



# How to Disable Directed Multicast on an Unleashed Master

Version: 200.8

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# Disable Directed Multicast

Directed Multicast Service (DMS), is a standard that allows client device(s) to request the AP to transmit the required multicast packet as unicast frames. One of the many benefits of this procedure is the ability for client devices to take greater advantage of existing power saving abilities. However, there are manufacturers that do not take advantage of the 802.11v standard, so this presentation will explain the step-by-step procedure of disabling this standard for a custom WLAN on the Unleashed Master.

# Agenda

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- Getting Started
- Step by Step CLI Commands for each WLAN
- Verify Changes with Step by Step CLI Commands

# Getting Started

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## Gather the Following Information

Please gather the Username for the Unleashed Master.

Please be prepared with the Password for the Unleashed Master.

Please collect the IP Address of the Unleashed Master.

Provide the ESSID that will be modified.

# Getting Started

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## Software Requirement is a Terminal Emulator

PuTTY is an open source terminal emulator app that acts as a client for the following: SSH, Telnet, rlogin, Serial ports as well as TCP computing protocols.

PuTTY is free to download. The latest version of software can be found at this website. <https://www.chiark.greenend.org.uk/~sgtatham/putty/latest.html>

Download the file under “Alternative binary files” on the site, please select the “64-bit:” version of the executable file called “putty.exe”.

# Step by Step CLI Commands for each WLAN

## PuTTY Configuration Interface

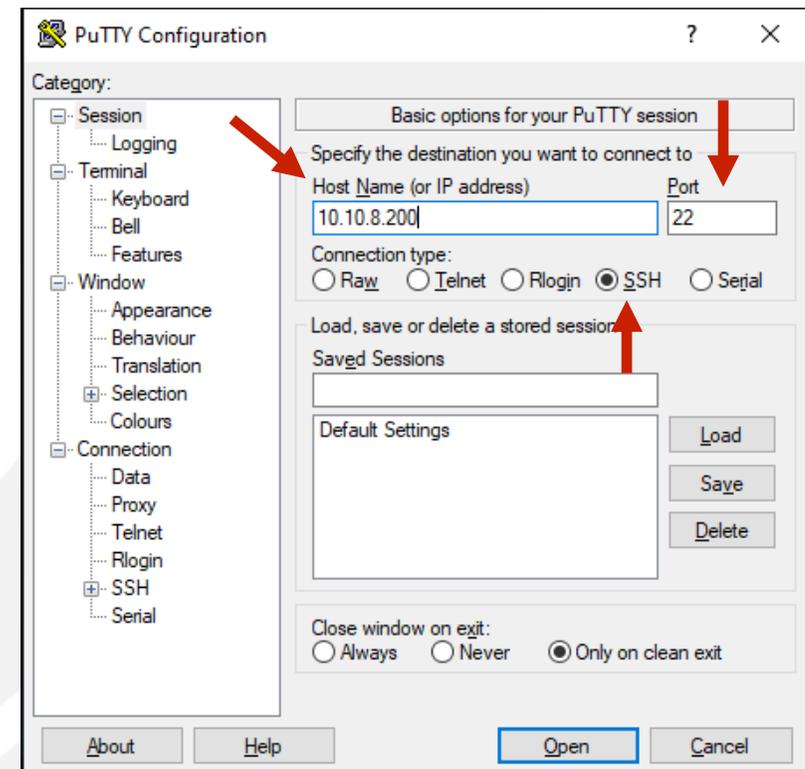
Launch putty.exe

Enter in the IP Address of the Unleashed Master.

Ensure that "Port" field has the value of "22" filled in.

Ensure the Connection type is "SSH".

Then click on "Open" to launch the terminal interface.



# Step by Step CLI Commands for each WLAN

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## PuTTY Terminal Interface

Type in "admin" and press enter.

You will receive an acknowledgement of "Please login:" prompt.



```
10.10.8.200 - PuTTY
login as: admin
Please login:
```

The screenshot shows a PuTTY terminal window with a black background and white text. The title bar reads "10.10.8.200 - PuTTY". The terminal content shows the prompt "login as: admin" followed by a green cursor. Below it, the prompt "Please login:" is displayed. Two red arrows point to the end of each line, indicating where the user should type.

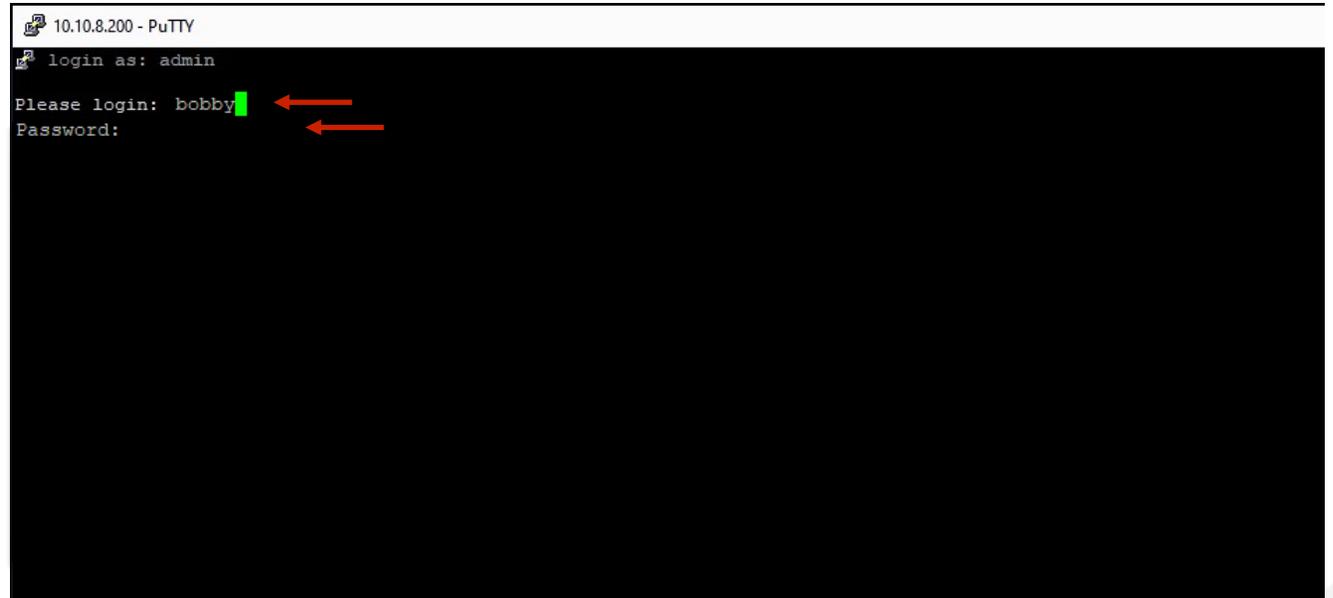
# Step by Step CLI Commands for each WLAN

---

## PuTTY Terminal Interface

Type in the “username” and press enter.

