

Configure Power over Ethernet (PoE) Settings on the RV345P Router

Objective

Power over Ethernet (PoE) is a feature available on PoE-based devices, such as the RV345P, which delivers the electrical power to connected powered devices (PD) over the copper cables without the interference of the network traffic. The PoE Settings page in the web-based utility enables the selection of either the Port Limit or Class Limit PoE mode and specifies the PoE traps to be generated. When the PD actually connects and if it consumes power, it might consume much less than the maximum power allowed. Output power is disabled when power-on reboot, initialization, or system configuration occurs to ensure that the powered devices are not damaged.

The objective of this document is to provide the steps on how to configure the PoE settings on the RV345P Router.

Applicable Devices

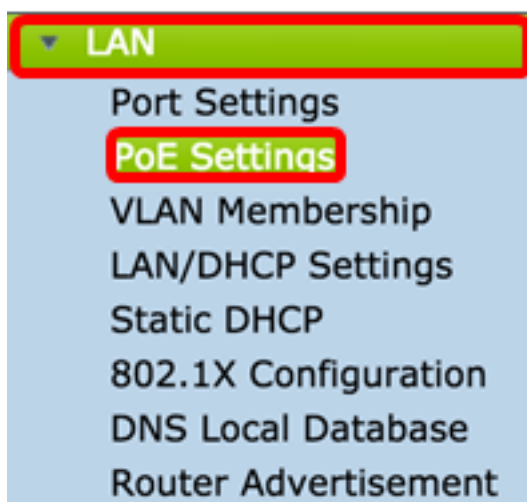
- RV345P

Software Version

1.0.00.33

Configure Power over Ethernet

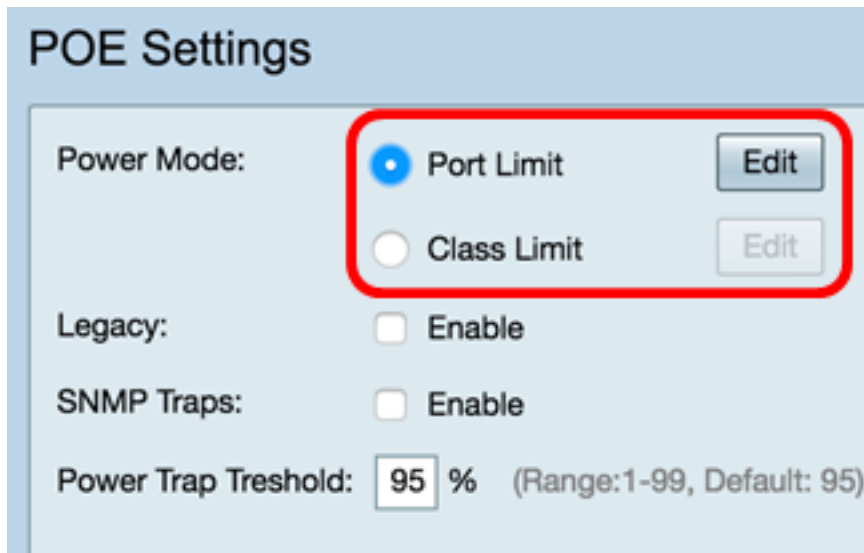
Step 1. Log in to the web-based utility and choose **LAN > PoE Settings**.



[Step 2](#). Choose a Power Mode radio button. The options are:

