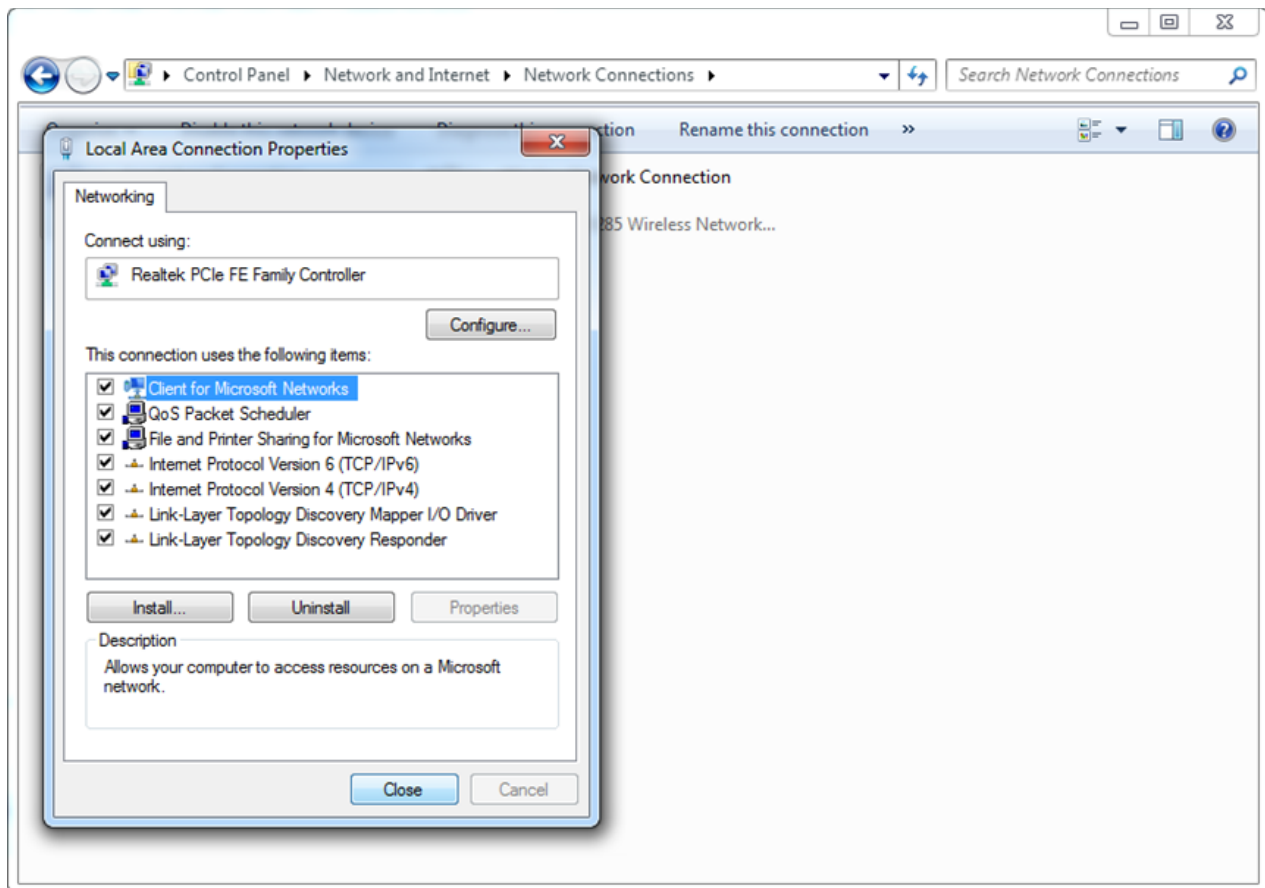


1.6

Select Use the following IP address and input 192.168.0.10 followed by the Subnet mask 255.255.255.0. Press OK.

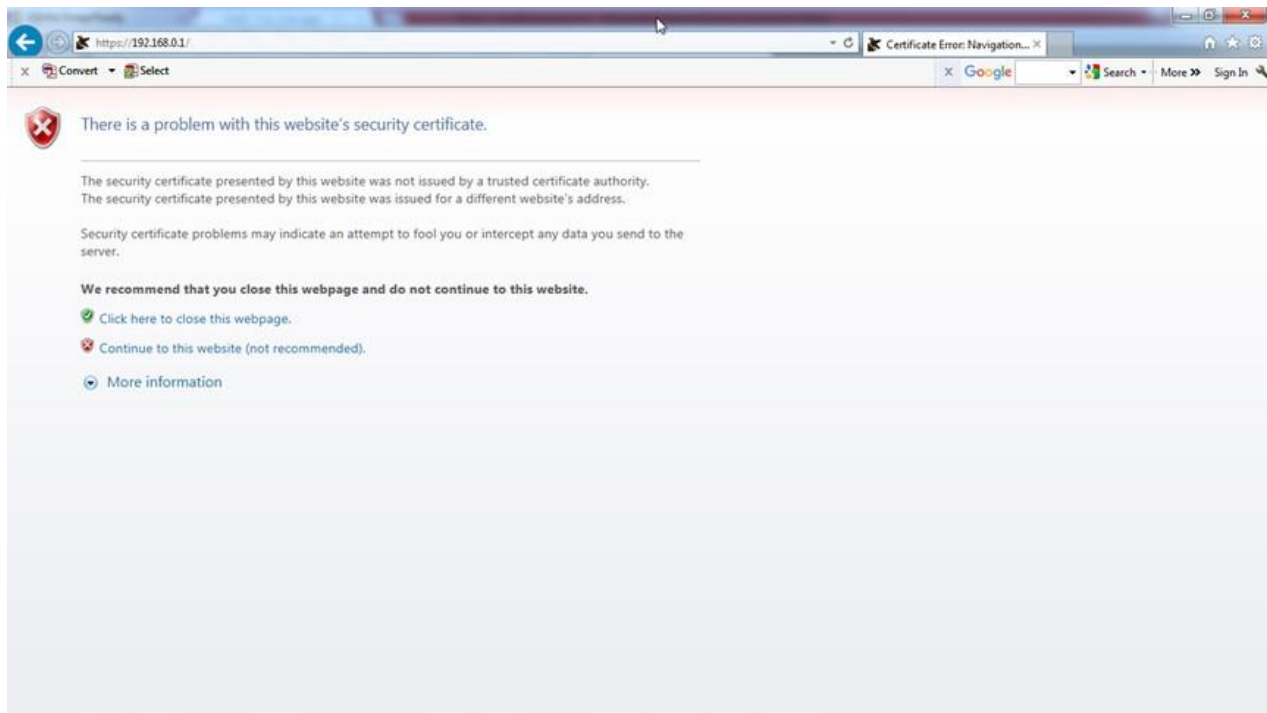


1.7 Press
Close.



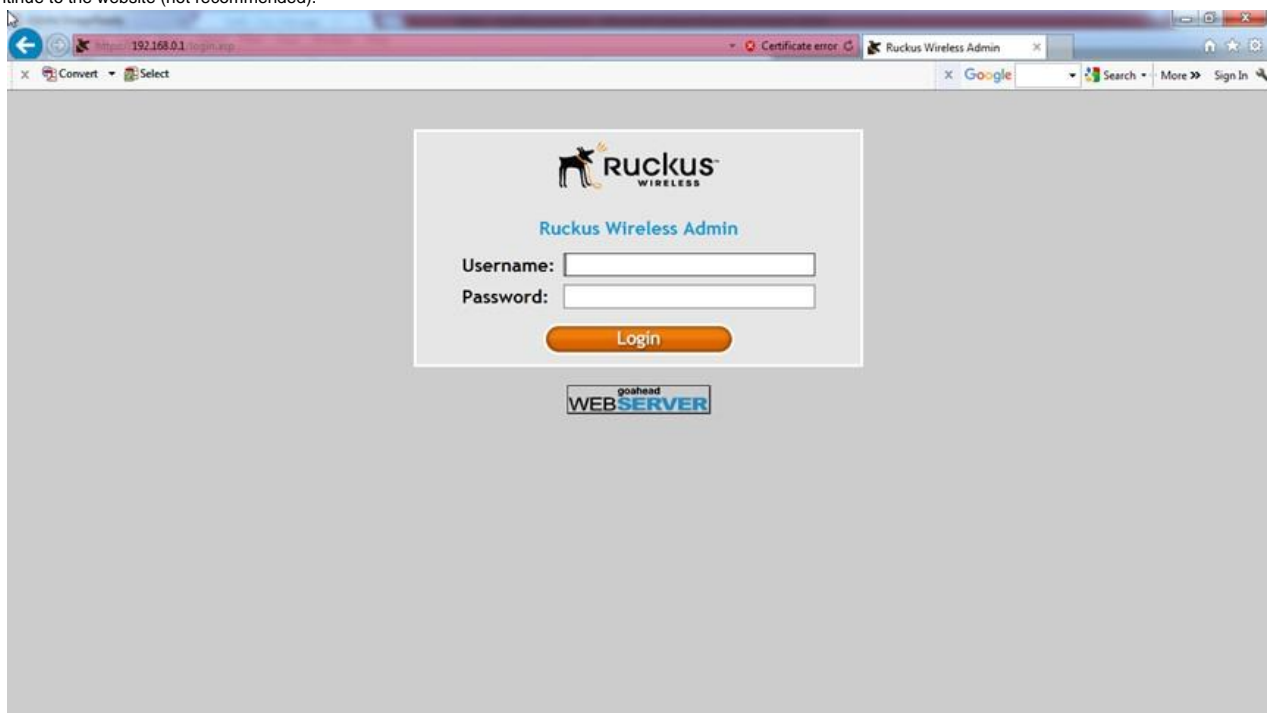
1.8

Next open the Internet Explorer and input into the URL field 192.168.0.1. You will see the following message.



1.9

Click on Continue to the website (not recommended).



1.10

Input the Username: super and Password: sp-admin to enter the Ruckus Wireless Admin. Select Internet under Configuration.

Status :: Device

Device Name: RuckusAP
 Device Location:
 GPS Coordinates:
 USB Software vid-pid:
 USB Software Version:
 MAC Address: 84:18:3A:0E:A9:F0
 Serial Number: 191402000100
 Software Version: 9.6.1.0.15
 Uptime: 22 mins 56 secs
 Current Time (GMT): Sat Sep 19 19:27:50 2015

Port	Interface	802.1X	Logical Link	Physical Link	Label
0	eth0	None	Down	Down	10/100
1	eth1	None	Up	Up 100Mbps full	10/100/1000 PoE

1.11

Fill in the values as shown below for the first Ruckus ZF 7372 access point

For the remaining Ruckus ZF 7372 access points, fill in the values as shown below except for the IPv4 Address which changes to 172.27.80.51, 172.27.80.52, 172.27.80.53, etc.

Press the Update Settings button.