You will receive an acknowledgement of “Password:” prompt.



```
10.10.8.200 - PuTTY
login as: admin
Please login: bobby
Password:
```

The screenshot shows a PuTTY terminal window with a black background and white text. The title bar reads "10.10.8.200 - PuTTY". The terminal output shows a login prompt "login as: admin" followed by "Please login: bobby" where "bobby" is followed by a green cursor. Below that is the "Password:" prompt. Two red arrows point to the green cursor and the "Password:" prompt respectively.

# Step by Step CLI Commands for each WLAN

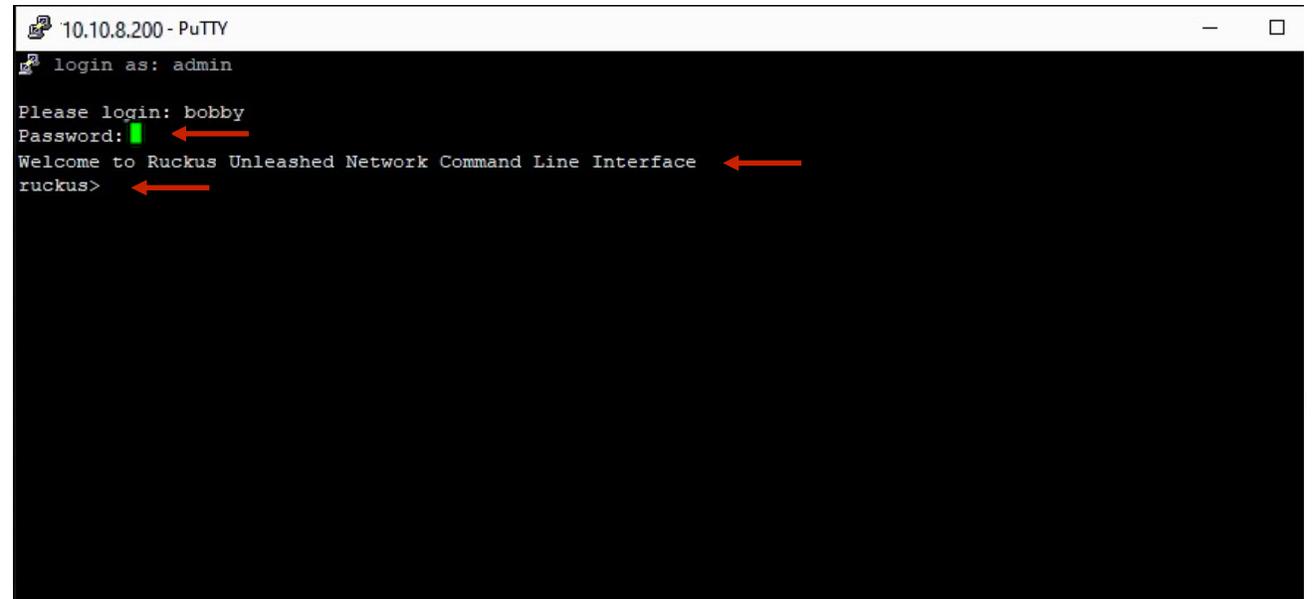
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## PuTTY Terminal Interface

Type in the “password” and hit enter.

Please note you will not see your password as it’s being typed out.

You will be greeted to “Welcome to Ruckus Unleashed Network Command Line Interface” and the next “ruckus>” command prompt.



```
10.10.8.200 - PuTTY
login as: admin
Please login: bobby
Password: ██████████
Welcome to Ruckus Unleashed Network Command Line Interface
ruckus>
```

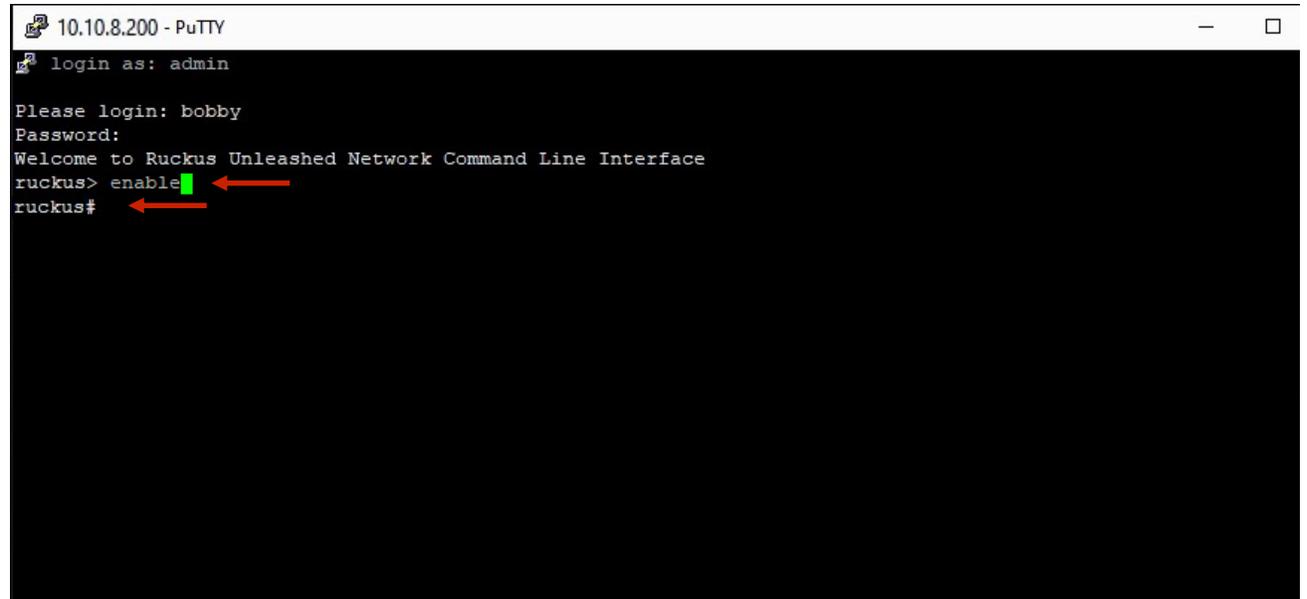
# Step by Step CLI Commands for each WLAN

---

## PuTTY Terminal Interface

Type in “enable” and press enter.