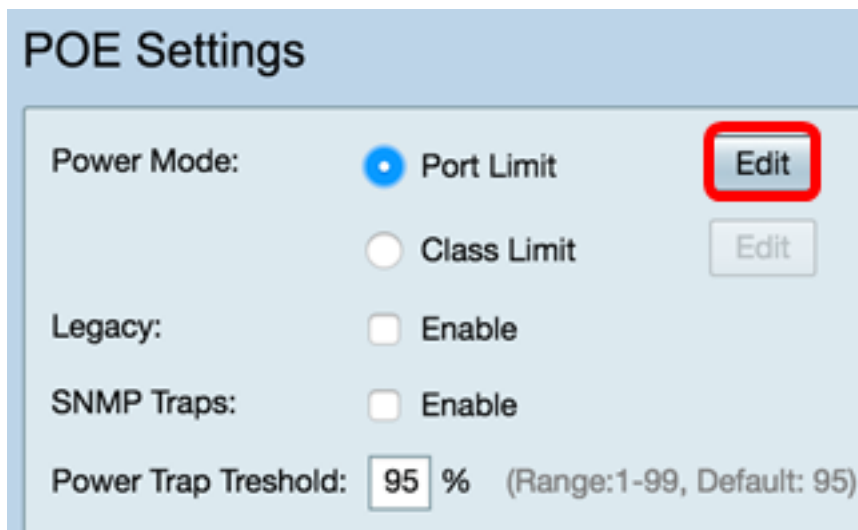
- Port Limit — Choose this if you want to configure the port to operate at a specific wattage.
- Class Limit — The maximum power limit per port is determined by the class of the device, which results from the Classification stage. In this stage, the PD specifies its class, which is the amount of the maximum power that the PD consumes. To configure Class Limit, skip to [Step 12](#).

Note: For this example, Port Limit was chosen.



The screenshot shows the 'POE Settings' configuration page. Under the 'Power Mode:' section, the 'Port Limit' radio button is selected and highlighted with a red box, along with its corresponding 'Edit' button. The 'Class Limit' radio button and its 'Edit' button are also visible but not selected. Below this, there are checkboxes for 'Legacy:' and 'SNMP Traps:', both currently unchecked. At the bottom, the 'Power Trap Threshold' is set to '95 %' with a range of '1-99' and a default of '95'.

Step 3. Click **Edit**. You will be taken to the POE Setting Table.



This screenshot is identical to the previous one, but the 'Edit' button next to the selected 'Port Limit' radio button is now highlighted with a red box, indicating it is the next step in the process.

Step 4. Click the corresponding radio button of the LAN port you want to configure.

Note: For this example, LAN3 is chosen.

POE Settings(Port Limit Mode)

POE Setting Table								
	Port	Enable	Power Priori...	Adminis...	Max Po...	Power C...	Class	PoE Sta...
<input type="radio"/>	LAN1	Enable	low	30000	30000	0	0	0
<input type="radio"/>	LAN2	Enable	low	30000	30000	0	0	0
<input checked="" type="radio"/>	LAN3	Enable	low	30000	30000	0	0	0
<input type="radio"/>	LAN5	Enable	low	0	0	0	0	0
<input type="radio"/>	LAN6	Enable	critical	0	0	0	0	0
<input type="radio"/>	LAN7	Enable	low	0	0	0	0	0
<input type="radio"/>	LAN8	Enable	low	0	0	0	0	0
<input type="radio"/>	LAN9	Enable	low	30000	30000	0	0	0
<input type="radio"/>	LAN10	Enable	low	30000	30000	0	0	0
<input type="radio"/>	LAN11	Enable	low	30000	30000	0	0	0
<input type="radio"/>	LAN12	Enable	low	30000	30000	0	0	0
<input type="radio"/>	LAN13	Enable	low	0	0	0	0	0
<input type="radio"/>	LAN14	Enable	low	0	0	0	0	0

Step 5. Click **Edit**. The PoE Settings-Port Limit page opens.

POE Settings(Port Limit Mode)

POE Setting Table								
	Port	Enable	Power Priori...	Adminis...	Max Po...	Power C...	Class	PoE Sta...
<input type="radio"/>	LAN1	Enable	low	30000	30000	0	0	0
<input type="radio"/>	LAN2	Enable	low	30000	30000	0	0	0
<input checked="" type="radio"/>	LAN3	Enable	low	30000	30000	0	0	0
<input type="radio"/>	LAN5	Enable	low	0	0	0	0	0
<input type="radio"/>	LAN6	Enable	critical	0	0	0	0	0
<input type="radio"/>	LAN7	Enable	low	0	0	0	0	0
<input type="radio"/>	LAN8	Enable	low	0	0	0	0	0
<input type="radio"/>	LAN9	Enable	low	30000	30000	0	0	0
<input type="radio"/>	LAN10	Enable	low	30000	30000	0	0	0
<input type="radio"/>	LAN11	Enable	low	30000	30000	0	0	0
<input type="radio"/>	LAN12	Enable	low	30000	30000	0	0	0
<input type="radio"/>	LAN13	Enable	low	0	0	0	0	0
<input type="radio"/>	LAN14	Enable	low	0	0	0	0	0

Step 6. Check the PoE **Enable** check box to activate PoE. This is enabled by default.