Configuration :: Internet

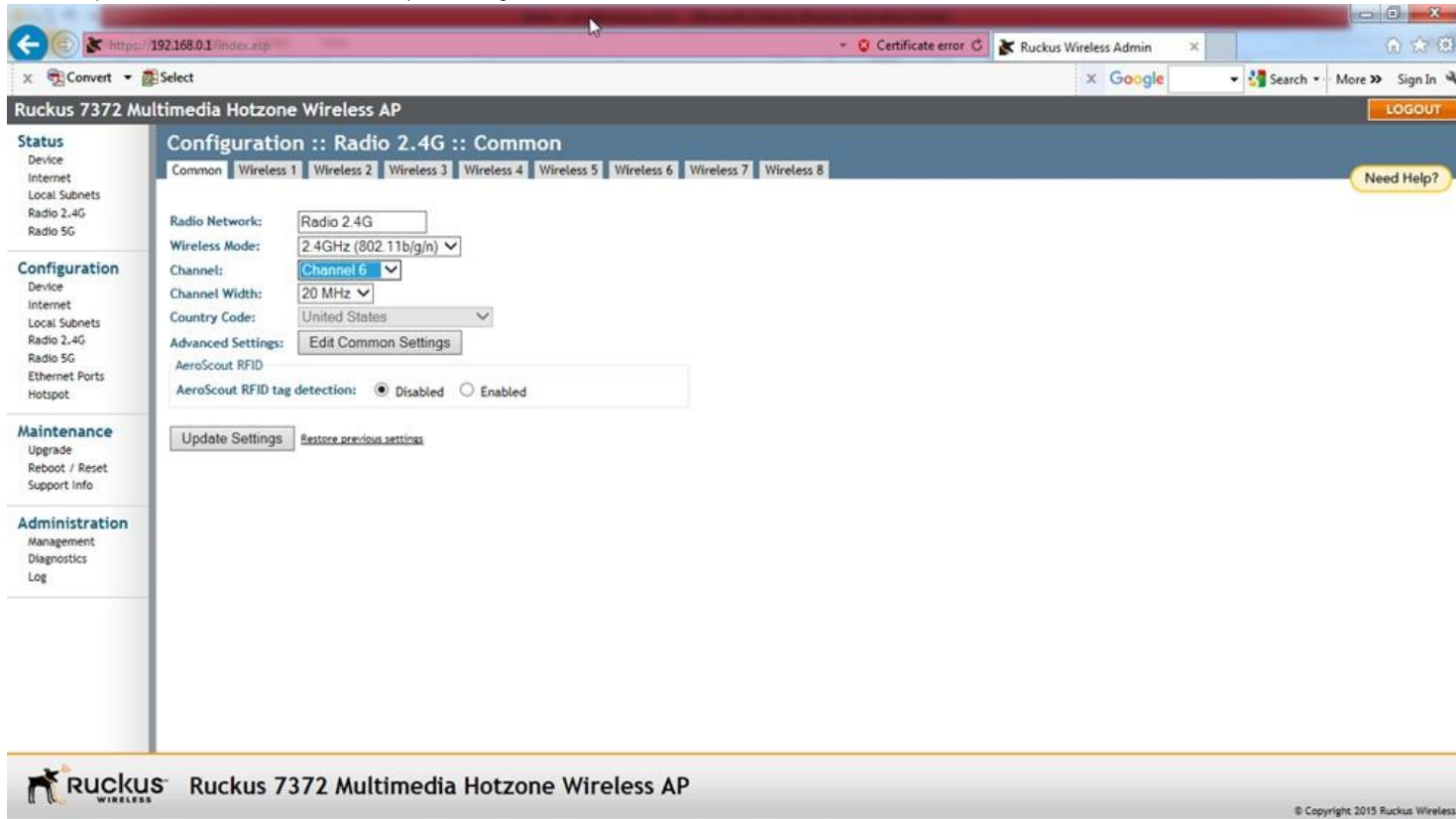
NTP Server: ntp.ruckuswireless.com
 Management VLAN: 1 (Need to reboot for change to take effect)
 IPv4 Connection Type: ☐ DHCP ☒ Static IP ☐ PPPoE
 Internet Connection Settings
 IPv4 Address: 172.27.80.50
 IPv4 Subnet Mask: 255.255.240.0
 IPv4 Gateway: 172.27.80.1
 IPV4 DNS Mode: ☒ Auto ☐ Manual
 IPv6 Connection Type: ☒ Auto Configuration ☐ Static IP
 IPv6 Primary DNS Server:
 IPv6 Secondary DNS Server:
 L2TP Connection
 L2TP Connection: ☐ Enable ☒ Disable
 Update Settings Restore previous settings

1.12

There will be no response from the Ruckus ZF 7372. This is because we have just changed the IP address of the Ruckus ZF 7372 to 172.27.80.50 (or 172.27.80.51, 172.27.80.52, etc.). Go back to the step 2.1 and restart. This time in the step 2.6, put in the IP address 172.27.80.10 followed by the Subnet mask 255.255.240.0. Also in the step 2.8, put in the IP address of 172.27.80.50 (or 172.27.80.51, 172.27.80.52, etc.).

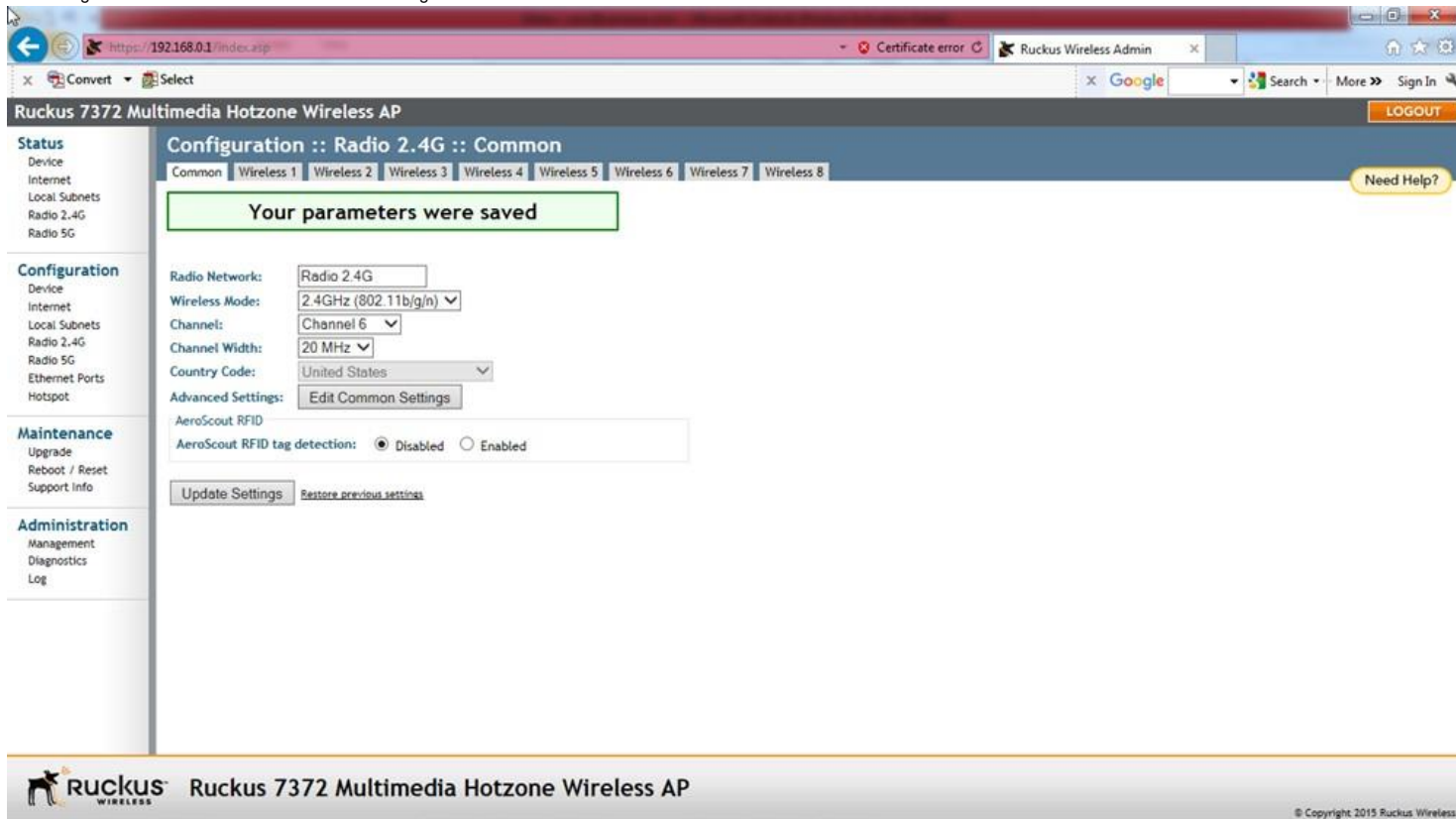
Entering into the Ruckus ZF 7372 as shown in the Step 2.10, click on the Radio 2.4G under Configuration. The following screen will appear. Click on SmartSelect and change it to any fixed channel 1 - 11. The SmartSelect is to be avoided as it can change the channel in midst of the sound transmission causing glitches and stutters in the audio. As for the channel to which the SmartSelect should change, it is best to select one that is not overlapping with other Ruckus ZF 7372 access points and also is least used in the surrounding environment. Use an app such as WiFi Analyser for Android or Apple phones to see the channel usage.

In our example, we select Channel 6. Next click on Update Settings button.



1.13

The settings will be saved with the confirmation message. Next click on Wireless 1.

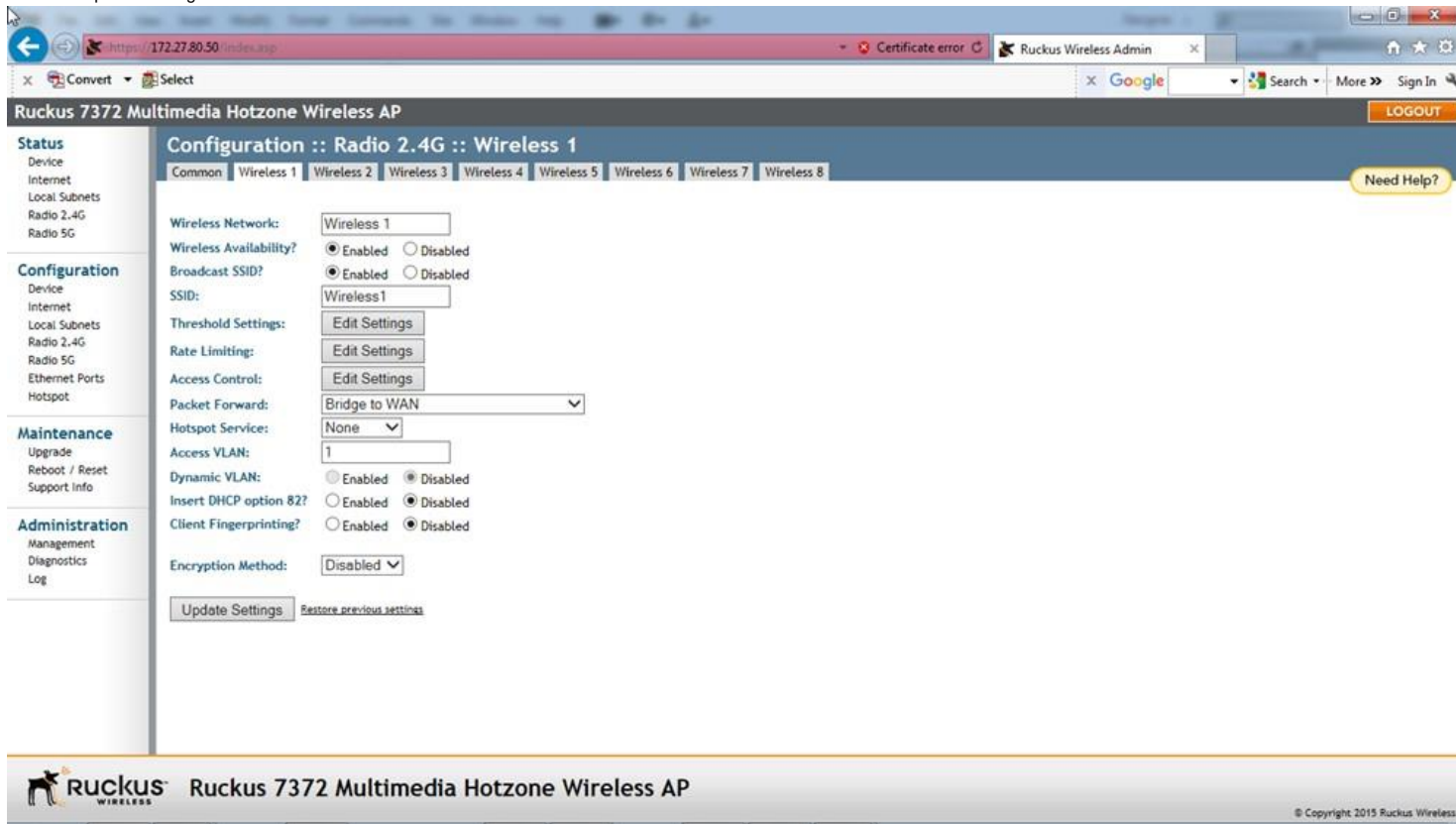


1.14

Click on Enable for Wireless Availability?. Change the values in the remaining fields as shown below. The SSID field, shown below as "Wireless 1", is the network name which will be displayed on the customer's smartphone. The customer will need to connect to the network in order to listen to the TVs. We recommend the SSID field be related to the actual location, such as "BWR Springfield OH".