You will receive an acknowledgement of “ruckus#” prompt.



```
10.10.8.200 - PuTTY
login as: admin
Please login: bobby
Password:
Welcome to Ruckus Unleashed Network Command Line Interface
ruckus> enable
ruckus#
```

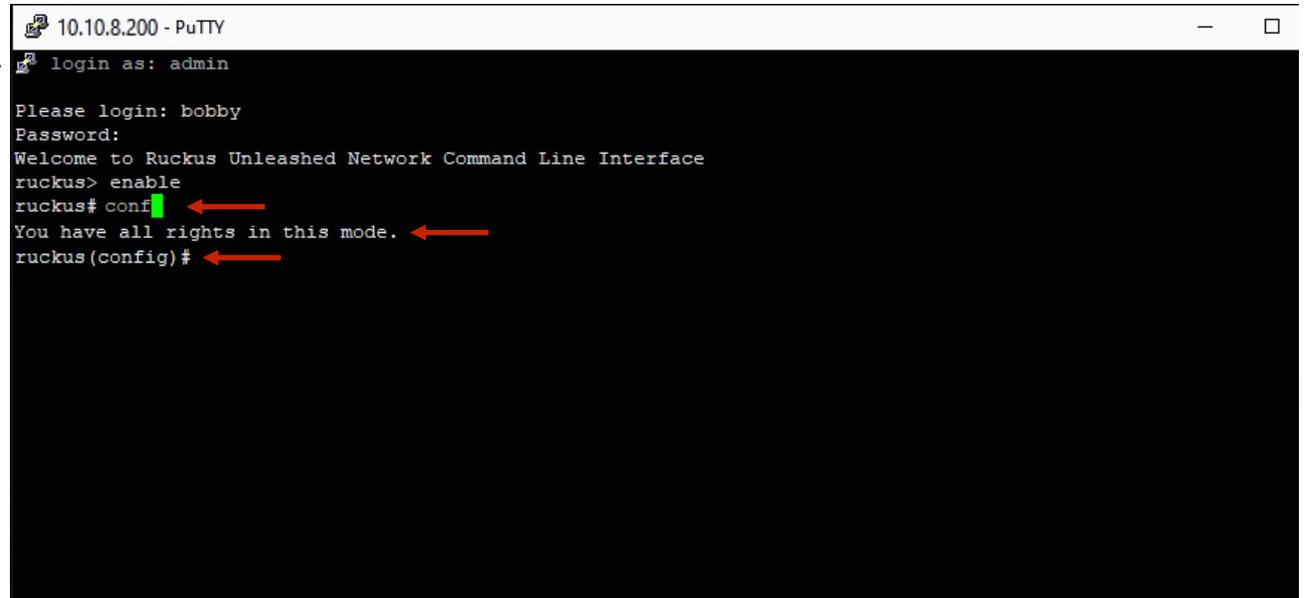
# Step by Step CLI Commands for each WLAN

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## PuTTY Terminal Interface

Type in "conf" and press enter.

You will receive an acknowledgement of “You have all rights in this mode” with the next “ruckus (config) #” command prompt.



```
10.10.8.200 - PuTTY
login as: admin
Please login: bobby
Password:
Welcome to Ruckus Unleashed Network Command Line Interface
ruckus> enable
ruckus# conf ←
You have all rights in this mode. ←
ruckus(config)# ←
```

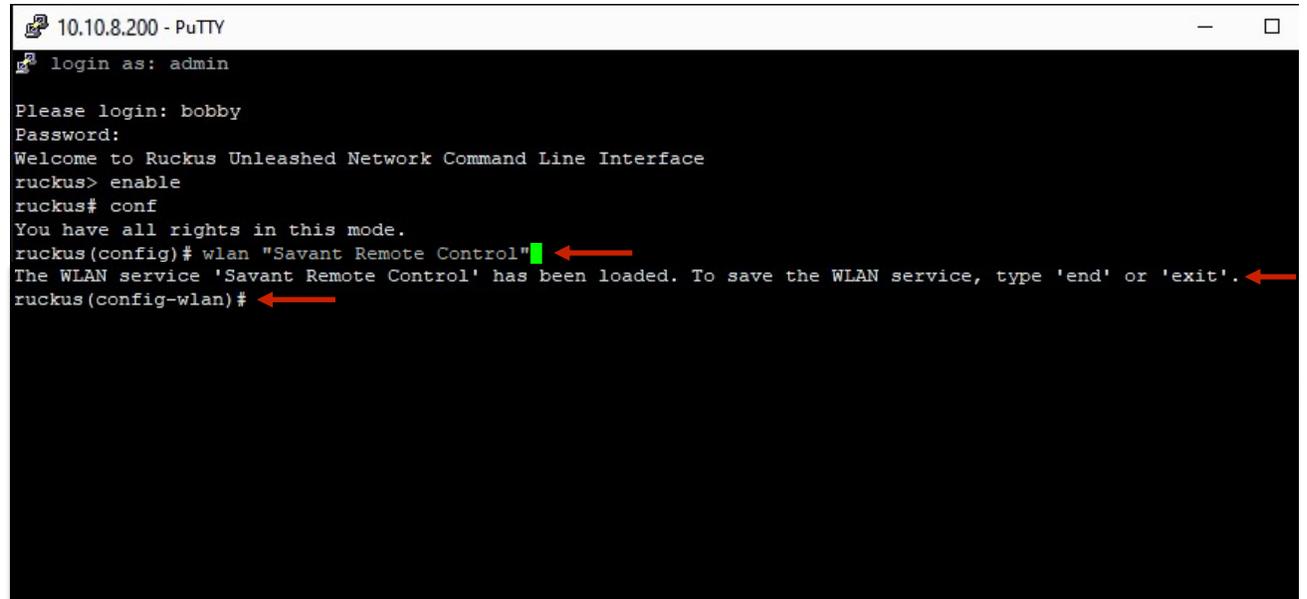
# Step by Step CLI Commands for each WLAN

## PuTTY Terminal Interface

Type in the "wlan "WLAN NAME that was created in the Unleashed Master" and press enter.

Please review my example of the command line.

An acknowledgement of the command will be displayed and the "ruckus (config-wlan) # prompt will be displayed.