PoE Settings-Port Limit

Port:	LAN3
PoE Enable:	<input checked="" type="checkbox"/>
Power Priority Level:	<input checked="" type="radio"/> Critical <input type="radio"/> High <input type="radio"/> Low
Administrative Power Allocation:	<input type="text" value="30000"/> mW (Range: 0-30000, Default: 30000)
Class:	0
Max Power Allocation:	30000 mW
Power Consumption:	0 mW
Overload Counter:	0
Short Counter:	0
Denied Counter:	0
Absent Counter:	0
Invalid Signature Counter:	0

Step 7. Click the radio button for the Power Priority Level. A port with a lower priority level may be denied power over a port with a higher priority level if power is limited. The options are Critical, High, and Low. The default is Low.

Note: For this example, Critical is used.

PoE Settings-Port Limit

Port:	LAN3
PoE Enable:	<input checked="" type="checkbox"/>
Power Priority Level:	<input checked="" type="radio"/> Critical <input type="radio"/> High <input type="radio"/> Low
Administrative Power Allocation:	<input type="text" value="30000"/> mW (Range: 0-30000, Default: 30000)
Class:	0
Max Power Allocation:	30000 mW
Power Consumption:	0 mW
Overload Counter:	0
Short Counter:	0
Denied Counter:	0
Absent Counter:	0
Invalid Signature Counter:	0

Step 8. In the *AdministrativePower Allocation* field, enter a value between 0 to 30000. This value indicates the power in milliwatts (mW) that is allocated to the port. The default is 30000.

Note: For this example, the default mW value of 30000 is used.

PoE Settings-Port Limit

Port:	LAN3
PoE Enable:	<input checked="" type="checkbox"/>
Power Priority Level:	<input checked="" type="radio"/> Critical <input type="radio"/> High <input type="radio"/> Low
Administrative Power Allocation:	<input type="text" value="30000"/> mW (Range: 0-30000, Default: 30000)
Class:	0
Max Power Allocation:	30000 mW
Power Consumption:	0 mW
Overload Counter:	0
Short Counter:	0
Denied Counter:	0
Absent Counter:	0
Invalid Signature Counter:	0

Note: The following areas in the page are counters.

- Class — Determines the power level that the end device can receive.
 - Class 0 — 15.4 Watts of maximum power is delivered to the port. This is the default.
 - Class 1 — 4.0 Watts of maximum power is delivered to the port.
 - Class 2 — 7.0 Watts of maximum power is delivered to the port.
 - Class 3 — 15.4 Watts of maximum power is delivered to the port.
 - Class 4 — 30 Watts of maximum power is delivered to the port.
- Max Power Allocation — The maximum power allotted for the device.
- Power Consumption — The amount of power in milliwatts assigned to the powered device that is connected to the specified port.
- Overload Counter — The total number of power overload occurrences.
- Short Counter — The total number of power shortage occurrences.
- Denied Counter — The number of times the connected device was denied power.

- Absent Counter — The number of times the power was stopped to the connected device because the device was no longer detected.
- Invalid Signature Counter — The number of times an invalid signature was received from the connected device.

PoE Settings-Port Limit

Port:	LAN3
PoE Enable:	<input checked="" type="checkbox"/>
Power Priority Level:	<input checked="" type="radio"/> Critical <input type="radio"/> High <input type="radio"/> Low
Administrative Power Allocation:	<input type="text" value="30000"/> mW (Range: 0-30000, Default: 30000)
Class:	0
Max Power Allocation:	30000 mW
Power Consumption:	0 mW
Overload Counter:	0
Short Counter:	0
Denied Counter:	0
Absent Counter:	0
Invalid Signature Counter:	0

Step 9. Click **Apply**. You will be taken back to the POE Settings (Port Limit Mode) page.