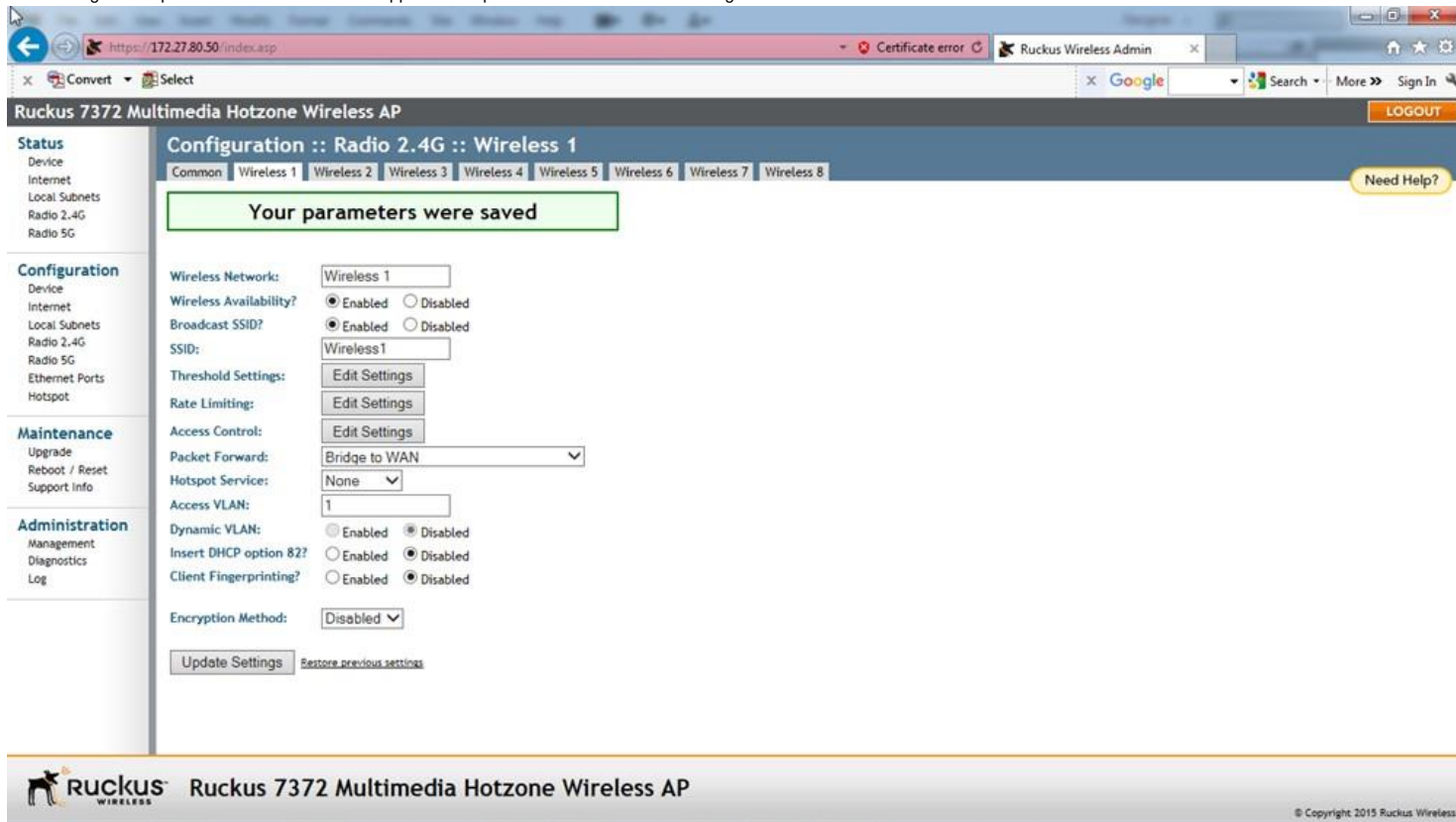
Use the same SSID setting for all of the Ruckus ZF 7372 access points. This will allow the customer's smartphones and tablets to roam between the access points without the need to change the Wi-Fi network. Note that the different SSID names will show up as different Wi-Fi networks on the smartphones and tablets.

Press the Update Settings button.



1.15

The message "Your parameters were saved" will appear. Next press the Radio 5G under Configuration.



1.16

Here we change the SmartSelect to any channel between 145 - 161 that is not overlapping with another access point and also is least used by the surrounding networks.

In our example, we selected Channel 161. Next click on Update Settings button.

The screenshot shows the Ruckus Wireless Admin interface for a Ruckus 7372 Multimedia Hotzone Wireless AP. The browser address bar shows <https://192.168.0.1/index.asp>. The page title is "Ruckus 7372 Multimedia Hotzone Wireless AP". The left sidebar contains navigation links: Status (Device, Internet, Local Subnets, Radio 2.4G, Radio 5G), Configuration (Device, Internet, Local Subnets, Radio 2.4G, Radio 5G, Ethernet Ports, Hotspot), Maintenance (Upgrade, Reboot / Reset, Support Info), and Administration (Management, Diagnostics, Log). The main content area is titled "Configuration :: Radio 5G :: Common". Below this title are tabs for "Common", "Wireless9", "Wireless10", "Wireless11", "Wireless12", "Wireless13", "Wireless14", "Wireless15", and "Wireless16". The "Common" tab is active. The configuration fields are: Radio Network: Radio 5G; Wireless Mode: 5GHz (802.11a/n); Channel: Channel 161; Channel Width: 40 MHz; Country Code: United States. There is an "Advanced Settings" link and an "Edit Common Settings" button. At the bottom of the configuration section are "Update Settings" and "Restore previous settings" buttons. A "Need Help?" link is in the top right corner. The footer shows the Ruckus logo and "Ruckus 7372 Multimedia Hotzone Wireless AP" with a copyright notice for 2015.

1.17

The settings will be saved with the confirmation message. Next click on Wireless9.

This screenshot shows the same Ruckus Wireless Admin interface after the settings have been saved. A green box with the text "Your parameters were saved" is prominently displayed at the top of the configuration area. The configuration fields remain the same: Radio Network: Radio 5G; Wireless Mode: 5GHz (802.11a/n); Channel: Channel 161; Channel Width: 40 MHz; Country Code: United States. The "Wireless9" tab is now selected, and the "Common" tab is no longer active. The "Update Settings" and "Restore previous settings" buttons are still present. The footer remains the same with the Ruckus logo and product name.

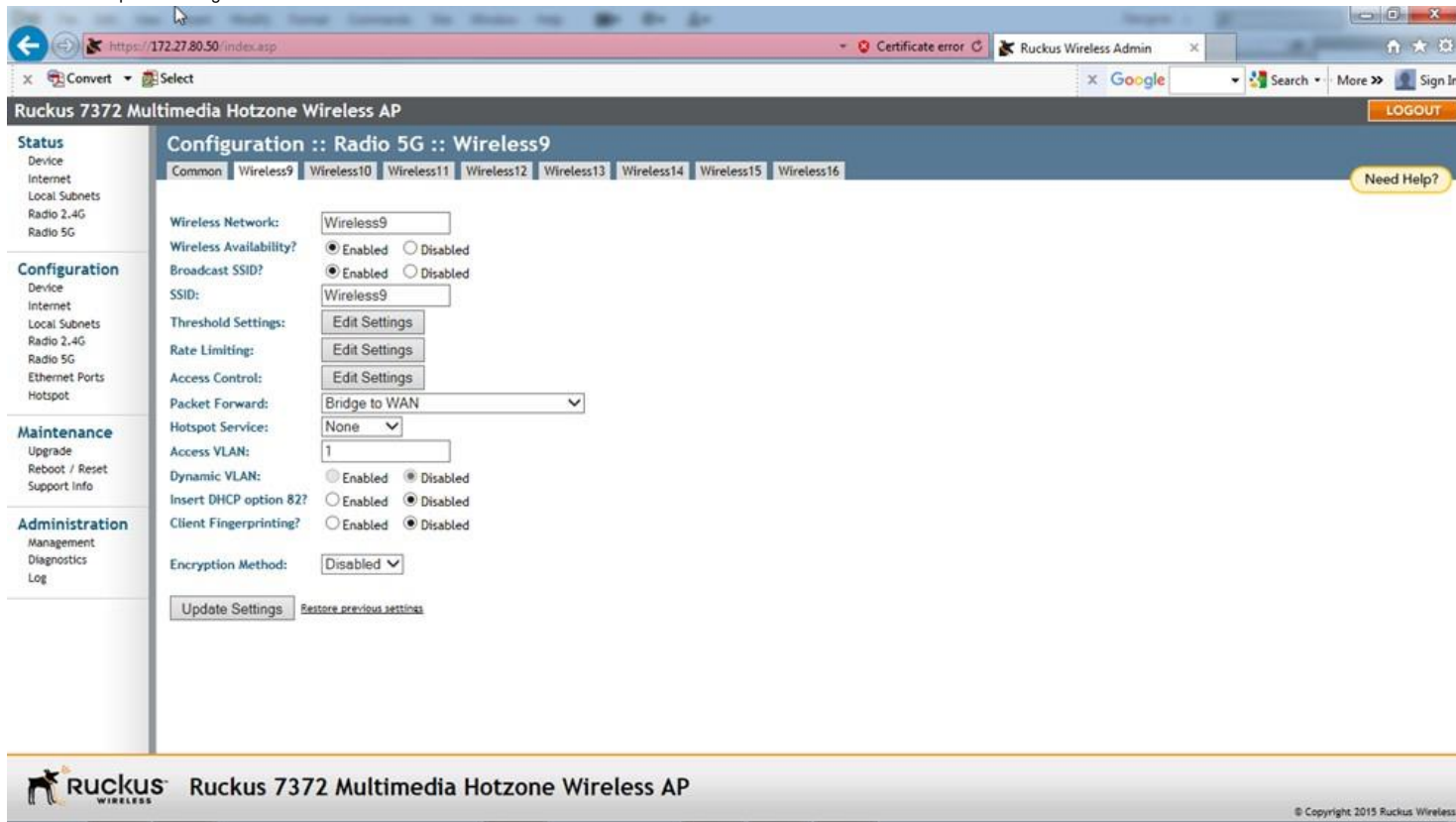
1.18

Click on Enable for Wireless Availability?. Change the values in the remaining fields as shown below. The SSID field, shown below as "Wireless9", is the network name which will be displayed on the customer's smartphone or tablet. The customer will need to connect to the network in order to listen to the TVs. We recommend the SSID field be related to the actual location, such as "BWR Springfield OH".

Use the same SSID setting for all of the Ruckus ZF 7372 access points. This will allow the customer's smartphones and tablets to roam between the access points without the need to change the Wi-Fi network. Note that the different SSID names will show up as different Wi-Fi networks on the smartphones and tablets.