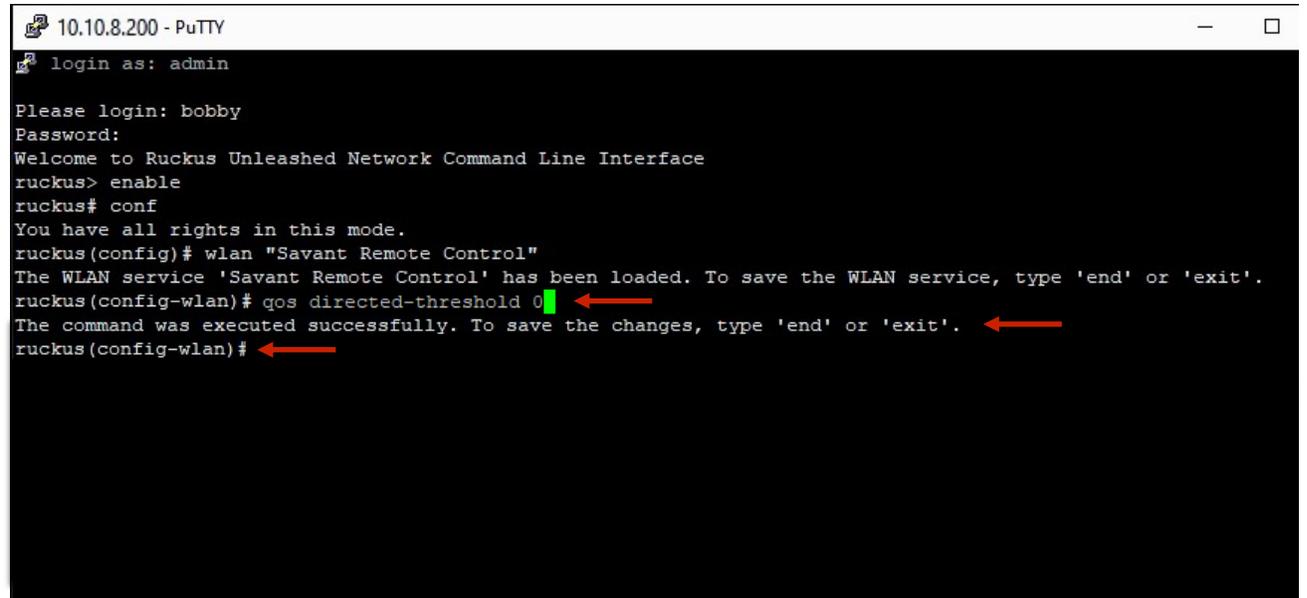
```
10.10.8.200 - PuTTY
login as: admin
Please login: bobby
Password:
Welcome to Ruckus Unleashed Network Command Line Interface
ruckus> enable
ruckus# conf
You have all rights in this mode.
ruckus(config)# wlan "Savant Remote Control"
The WLAN service 'Savant Remote Control' has been loaded. To save the WLAN service, type 'end' or 'exit'.
ruckus(config-wlan)#
```

# Step by Step CLI Commands for each WLAN

## PuTTY Terminal Interface

Type in "qos directed-threshold 0" and press enter.

An acknowledgement of the command will be displayed and the "ruckus (config-wlan) #" prompt will be displayed.



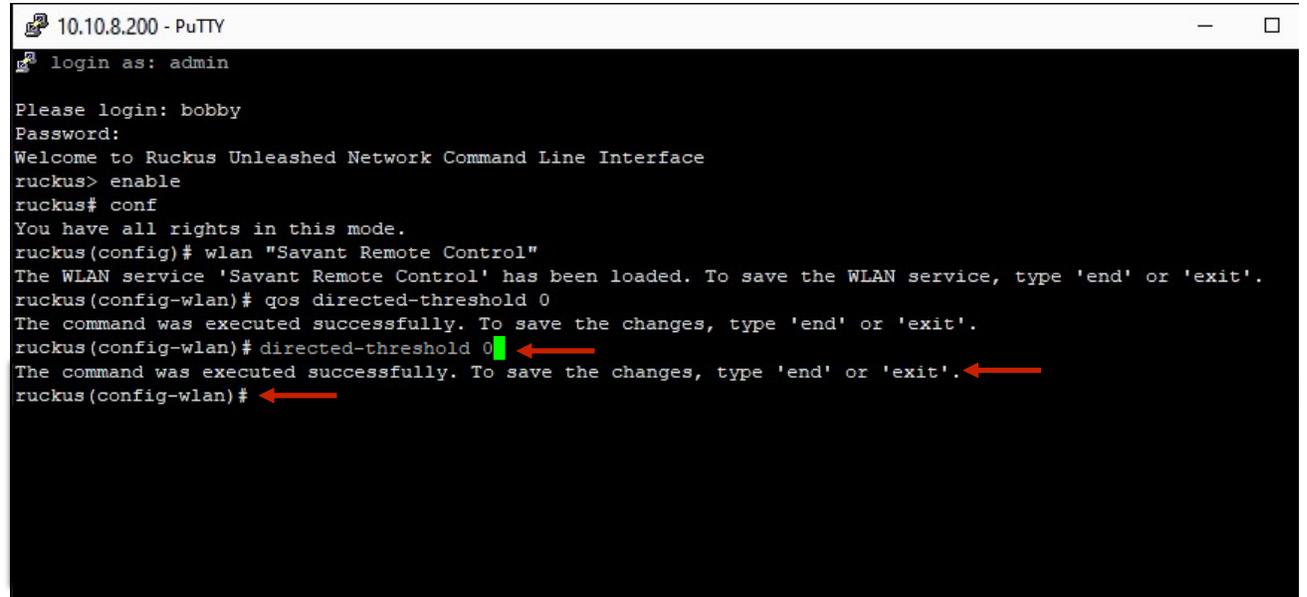
```
10.10.8.200 - PuTTY
login as: admin
Please login: bobby
Password:
Welcome to Ruckus Unleashed Network Command Line Interface
ruckus> enable
ruckus# conf
You have all rights in this mode.
ruckus(config)# wlan "Savant Remote Control"
The WLAN service 'Savant Remote Control' has been loaded. To save the WLAN service, type 'end' or 'exit'.
ruckus(config-wlan)# qos directed-threshold 0
The command was executed successfully. To save the changes, type 'end' or 'exit'.
ruckus(config-wlan)#
```

# Step by Step CLI Commands for each WLAN

## PuTTY Terminal Interface

Type in "directed-threshold 0" and press enter.

An acknowledgement of the command will be displayed and the "ruckus (config-wlan) # prompt will be displayed.



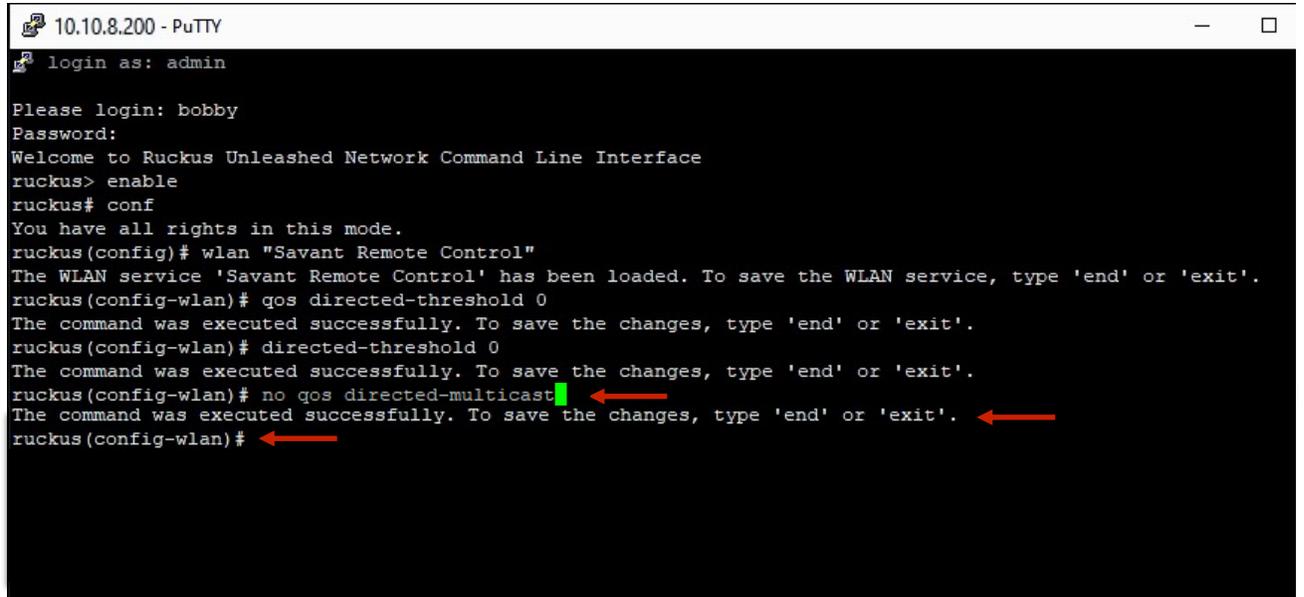
```
10.10.8.200 - PuTTY
login as: admin
Please login: bobby
Password:
Welcome to Ruckus Unleashed Network Command Line Interface
ruckus> enable
ruckus# conf
You have all rights in this mode.
ruckus(config)# wlan "Savant Remote Control"
The WLAN service 'Savant Remote Control' has been loaded. To save the WLAN service, type 'end' or 'exit'.
ruckus(config-wlan)# qos directed-threshold 0
The command was executed successfully. To save the changes, type 'end' or 'exit'.
ruckus(config-wlan)# directed-threshold 0
The command was executed successfully. To save the changes, type 'end' or 'exit'.
ruckus(config-wlan)#
```