PoE Settings-Port Limit

Port:	LAN3
PoE Enable:	<input checked="" type="checkbox"/>
Power Priority Level:	<input checked="" type="radio"/> Critical <input type="radio"/> High <input type="radio"/> Low
Administrative Power Allocation:	<input type="text" value="30000"/> mW (Range: 0-30000, Default: 30000)
Class:	0
Max Power Allocation:	30000 mW
Power Consumption:	0 mW
Overload Counter:	0
Short Counter:	0
Denied Counter:	0
Absent Counter:	0
Invalid Signature Counter:	0

Step 10. (Optional) To configure more ports under Port Limit, repeat Steps 4-9.

POE Setting Table								
	Port	Enable	Power Prior...	Administrati...	Max Power ...	Power Cons...	Class	PoE Standard
<input type="radio"/>	LAN1	Enable	low	0	0	0	0	0
<input type="radio"/>	LAN2	Enable	low	30000	30000	0	0	0
<input checked="" type="radio"/>	LAN3	Enable	critical	30000	30000	0	0	0
<input type="radio"/>	LAN5	Enable	low	0	0	0	0	0
<input type="radio"/>	LAN6	Enable	critical	0	0	0	0	0
<input type="radio"/>	LAN7	Enable	low	0	0	0	0	0
<input type="radio"/>	LAN8	Enable	low	0	0	0	0	0
<input type="radio"/>	LAN9	Enable	low	30000	30000	0	0	0
<input type="radio"/>	LAN10	Enable	low	30000	30000	0	0	0
<input type="radio"/>	LAN11	Enable	low	30000	30000	0	0	0
<input type="radio"/>	LAN12	Enable	low	30000	30000	0	0	0
<input type="radio"/>	LAN13	Enable	low	0	0	0	0	0
<input type="radio"/>	LAN14	Enable	low	0	0	0	0	0

Edit

Back

Step 11. Click on **Back** to return to the main POE Settings page. Then skip to [Step 20](#).

POE Setting Table								
	Port	Enable	Power Prior...	Administrati...	Max Power ...	Power Cons...	Class	PoE Standard
<input type="radio"/>	LAN1	Enable	low	0	0	0	0	0
<input type="radio"/>	LAN2	Enable	low	30000	30000	0	0	0
<input checked="" type="radio"/>	LAN3	Enable	critical	30000	30000	0	0	0
<input type="radio"/>	LAN5	Enable	low	0	0	0	0	0
<input type="radio"/>	LAN6	Enable	critical	0	0	0	0	0
<input type="radio"/>	LAN7	Enable	low	0	0	0	0	0
<input type="radio"/>	LAN8	Enable	low	0	0	0	0	0
<input type="radio"/>	LAN9	Enable	low	30000	30000	0	0	0
<input type="radio"/>	LAN10	Enable	low	30000	30000	0	0	0
<input type="radio"/>	LAN11	Enable	low	30000	30000	0	0	0
<input type="radio"/>	LAN12	Enable	low	30000	30000	0	0	0
<input type="radio"/>	LAN13	Enable	low	0	0	0	0	0
<input type="radio"/>	LAN14	Enable	low	0	0	0	0	0

Edit

Back

[Step 12](#). If you have chosen Class Limit in [Step 2](#), click Edit and you will be taken to the POE Settings (Class Limit Mode) page.

POE Settings

Power Mode: Port Limit

Class Limit

Legacy: Enable

SNMP Traps: Enable

Power Trap Treshold: % (Range:1-99, Default: 95)

Step 13. Click on the corresponding radio button of the LAN port you want to configure.

Note: For this example, LAN3 is chosen.