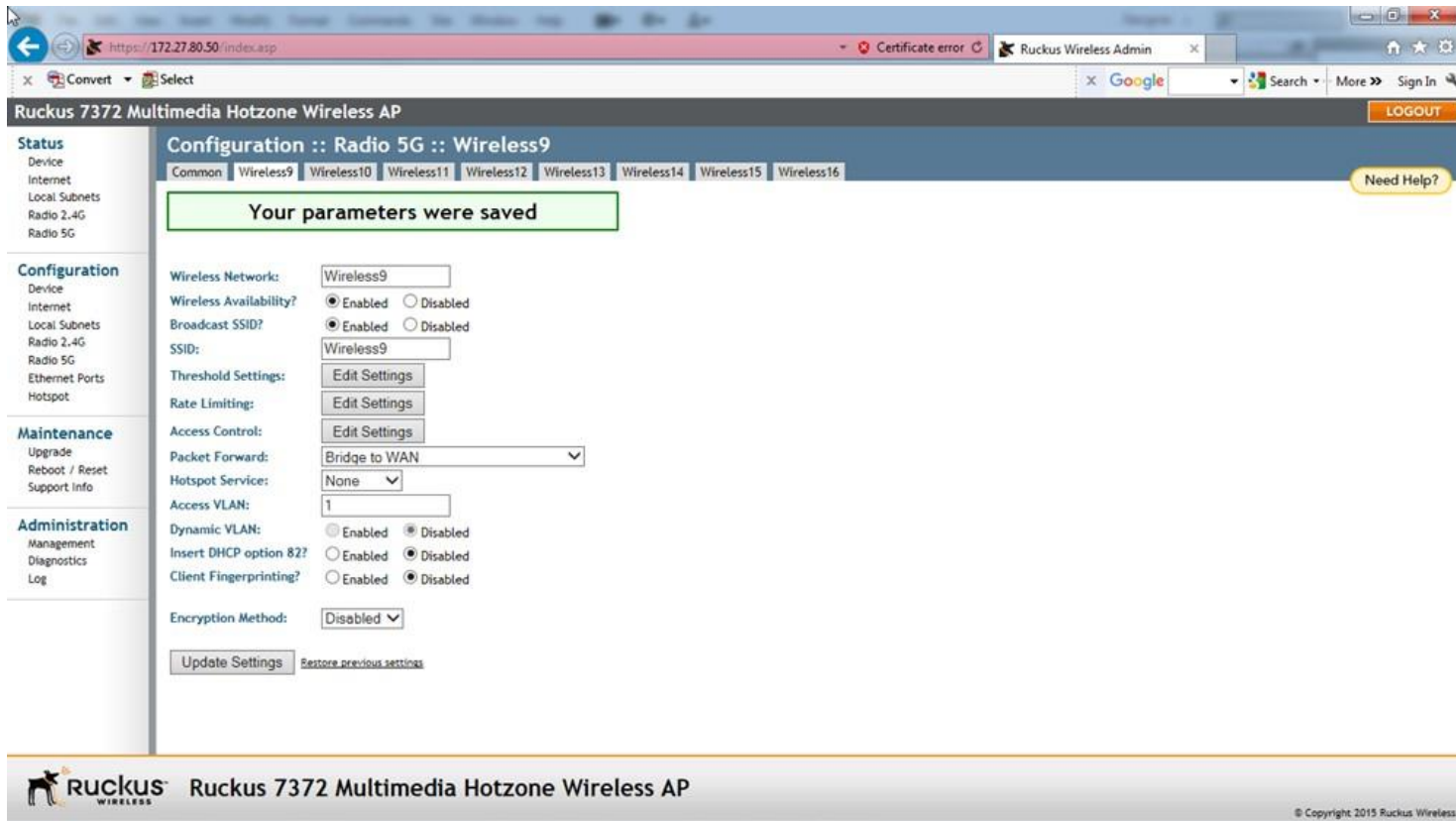
The same SSID setting can be used for the Wireless 1 and Wireless 9, in which case the 2.4G or 5G frequency assignment will be automatically made by the smartphone or tablet. By setting the SSID field different, you can also force the smartphones or tablets to connect into a certain frequency only.

Next click on Update Settings button.



1.19

The message "Your parameters were saved" will appear. Next press the LOGOUT button on the right upper corner to exit.

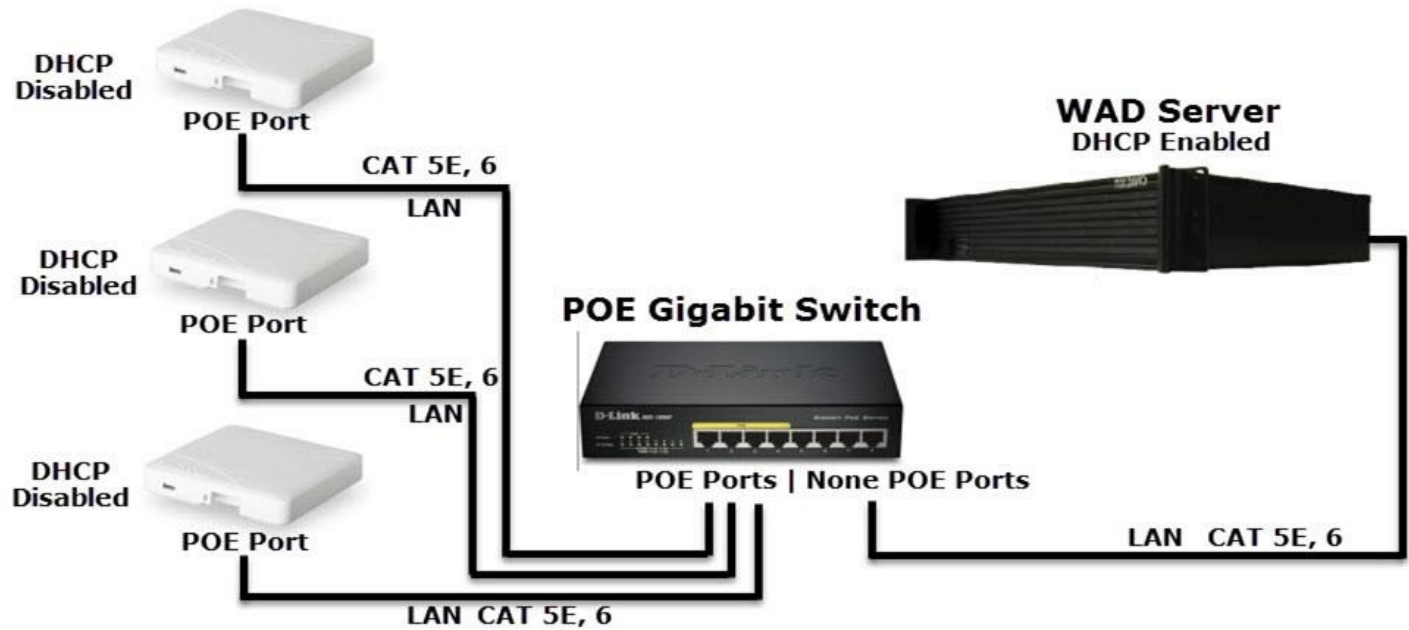


The Ruckus ZF 7372 is now ready for use. Connect the next Ruckus ZF 7372 and follow the steps starting from Step 1.1.

1.20

When all of the Ruckus ZF 7372 are setup, connect the access points to the WAD server as shown below..

Ruckus ZF 7372 Access Points



2. How to setup the multiple Ruckus ZF 7372 for WAD with its DHCP server disabled

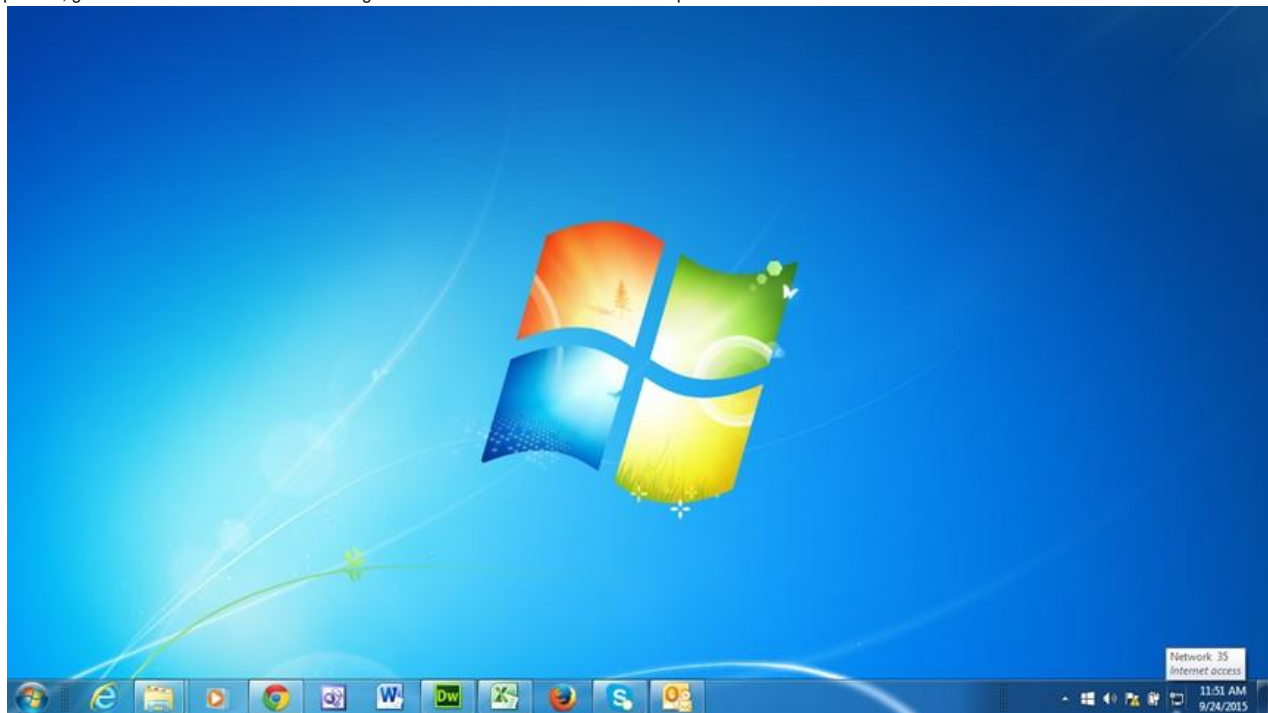
Following the Quick Setup Guide that comes in the package, connect each of the Ruckus ZF 7372, one at a time, to a laptop or a PC. We assume that each of the Ruckus ZF 7372 access point has the factory default settings. If not, please reset the Ruckus ZF 7372 access point to the factory default.

Follow the instruction in Part I - [1. How to Setup Ruckus ZF 7372 with its DHCP server enabled] to setup the first Ruckus ZF 7372 access point.

For the remaining Ruckus ZF 7372 access points, follow the steps below.