# Step by Step CLI Commands for each WLAN

## PuTTY Terminal Interface

Type in "no qos directed-multicast" and press enter.

An acknowledgement of the command will be displayed and the "ruckus (config-wlan) #" prompt will be displayed.



```
10.10.8.200 - PuTTY
login as: admin
Please login: bobby
Password:
Welcome to Ruckus Unleashed Network Command Line Interface
ruckus> enable
ruckus# conf
You have all rights in this mode.
ruckus(config)# wlan "Savant Remote Control"
The WLAN service 'Savant Remote Control' has been loaded. To save the WLAN service, type 'end' or 'exit'.
ruckus(config-wlan)# qos directed-threshold 0
The command was executed successfully. To save the changes, type 'end' or 'exit'.
ruckus(config-wlan)# directed-threshold 0
The command was executed successfully. To save the changes, type 'end' or 'exit'.
ruckus(config-wlan)# no qos directed-multicast
The command was executed successfully. To save the changes, type 'end' or 'exit'.
ruckus(config-wlan)#
```

# Step by Step CLI Commands for each WLAN

## PuTTY Terminal Interface

Type in "exit" and press enter.

An acknowledgement of WLAN was updated and saved. You will also receive another acknowledgement "Your changes have been saved." as well as the display of "ruckus (config) #" prompt.

```
10.10.8.200 - PuTTY
login as: admin
Please login: bobby
Password:
Welcome to Ruckus Unleashed Network Command Line Interface
ruckus> enable
ruckus# conf
You have all rights in this mode.
ruckus(config)# wlan "Savant Remote Control"
The WLAN service 'Savant Remote Control' has been loaded. To save the WLAN service, type 'end' or 'exit'.
ruckus(config-wlan)# qos directed-threshold 0
The command was executed successfully. To save the changes, type 'end' or 'exit'.
ruckus(config-wlan)# directed-threshold 0
The command was executed successfully. To save the changes, type 'end' or 'exit'.
ruckus(config-wlan)# no qos directed-multicast
The command was executed successfully. To save the changes, type 'end' or 'exit'.
ruckus(config-wlan)# exit
The WLAN service 'Savant Remote Control' has been updated and saved.
Your changes have been saved.
ruckus(config)#
```

# Step by Step CLI Commands for each WLAN

## PuTTY Terminal Interface

Type in “exit” and press enter.

An acknowledgement of your changes have been saved will appear.

The “ruckus#” prompt will now appear.

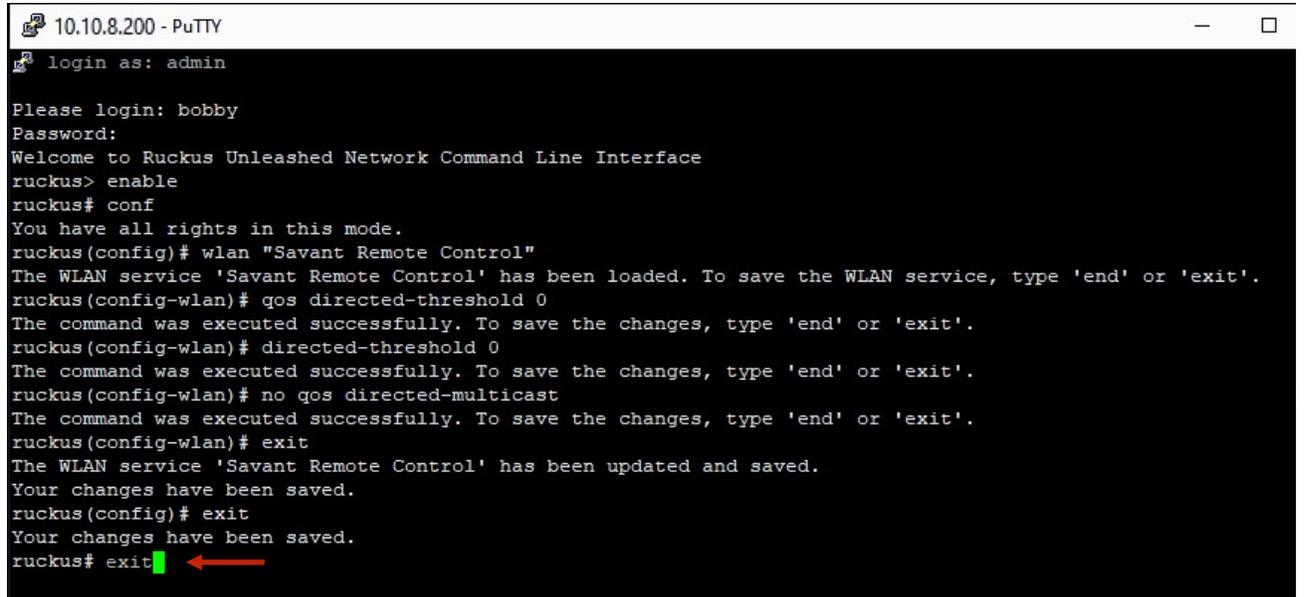
```
10.10.8.200 - PuTTY
login as: admin
Please login: bobby
Password:
Welcome to Ruckus Unleashed Network Command Line Interface
ruckus> enable
ruckus# conf
You have all rights in this mode.
ruckus(config)# wlan "Savant Remote Control"
The WLAN service 'Savant Remote Control' has been loaded. To save the WLAN service, type 'end' or 'exit'.
ruckus(config-wlan)# qos directed-threshold 0
The command was executed successfully. To save the changes, type 'end' or 'exit'.
ruckus(config-wlan)# directed-threshold 0
The command was executed successfully. To save the changes, type 'end' or 'exit'.
ruckus(config-wlan)# no qos directed-multicast
The command was executed successfully. To save the changes, type 'end' or 'exit'.
ruckus(config-wlan)# exit
The WLAN service 'Savant Remote Control' has been updated and saved.
Your changes have been saved.
ruckus(config)# exit ←
Your changes have been saved. ←
ruckus# ←
```

# Step by Step CLI Commands for each WLAN

## PuTTY Terminal Interface

Type in “exit” and press enter.