POE Settings(Class Limit Mode)

POE Setting Table						
	Port	Enable	Power Priorit...	Max Power A...	Power Consu...	Class
<input type="radio"/>	LAN1	Enable	low	30000	0	0
<input type="radio"/>	LAN2	Enable	low	30000	0	0
<input checked="" type="radio"/>	LAN3	Enable	critical	30000	0	0
<input type="radio"/>	LAN5	Enable	low	0	0	0
<input type="radio"/>	LAN6	Enable	critical	0	0	0
<input type="radio"/>	LAN7	Enable	low	0	0	0
<input type="radio"/>	LAN8	Enable	low	0	0	0
<input type="radio"/>	LAN9	Enable	low	30000	0	0
<input type="radio"/>	LAN10	Enable	low	30000	0	0
<input type="radio"/>	LAN11	Enable	low	30000	0	0
<input type="radio"/>	LAN12	Enable	low	30000	0	0
<input type="radio"/>	LAN13	Enable	low	0	0	0
<input type="radio"/>	LAN14	Enable	low	0	0	0

Step 14. Click **Edit**.

POE Settings(Class Limit Mode)

POE Setting Table						
	Port	Enable	Power Priorit...	Max Power A...	Power Consu...	Class
<input type="radio"/>	LAN1	Enable	low	30000	0	0
<input type="radio"/>	LAN2	Enable	low	30000	0	0
<input checked="" type="radio"/>	LAN3	Enable	critical	30000	0	0
<input type="radio"/>	LAN5	Enable	low	0	0	0
<input type="radio"/>	LAN6	Enable	critical	0	0	0
<input type="radio"/>	LAN7	Enable	low	0	0	0
<input type="radio"/>	LAN8	Enable	low	0	0	0
<input type="radio"/>	LAN9	Enable	low	30000	0	0
<input type="radio"/>	LAN10	Enable	low	30000	0	0
<input type="radio"/>	LAN11	Enable	low	30000	0	0
<input type="radio"/>	LAN12	Enable	low	30000	0	0
<input type="radio"/>	LAN13	Enable	low	0	0	0
<input type="radio"/>	LAN14	Enable	low	0	0	0

Step 15. Check the PoE **Enable** check box to activate PoE. This is enabled by default.

PoE Settings-Class Limit

Port:	LAN3
PoE Enable:	<input checked="" type="checkbox"/>
Power Priority Level:	<input checked="" type="radio"/> Critical <input type="radio"/> High <input type="radio"/> Low
Class:	0
Max Power Allocation:	30000 mW
Power Consumption:	0 mW
Overload Counter:	0
Short Counter:	0
Denied Counter:	0
Absent Counter:	0
Invalid Signature Counter:	0

Step 16. Click the radio button for the Power Priority Level. A port with a lower priority level may be denied power over a port with a higher priority level if power is limited. The options are Critical, High, and Low. The default is Low.

Note: For this example, Critical is chosen.

PoE Settings-Class Limit

Port:	LAN3
PoE Enable:	<input checked="" type="checkbox"/>
Power Priority Level:	<input checked="" type="radio"/> Critical <input type="radio"/> High <input type="radio"/> Low
Class:	0
Max Power Allocation:	30000 mW
Power Consumption:	0 mW
Overload Counter:	0
Short Counter:	0
Denied Counter:	0
Absent Counter:	0
Invalid Signature Counter:	0

Note: The following fields in the page are counters.

- Class — Determines the power level that the end device can receive.
 - Class 0 — 15.4 Watts of maximum power is delivered by the port. This is the default.
 - Class 1 — 4.0 Watts of maximum power is delivered by the port.
 - Class 2 — 7.0 Watts of maximum power is delivered by the port.
 - Class 3 — 15.4 Watts of maximum power is delivered by the port.
 - Class 4 — 30 Watts of maximum power is delivered by the port.
- Max Power Allocation — Maximum amount of power that is allowed on the chosen port.
- Power Consumption — Amount of power in milliwatts that is assigned to the powered device connected to the port.

- Overload Counter — Number of times there has been a power overload.
- Short Counter — Number of times there has been a power shortage.
- Denied Counter — Number of times the powered device has been denied power.
- Absent Counter — Number of times power has stopped because the powered device was not detected.
- Invalid Signature Counter — Number of times an invalid signature was received.