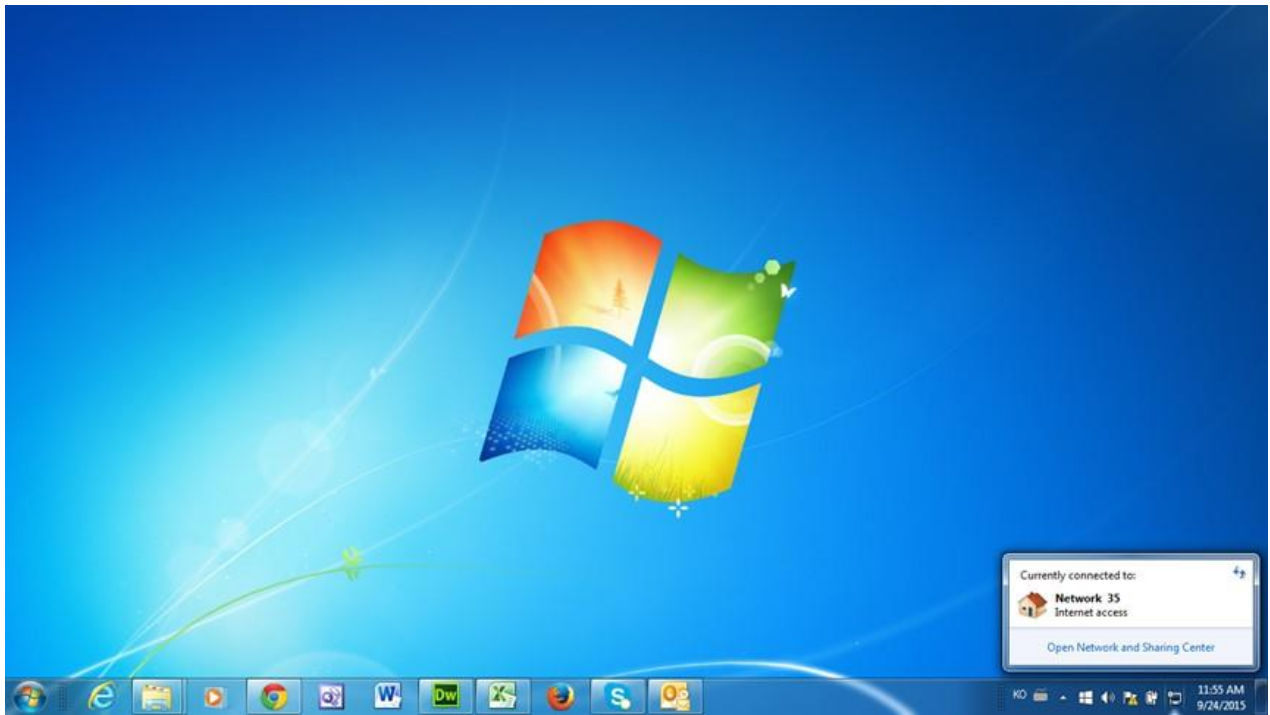
2.1

In your laptop or PC, go to the Internet Access icon in the right bottom corner of the Windows desktop.



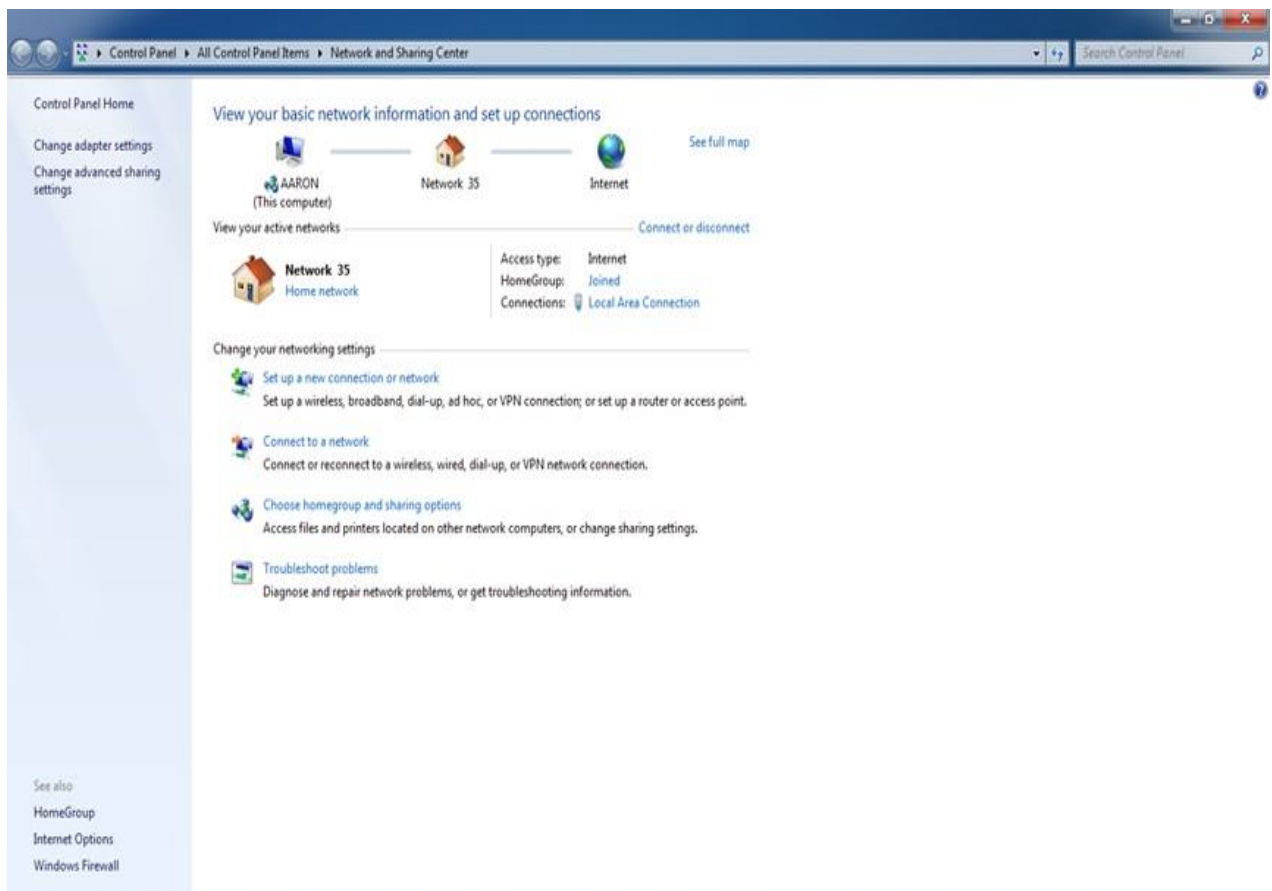
2.2

Click on the Internet Access icon and a pop-up display will appear.



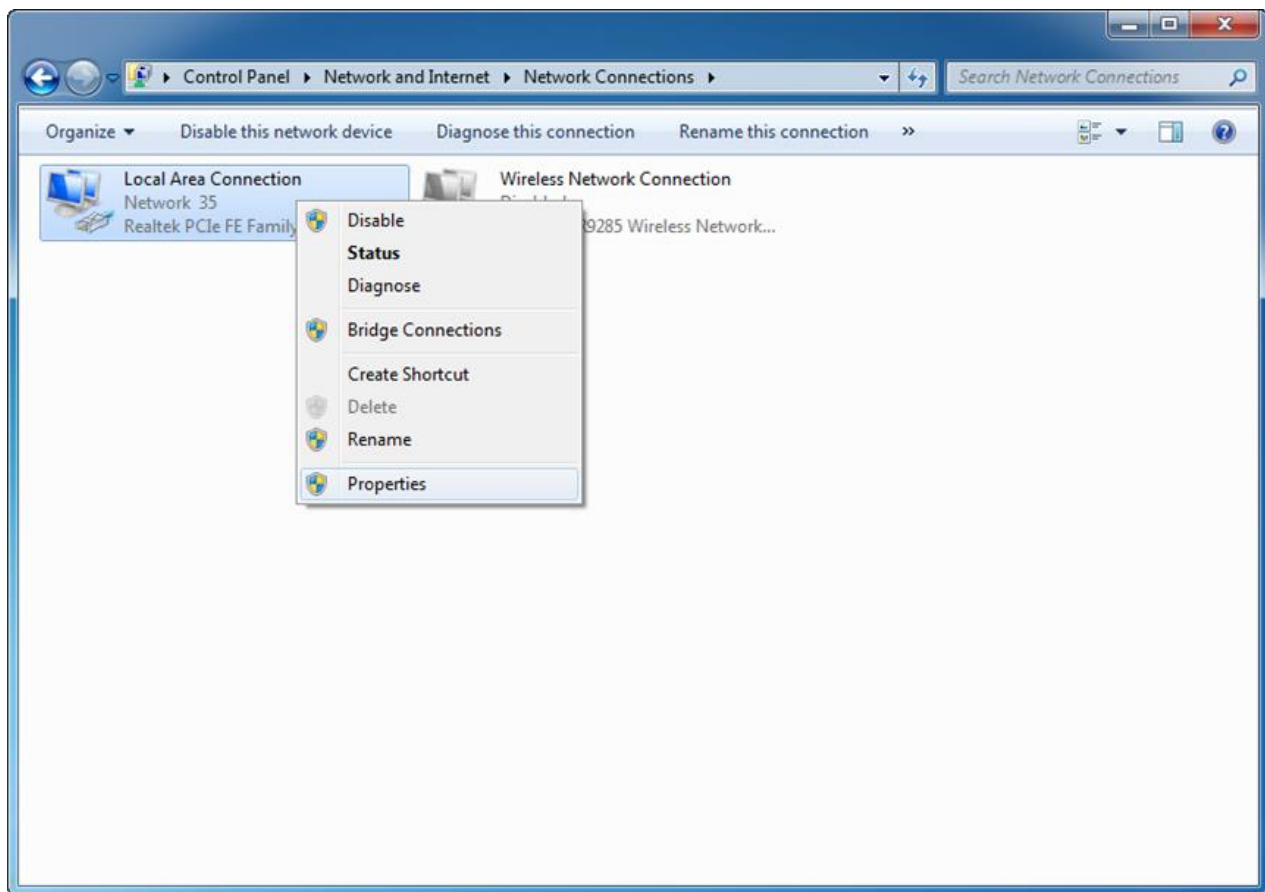
2.3

Click on the Open Network and Sharing Center. The following pop-up display will appear.



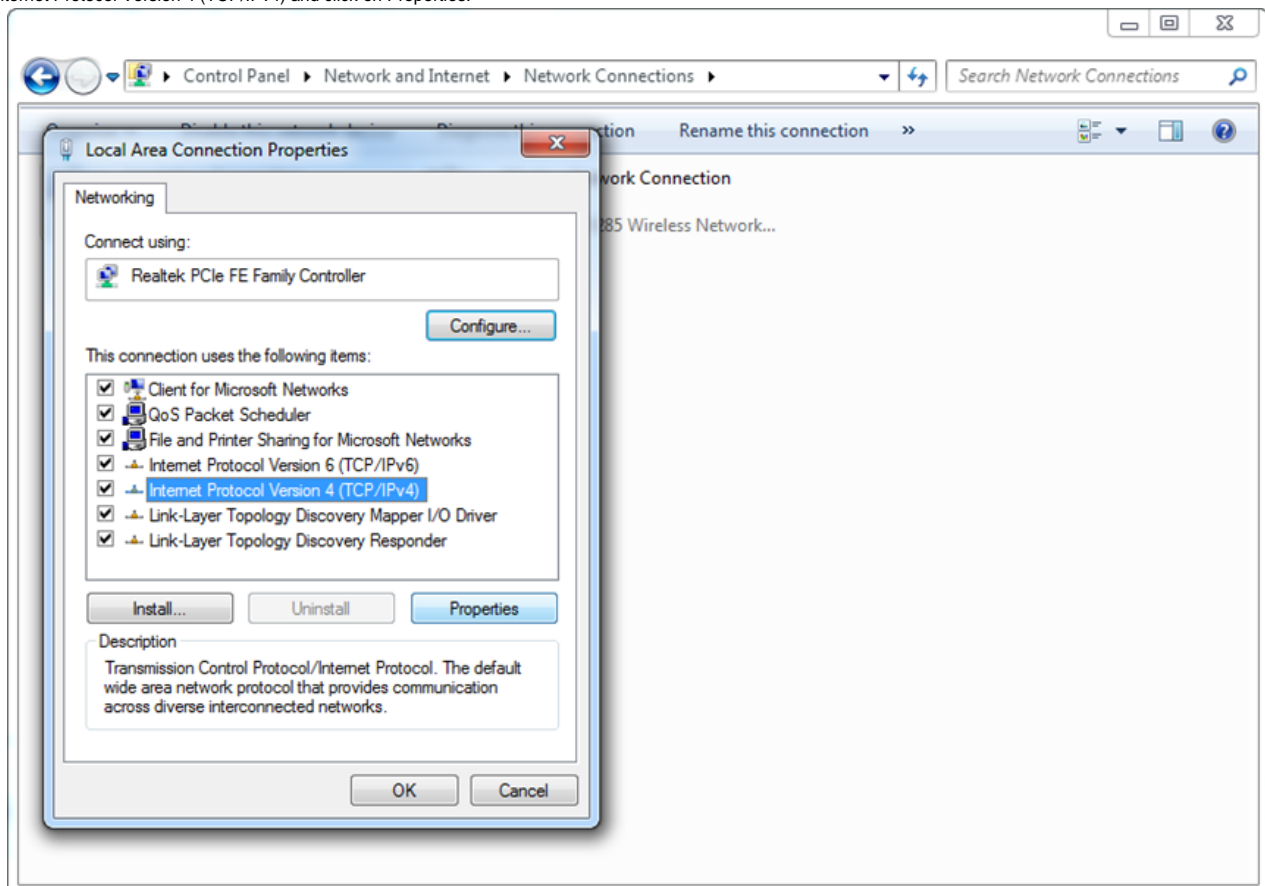
2.4

Click on the Change adapter settings. The following pop-up display will appear. Right-click on the Local Area Connection and select Properties.