The final “exit” command will save all of the work and automatically exit out of Putty.



```
10.10.8.200 - PuTTY
login as: admin
Please login: bobby
Password:
Welcome to Ruckus Unleashed Network Command Line Interface
ruckus> enable
ruckus# conf
You have all rights in this mode.
ruckus(config)# wlan "Savant Remote Control"
The WLAN service 'Savant Remote Control' has been loaded. To save the WLAN service, type 'end' or 'exit'.
ruckus(config-wlan)# qos directed-threshold 0
The command was executed successfully. To save the changes, type 'end' or 'exit'.
ruckus(config-wlan)# directed-threshold 0
The command was executed successfully. To save the changes, type 'end' or 'exit'.
ruckus(config-wlan)# no qos directed-multicast
The command was executed successfully. To save the changes, type 'end' or 'exit'.
ruckus(config-wlan)# exit
The WLAN service 'Savant Remote Control' has been updated and saved.
Your changes have been saved.
ruckus(config)# exit
Your changes have been saved.
ruckus# exit
```

# Recap and Verify Changes

---



## Steps followed and Steps to follow

By using PuTTY we were able to do the following:

Modify the WLAN by disabling directed-multicast by using a step-by-step command process.

Please note that if the above sequence of commands is not followed exactly, the directed-multicast settings of the unit will be wiped out.

Now we are going to verify the changes we made by using PuTTY once again. This will be a step-by-step command process.

# Verify Changes with Step by Step CLI Commands for each WLAN

## PuTTY Configuration Interface

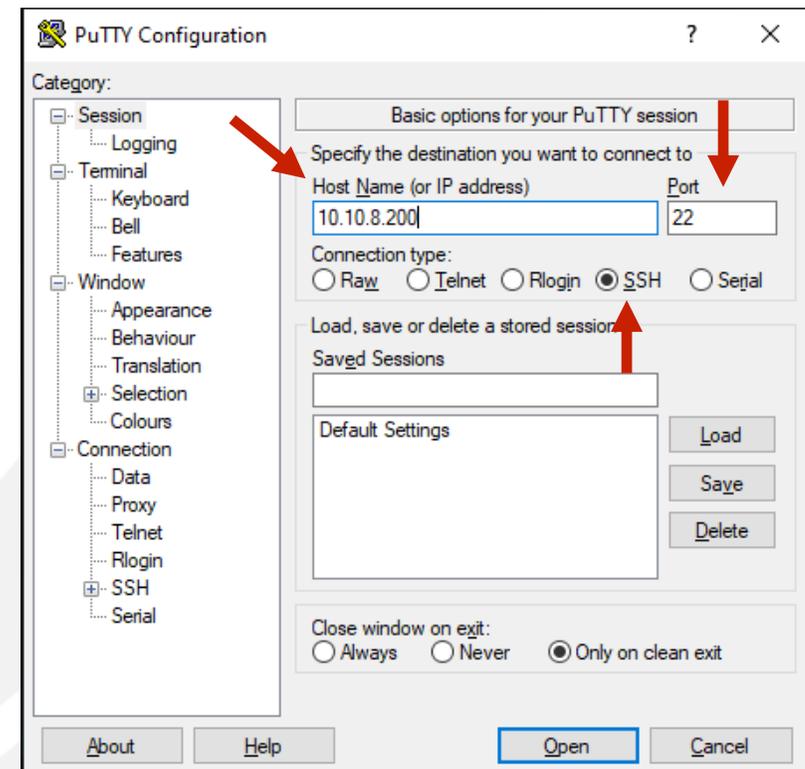
Launch putty.exe

Enter in the IP Address of the Unleashed Master.

Ensure that "Port" field has the value of "22" filled in.

Ensure the Connection type is "SSH".

Then click on "Open" to launch the terminal interface.



# Verify Changes with Step by Step CLI Commands for each WLAN

---

## PuTTY Terminal Interface

Type in "admin" and press enter.

You will receive an acknowledgement of "Please login:" prompt.



```
10.10.8.200 - PuTTY
login as: admin
Please login:
```

The screenshot shows a PuTTY terminal window with a black background and white text. The title bar reads "10.10.8.200 - PuTTY". The terminal content shows the prompt "login as: admin" followed by a green cursor. Below it, the prompt "Please login:" is displayed. Two red arrows point to the green cursor and the "Please login:" prompt.

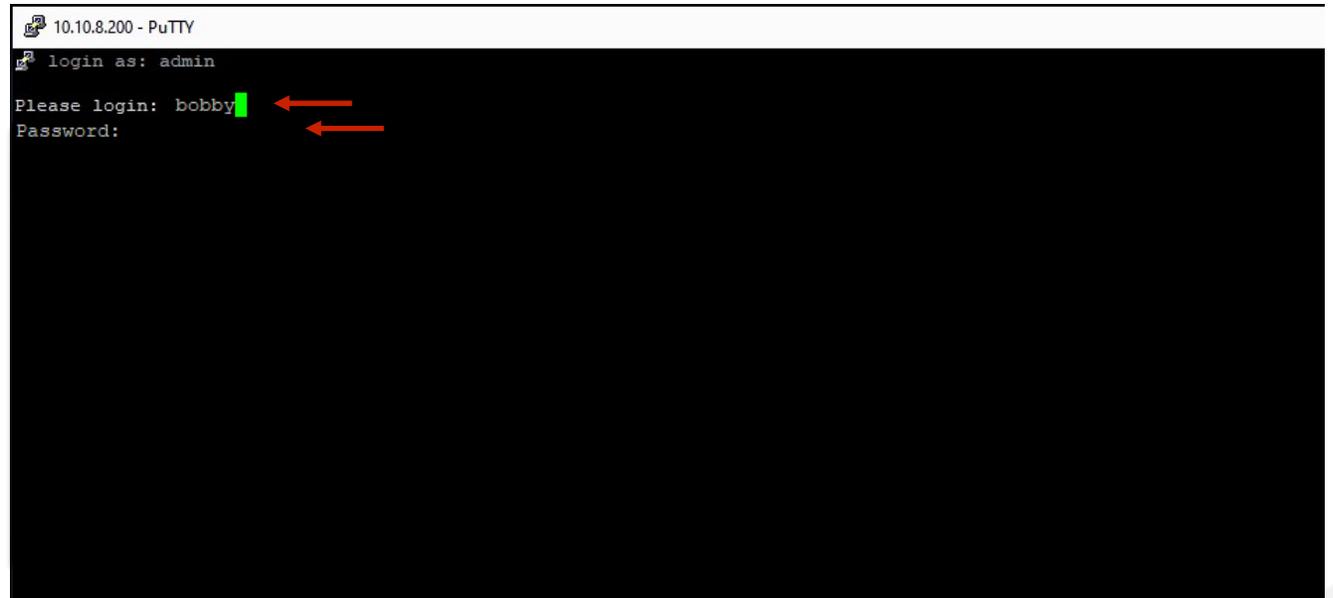
# Verify Changes with Step by Step CLI Commands for each WLAN

---

## PuTTY Terminal Interface

Type in the “username” and press enter.