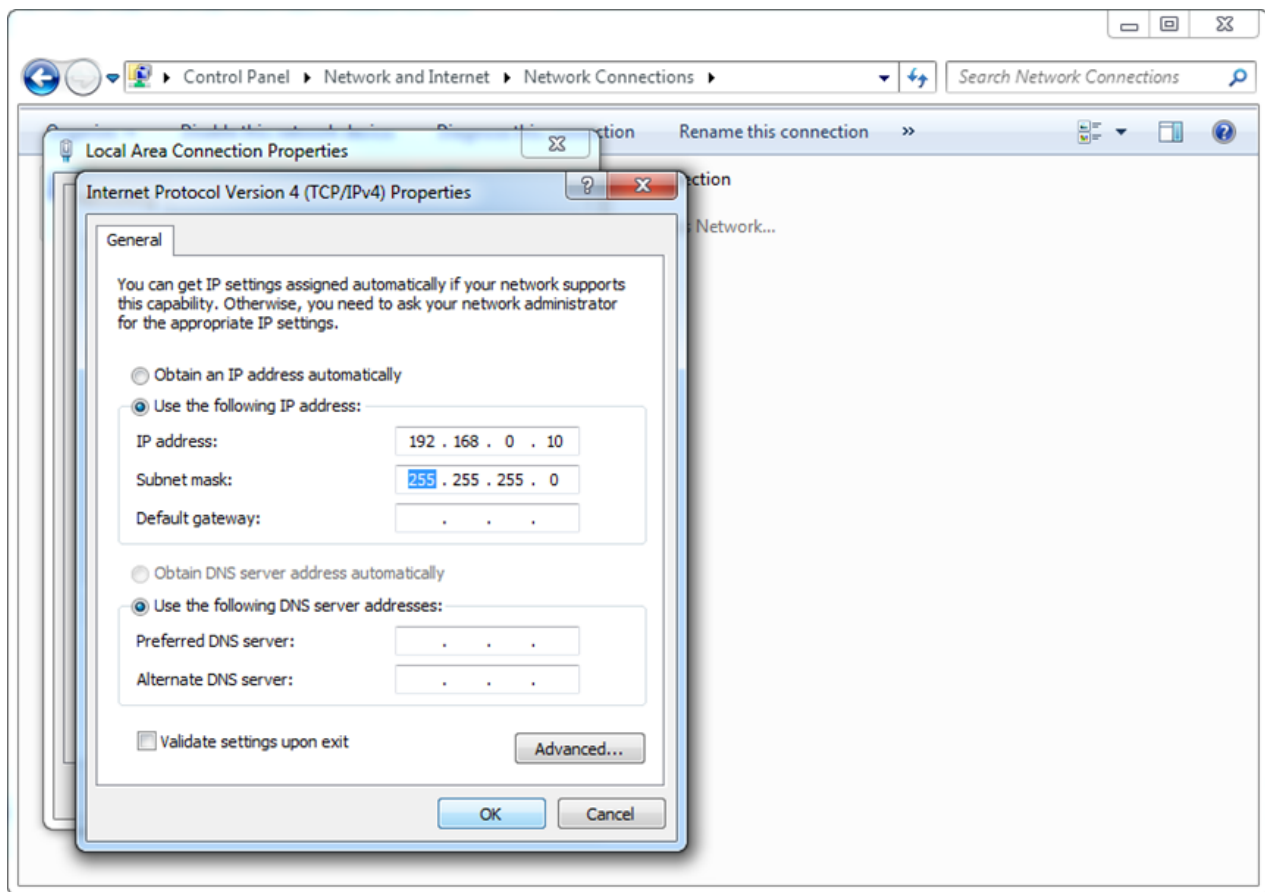
2.5

Select the Internet Protocol Version 4 (TCP/IPv4) and click on Properties.



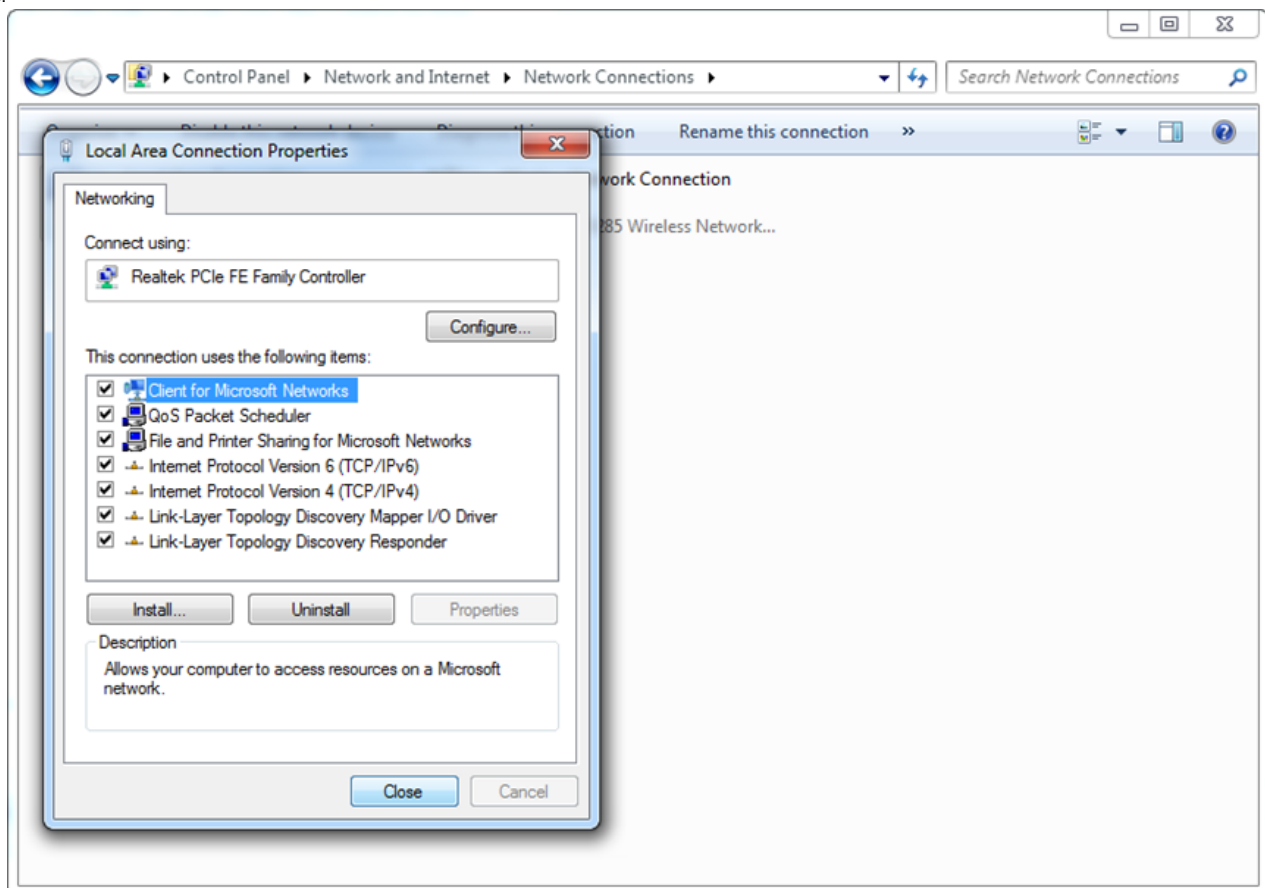
2.6

Select Use the following IP address and input 192.168.0.10 followed by the Subnet mask 255.255.255.0. Press OK.



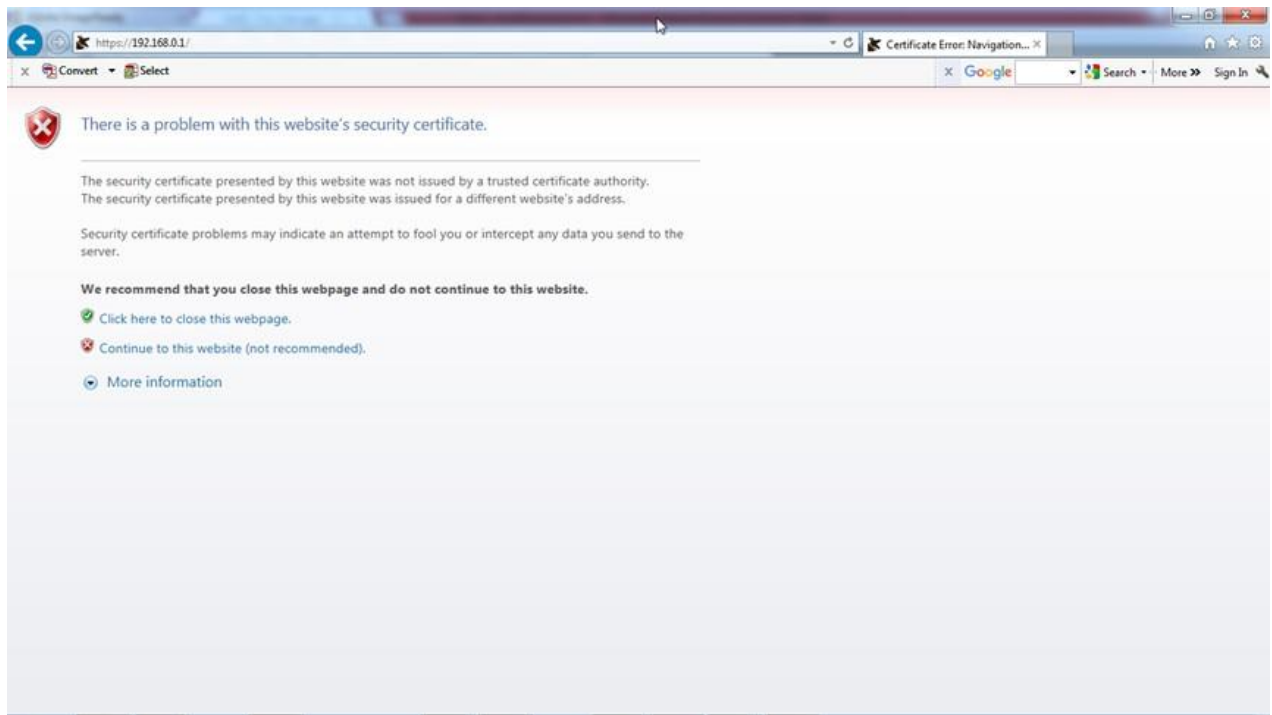
2.7

Press Close.



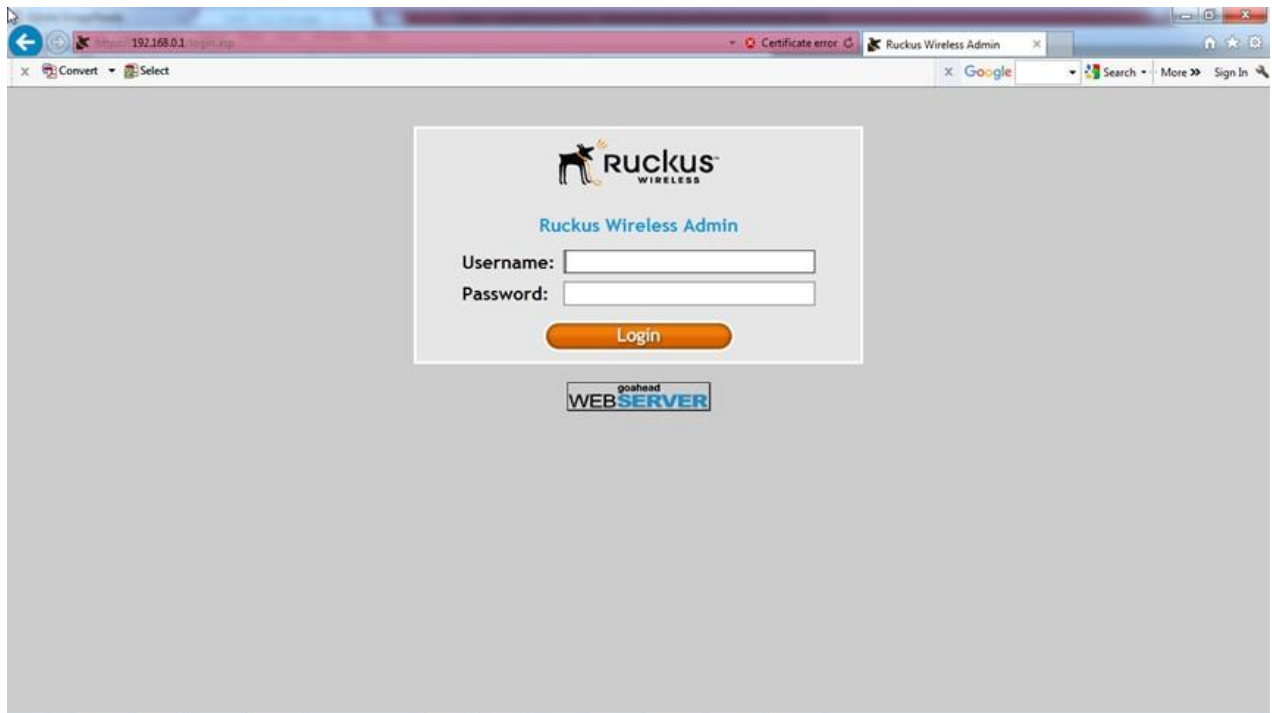
2.8

Next open the Internet Explorer and input into the URL field 192.168.0.1. You will see the following message.



2.9

Click on Continue to the website (not recommended).



2.10

Input the Username: super and Password: sp-admin to enter the Ruckus Wireless Admin. Select Internet under Configuration.

Ruckus 7372 Multimedia Hotzone Wireless AP

Status :: Device

Device Name: RuckusAP
 Device Location:
 GPS Coordinates:
 USB Software vid-pid:
 USB Software Version:
 MAC Address: 84:18:3A:0E:A9:F0
 Serial Number: 191402000100
 Software Version: 9.6.1.0.15
 Uptime: 22 mins 56 secs
 Current Time (GMT): Sat Sep 19 19:27:50 2015

Port	Interface	802.1X	Logical Link	Physical Link	Label
0	eth0	None	Down	Down	10/100
1	eth1	None	Up	Up 100Mbps full	10/100/1000 PoE

Ruckus 7372 Multimedia Hotzone Wireless AP

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2.11

Fill in the values as shown below for the second Ruckus ZF 7372 access point.

For the remaining Ruckus ZF 7372 access points, fill in the values as shown below except for the IPv4 Address which changes to 192.168.0.51, 192.168.0.52, etc.

Press the Update Settings button.

Ruckus 7372 Multimedia Hotzone Wireless AP

Configuration :: Internet

NTP Server: ntp.ruckuswireless.com
 Management VLAN: 1 (Need to reboot for change to take effect)
 IPv4 Connection Type: ☐ DHCP ☒ Static IP ☐ PPPoE
 Internet Connection Settings
 IPv4 Address: 192.168.0.50
 IPv4 Subnet Mask: 255.255.255.0
 IPv4 Gateway: 192.168.0.1
 IPv4 DNS Mode: ☒ Auto ☐ Manual
 IPv6 Connection Type: ☒ Auto Configuration ☐ Static IP
 IPv6 Primary DNS Server:
 IPv6 Secondary DNS Server:
 L2TP Connection
 L2TP Connection: ☐ Enable ☒ Disable
 Update Settings Restore previous settings

Ruckus 7372 Multimedia Hotzone Wireless AP

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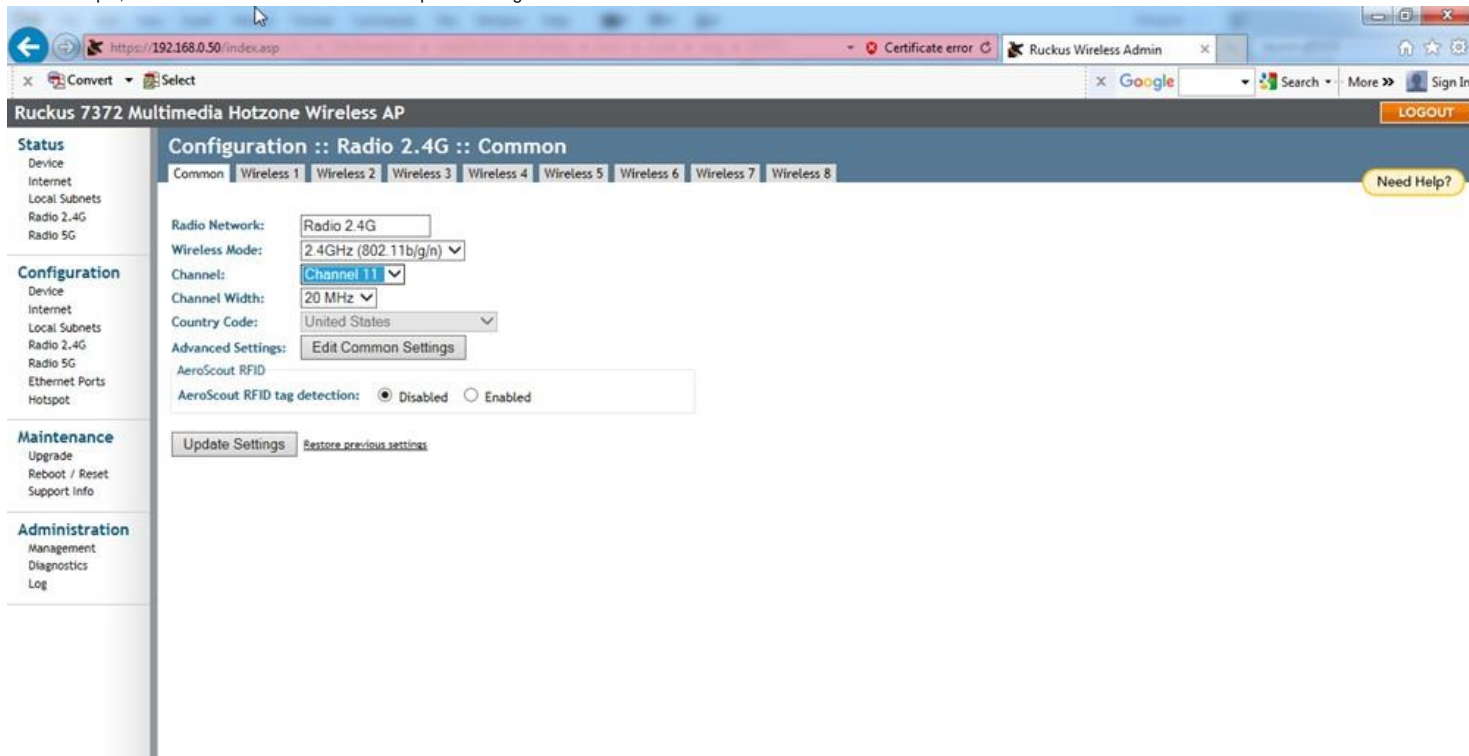
2.12

There will be no response from the Ruckus ZF 7372. This is because we have just changed the IP address of the Ruckus ZF 7372 to 192.168.0.50 (or 192.168.0.51, 192.168.0.52, etc.).

Disconnect the POE LAN cable from the Ruckus ZF 7372 to power it off. Reconnect the cable to the Ruckus ZF 7372. Go back to the Step 2.8 to reconnect to the Ruckus ZF 7372. This time, put in the IP address 192.168.0.50 (or 192.168.0.51, 192.168.0.52, etc.).

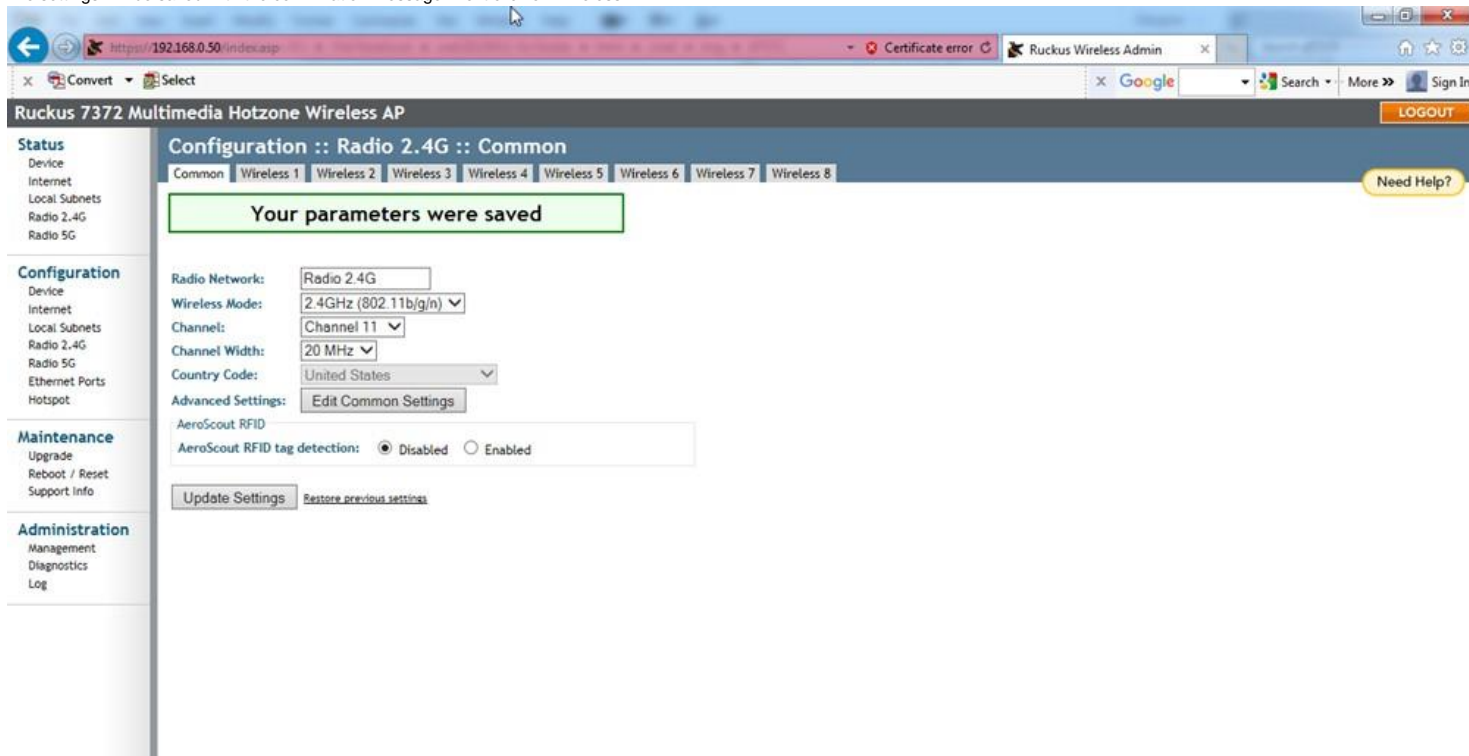
Entering into the Ruckus ZF 7372 as shown in the Step 2.10, click on the Radio 2.4G under Configuration. The following screen will appear. Click on SmartSelect and change it to any fixed channel 1 - 11. The SmartSelect is to be avoided as it can change the channel in midst of the sound transmission causing glitches and stutters in the audio. Change the SmartSelect to a fixed channel that is not overlapping with other Ruckus ZF 7372 access points and also is least used in the surrounding environment. Use an app such as WiFi Analyser for Android or Apple phones to see the channel usage.