You will receive an acknowledgement of “Password:” prompt.



```
10.10.8.200 - PuTTY
login as: admin
Please login: bobby
Password:
```

# Verify Changes with Step by Step CLI Commands for each WLAN

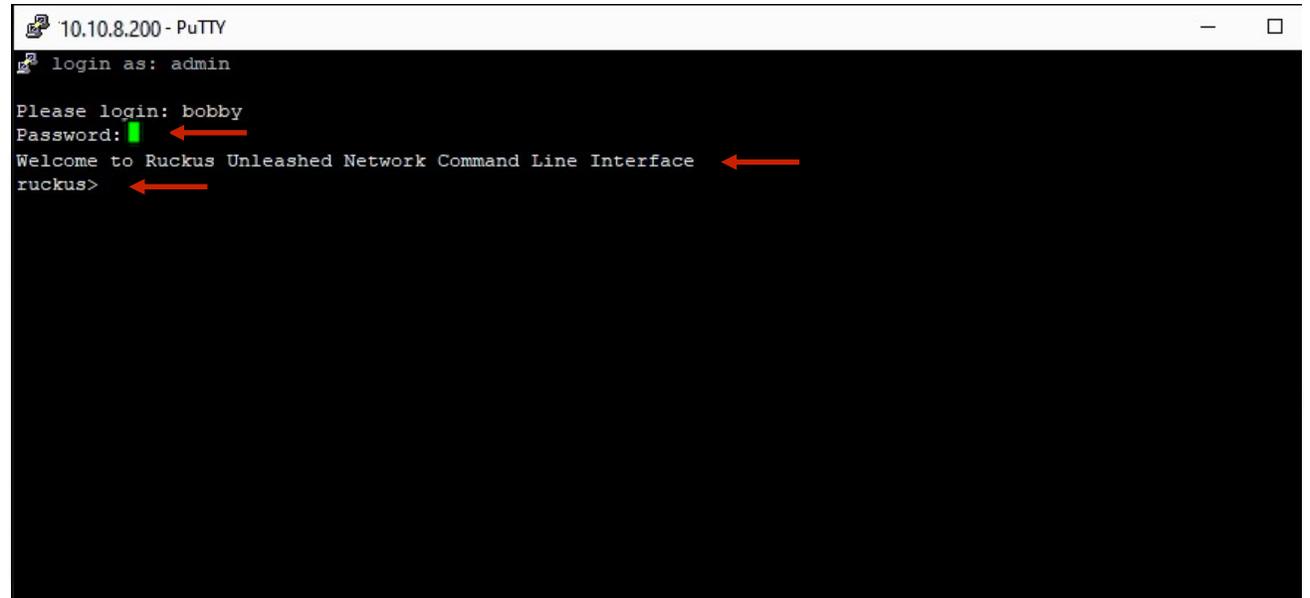
---

## PuTTY Terminal Interface

Type in the “password” and hit enter.

Please note you will not see the password as it’s being typed out.

You will be greeted to “Welcome to Ruckus Unleashed Network Command Line Interface” and the next “ruckus>” command prompt.



```
10.10.8.200 - PuTTY
login as: admin
Please login: bobby
Password: ██████████
Welcome to Ruckus Unleashed Network Command Line Interface
ruckus>
```

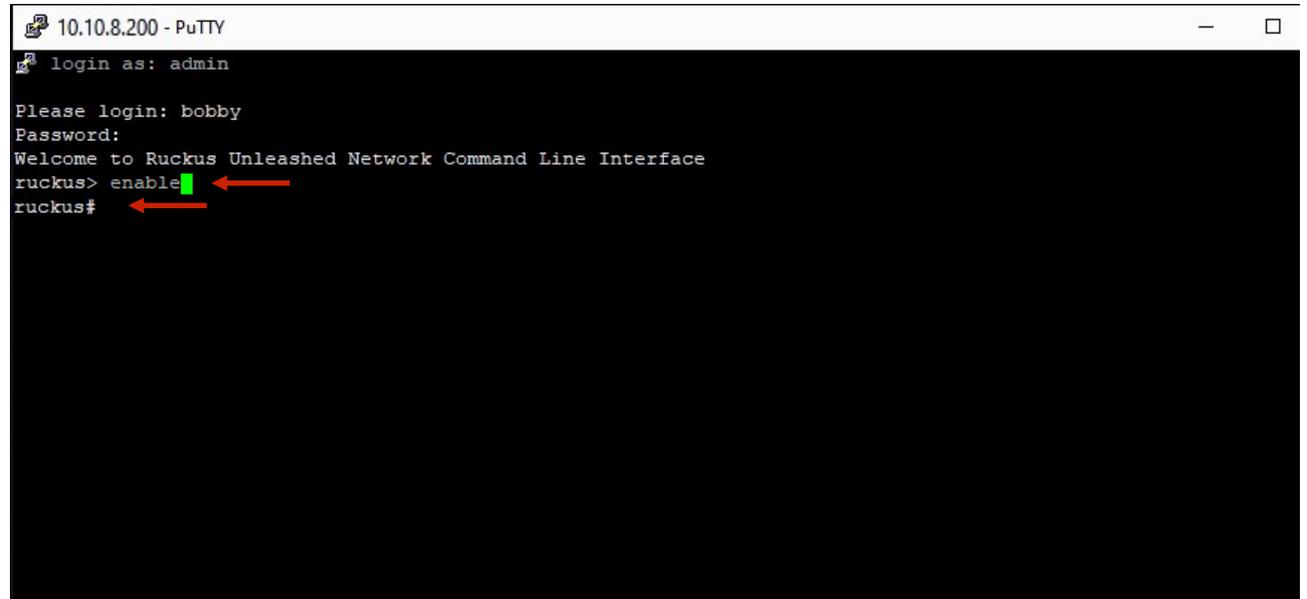
# Verify Changes with Step by Step CLI Commands for each WLAN

---

## PuTTY Terminal Interface

Type in “enable” and press enter.

You will receive an acknowledgement of “ruckus#” prompt.



```
10.10.8.200 - PuTTY
login as: admin
Please login: bobby
Password:
Welcome to Ruckus Unleashed Network Command Line Interface
ruckus> enable
ruckus#
```

# Verify Changes with Step by Step CLI Commands for each WLAN

---

## PuTTY Terminal Interface

Type in "debug" and press enter.