In our example, we select Channel 11. Next click on Update Settings button.



2.13

The settings will be saved with the confirmation message. Next click on Wireless 1.



2.14

Click on Enable for Wireless Availability?. Change the values in the remaining fields as shown below.

Use the same SSID setting for all of the Ruckus ZF 7372 access points. This will allow the customer's smartphones and tablets to roam between the access points without the need to change the Wi-Fi network. Note that the different SSID names will show up as different Wi-Fi networks on the smartphones and tablets.

The SSID field, shown below as "Wireless 1", is the network name which will be displayed on the customer's smartphone. It should be same as the first Ruckus ZF 7372 access point and all other Ruckus ZF 7372 access points. Since the customer will connect to the network in order to listen to the TVs, we recommend the SSID field be more related to the actual location, such as "BWR Springfield OH".

Press the Update Settings button.

The screenshot shows the Ruckus 7372 Multimedia Hotzone Wireless AP configuration interface. The browser address bar shows <https://192.168.0.50/index.asp>. The page title is "Ruckus 7372 Multimedia Hotzone Wireless AP". The left sidebar contains navigation links: Status (Device, Internet, Local Subnets, Radio 2.4G, Radio 5G), Configuration (Device, Internet, Local Subnets, Radio 2.4G, Radio 5G, Ethernet Ports, Hotspot), Maintenance (Upgrade, Reboot / Reset, Support Info), and Administration (Management, Diagnostics, Log). The main content area is titled "Configuration :: Radio 2.4G :: Wireless 1" and has tabs for "Common", "Wireless 1", "Wireless 2", "Wireless 3", "Wireless 4", "Wireless 5", "Wireless 6", "Wireless 7", and "Wireless 8". The "Wireless 1" tab is active. The settings for "Wireless 1" are: Wireless Network: Wireless 1, Wireless Availability: ☒ Enabled ☐ Disabled, Broadcast SSID: ☒ Enabled ☐ Disabled, SSID: Wireless1, Threshold Settings: Edit Settings, Rate Limiting: Edit Settings, Access Control: Edit Settings, Packet Forward: Bridge to WAN, Hotspot Service: None, Access VLAN: 1, Dynamic VLAN: ☐ Enabled ☒ Disabled, Insert DHCP option 82: ☐ Enabled ☒ Disabled, Client Fingerprinting: ☐ Enabled ☒ Disabled, Encryption Method: Disabled. At the bottom of the settings are buttons for "Update Settings" and "Restore previous settings".

2.15

The message "Your parameters were saved" will appear. Next press the Radio 5G under Configuration.

The screenshot shows the same Ruckus 7372 Multimedia Hotzone Wireless AP configuration interface as before, but with a green box at the top of the main content area containing the message "Your parameters were saved". The settings for "Wireless 1" remain the same as in the previous screenshot.

2.16

Here we change the SmartSelect to any channel between 145 - 161 that is not overlapping with another access point and also is least used by the surrounding networks.

In our example, we selected Channel 149. Next click on Update Settings button.

The screenshot shows the Ruckus 7372 Multimedia Hotzone Wireless AP configuration page. The browser address bar shows <https://192.168.0.50/index.asp>. The page title is "Ruckus 7372 Multimedia Hotzone Wireless AP". The left sidebar contains navigation links: Status (Device, Internet, Local Subnets, Radio 2.4G, Radio 5G), Configuration (Device, Internet, Local Subnets, Radio 2.4G, Radio 5G, Ethernet Ports, Hotspot), Maintenance (Upgrade, Reboot / Reset, Support Info), and Administration (Management, Diagnostics, Log). The main content area is titled "Configuration :: Radio 5G :: Common". It features a tabbed interface with "Common" selected, and other tabs for "Wireless9" through "Wireless16". The settings are as follows: Radio Network: Radio 5G; Wireless Mode: 5GHz (802.11a/n); Channel: Channel 149; Channel Width: 40 MHz; Country Code: United States. There are buttons for "Update Settings" and "Restore previous settings". A "Need Help?" link is in the top right. The footer shows the Ruckus logo and "Ruckus 7372 Multimedia Hotzone Wireless AP" with a copyright notice for 2015.

2.17

The settings will be saved with the confirmation message. Next click on Wireless9.

This screenshot shows the same configuration page as the previous one, but with a green confirmation message box at the top that reads "Your parameters were saved". The settings for Radio Network, Wireless Mode, Channel, Channel Width, and Country Code remain the same. The "Update Settings" button is still visible. The rest of the page layout, including the sidebar and footer, is identical to the previous screenshot.

2.18

Click on Enable for Wireless Availability?. Change the values in the remaining fields as shown below. The SSID field, shown below as "Wireless9", is the network name which will be displayed on the customer's smartphone or tablet. The customer will need to connect to the network in order to listen to the TVs. We recommend the SSID field be related to the actual location, such as "BWR Springfield OH".

Use the same SSID setting for all of the Ruckus ZF 7372 access points. This will allow the customer's smartphones and tablets to roam between the access points without the need to change the Wi-Fi network. Note that the different SSID names will show up as different Wi-Fi networks on the smartphones and tablets.

The same SSID setting can be used for the Wireless 1 and Wireless 9, in which case the 2.4G or 5G frequency assignment will be automatically made by the smartphone or tablet. By setting the SSID field different, you can also force the smartphones or tablets to connect into a certain frequency only.

Next click on Update Settings button.

The screenshot shows the Ruckus 7372 Multimedia Hotzone Wireless AP configuration page. The browser address bar shows <https://192.168.0.50/index.asp>. The page title is "Ruckus 7372 Multimedia Hotzone Wireless AP". The left sidebar contains navigation links: Status, Configuration, Maintenance, and Administration. The main content area is titled "Configuration :: Radio 5G :: Wireless9". It includes tabs for Common, Wireless9, Wireless10, Wireless11, Wireless12, Wireless13, Wireless14, Wireless15, and Wireless16. The settings for Wireless9 are as follows:

- Wireless Network: Wireless9
- Wireless Availability? ☒ Enabled ☐ Disabled
- Broadcast SSID? ☒ Enabled ☐ Disabled
- SSID: Wireless9
- Threshold Settings: Edit Settings
- Rate Limiting: Edit Settings
- Access Control: Edit Settings
- Packet Forward: Bridge to WAN
- Hotspot Service: None
- Access VLAN: 1
- Dynamic VLAN: ☐ Enabled ☒ Disabled
- Insert DHCP option 82? ☐ Enabled ☒ Disabled
- Client Fingerprinting? ☐ Enabled ☒ Disabled
- Encryption Method: Disabled

At the bottom, there are buttons for "Update Settings" and "Restore previous settings".

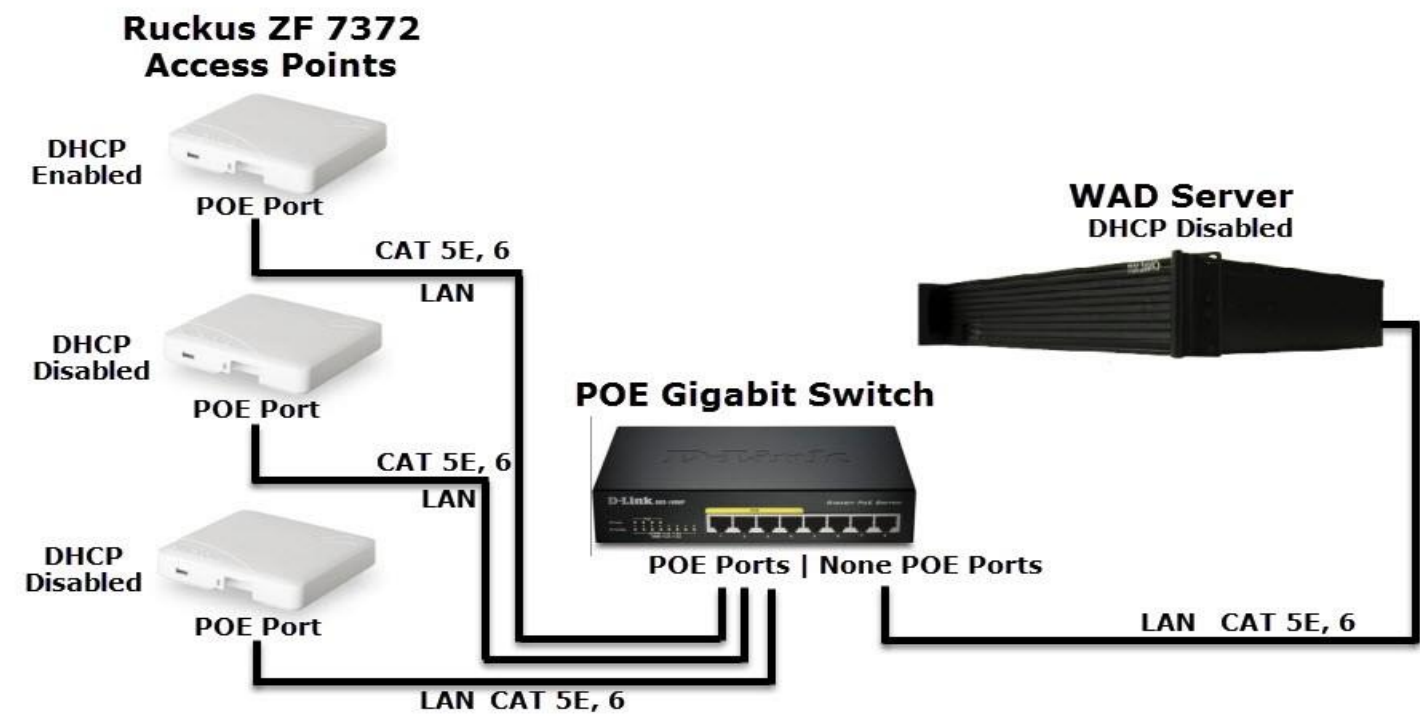
2.19

The message "Your parameters were saved" will appear. Next press the LOGOUT button on the right upper corner to exit.

The screenshot shows the same Ruckus 7372 Multimedia Hotzone Wireless AP configuration page, but with a green box at the top of the main content area containing the message "Your parameters were saved". The settings for Wireless9 remain the same as in the previous screenshot.

The Ruckus ZF 7372 is now ready for use. Connect the next Ruckus ZF 7372 and follow the steps starting from Step 2.1. 2.20

When all of the Ruckus ZF 7372 are setup, connect the access points to the WAD server as shown below..



END