You will receive an acknowledgement message and the "ruckus (debug) #" prompt.

```
10.10.8.200 - PuTTY
login as: admin
Please login: bobby
Password:
Welcome to Ruckus Unleashed Network Command Line Interface
ruckus> enable
ruckus# debug ←
You have all rights in this mode. ←
ruckus(debug)# ←
```

# Verify Changes with Step by Step CLI Commands for each WLAN

## PuTTY Terminal Interface

Type in "remote\_ap\_cli -A "set qos directedDHCP disable"" and press enter.

Several acknowledgements of your changes will appear. It is imperative that verification of this command was executed properly.

```
10.10.8.200 - PuTTY
login as: admin
Please login: bobby
Password:
Welcome to Ruckus Unleashed Network Command Line Interface
ruckus> enable
ruckus# debug
You have all rights in this mode.
ruckus(debug)# remote_ap_cli -A "set qos directedDHCP disable"
---- Command 'rkscli -c "set qos directedDHCP disable "' executed at 60:d0:2c:38:22:90
Directet DHCP is Disabled
OK
---- Command Execution Summary:
      success: 1
      failure: 0
      total: 1
remote_ap_cli "-A" ""set" "qos" "directedDHCP" "disable"
ruckus(debug)#
```

# Verify Changes with Step by Step CLI Commands for each WLAN

## PuTTY Terminal Interface

Type in "remote\_ap\_cli -A "get qos"" and press enter.

You will receive many messages for this command. Scroll up to view "Directed DHCP: Disabled".

```
10.10.8.200 - PuTTY
login as: admin

Please login: bobby
Password:
Welcome to Ruckus Unleashed Network Command Line Interface
ruckus> enable
ruckus# debug
You have all rights in this mode.
ruckus(debug)# remote_ap_cli -A "set qos directedDHCP disable"
---- Command 'rkscli -c "set qos directedDHCP disable "' executed at 60:d0:2c:38:22:90
Directet DHCP is Disabled
OK
---- Command Execution Summary:
      success: 1
      failure: 0
      total: 1
remote_ap_cli "-A" ""set" "qos" "directedDHCP" "disable""
ruckus(debug)# remote_ap_cli -A "get qos"
---- Command 'rkscli -c "get qos "' executed at 60:d0:2c:38:22:90
Tx Failure Threshold:      50          Dead Station Count: 0

Forward to Querier:        Disabled

Directed DHCP:             Disabled ←
```

# Verify Changes with Step by Step CLI Commands for each WLAN

## PuTTY Terminal Interface

Type in "quit" and press enter.

Type in "exit" at the "ruckus #" prompt.  
This final "exit" command will automatically exit out of Putty.

```
55 89400219 IGMP STA Updat 14EDBBEFDC91 (eth0) 0.0.0.0 (1)
56 89605259 IGMP STA Updat 14EDBBEFDC91 (eth0) 0.0.0.0 (1)
57 89730268 IGMP STA Updat 14EDBBEFDC91 (eth0) 0.0.0.0 (1)
58 89855276 IGMP STA Updat 14EDBBEFDC91 (eth0) 0.0.0.0 (1)
59 89980285 IGMP STA Updat 14EDBBEFDC91 (eth0) 0.0.0.0 (1)
60 90105294 IGMP STA Updat 14EDBBEFDC91 (eth0) 0.0.0.0 (1)
61 90230304 IGMP STA Updat 14EDBBEFDC91 (eth0) 0.0.0.0 (1)
62 90355310 IGMP STA Updat 14EDBBEFDC91 (eth0) 0.0.0.0 (1)
63 90480318 IGMP STA Updat 14EDBBEFDC91 (eth0) 0.0.0.0 (1)

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OK
---- Command Execution Summary:
      success: 1
      failure: 0
      total: 1
remote_ap_cli "-A" ""get" "qos""
ruckus(debug)# quit
```

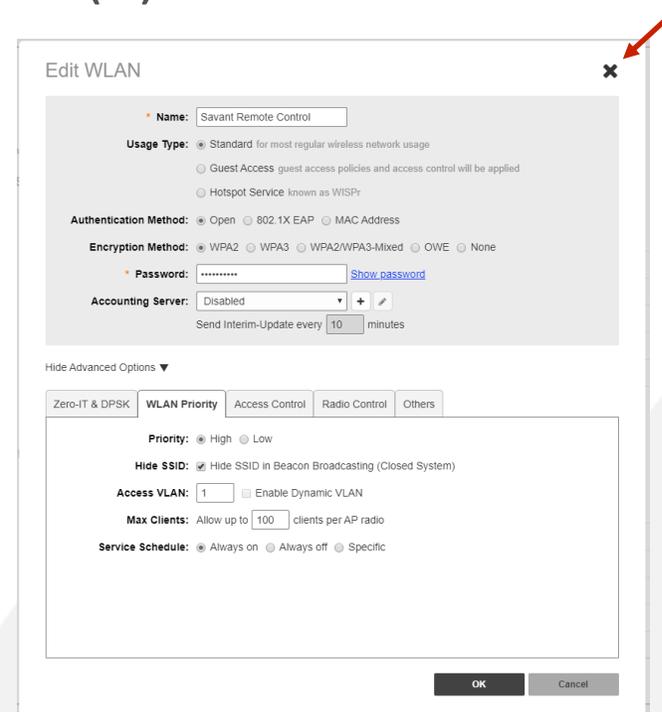
# Important Note for Disabled Directed Multicast WLAN(s)

## Disabled Direct Multicast WLAN(s)

Please do not modify the WLAN after completing these steps. Any modifications you made in these steps will be completely wiped out.

Please do not open the “Edit WLAN” in the Unleashed Master and hit the “OK” button. It will wipe out all the steps completed. Hit the “x” button to exit out of the “Edit WLAN” window.

If modifications are made or the “OK” button is pressed, you will be required to follow these steps again to Disable Directed Multicast.



The screenshot shows the 'Edit WLAN' configuration window. The 'Name' field is set to 'Savant Remote Control'. The 'Usage Type' is 'Standard for most regular wireless network usage'. The 'Authentication Method' is 'Open'. The 'Encryption Method' is 'WPA2'. The 'Password' field is masked with asterisks. The 'Accounting Server' is set to 'Disabled'. The 'WLAN Priority' tab is selected, showing 'Priority' set to 'High', 'Hide SSID' checked, 'Access VLAN' set to '1', 'Max Clients' set to '100', and 'Service Schedule' set to 'Always on'. The 'OK' and 'Cancel' buttons are at the bottom right. A red arrow points to the 'x' close button in the top right corner.

# THANK YOU

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## CONTACT INFO

**Bobby Giebenrath**

PARTNER TRAINING & DEVELOPMENT MANAGER  
ACCESS NETWORKS

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### EMAIL

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# Q&A



## How to Disable Directed Multicast on an Unleashed Master

Version: 200.8

Bobby Giebenrath

**Partner Training & Development Manager**