Step 17. Click **Apply**. You will be taken back to the POE Settings (Class Limit Mode) page.

PoE Settings-Class Limit

Port:	LAN3
PoE Enable:	<input checked="" type="checkbox"/>
Power Priority Level:	<input checked="" type="radio"/> Critical <input type="radio"/> High <input type="radio"/> Low
Class:	0
Max Power Allocation:	30000 mW
Power Consumption:	0 mW
Overload Counter:	0
Short Counter:	0
Denied Counter:	0
Absent Counter:	0
Invalid Signature Counter:	0

Step 18. (Optional) To configure more ports under Class Limit, repeat Steps 13-17.

POE Settings(Class Limit Mode)

POE Setting Table						
	Port	Enable	Power Priority L...	Max Power Allo...	Power Consum...	Class
<input type="radio"/>	LAN1	Enable	low	30000	0	0
<input type="radio"/>	LAN2	Enable	low	30000	0	0
<input type="radio"/>	LAN3	Enable	critical	30000	0	0
<input type="radio"/>	LAN5	Enable	low	0	0	0
<input type="radio"/>	LAN6	Enable	critical	0	0	0
<input type="radio"/>	LAN7	Enable	low	0	0	0
<input type="radio"/>	LAN8	Enable	low	0	0	0
<input type="radio"/>	LAN9	Enable	low	30000	0	0
<input type="radio"/>	LAN10	Enable	low	0	0	0
<input type="radio"/>	LAN11	Enable	low	30000	0	0
<input type="radio"/>	LAN12	Enable	low	30000	0	0
<input type="radio"/>	LAN13	Enable	low	0	0	0
<input type="radio"/>	LAN14	Enable	low	0	0	0

Step 19. Click on **Back** to return to the main POE Settings page.

POE Settings(Class Limit Mode)

POE Setting Table						
	Port	Enable	Power Priority L...	Max Power Allo...	Power Consum...	Class
<input type="radio"/>	LAN1	Enable	low	30000	0	0
<input type="radio"/>	LAN2	Enable	low	30000	0	0
<input type="radio"/>	LAN3	Enable	critical	30000	0	0
<input type="radio"/>	LAN5	Enable	low	0	0	0
<input type="radio"/>	LAN6	Enable	critical	0	0	0
<input type="radio"/>	LAN7	Enable	low	0	0	0
<input type="radio"/>	LAN8	Enable	low	0	0	0
<input type="radio"/>	LAN9	Enable	low	30000	0	0
<input type="radio"/>	LAN10	Enable	low	0	0	0
<input type="radio"/>	LAN11	Enable	low	30000	0	0
<input type="radio"/>	LAN12	Enable	low	30000	0	0
<input type="radio"/>	LAN13	Enable	low	0	0	0
<input type="radio"/>	LAN14	Enable	low	0	0	0

[Step 20.](#) Check the **Enable** Legacy check box to cater to old devices.

POE Settings

Power Mode:	<input checked="" type="radio"/> Port Limit	<input type="button" value="Edit"/>
	<input type="radio"/> Class Limit	<input type="button" value="Edit"/>
Legacy:	<input checked="" type="checkbox"/> Enable	
SNMP Traps:	<input type="checkbox"/> Enable	
Power Trap Treshold:	<input type="text" value="95"/> %	(Range:1-99, Default: 95)

Step 21. Check the **Enable** SNMP Traps check box to allow Simple Network Transport Protocol to send trap notifications. If traps are enabled, you must also enable SNMP and configure at least one SNMP Notification Recipient.

POE Settings

Power Mode:	<input checked="" type="radio"/> Port Limit	<input type="button" value="Edit"/>
	<input type="radio"/> Class Limit	<input type="button" value="Edit"/>
Legacy:	<input checked="" type="checkbox"/> Enable	
SNMP Traps:	<input checked="" type="checkbox"/> Enable	
Power Trap Treshold:	<input type="text" value="95"/> %	(Range:1-99, Default: 95)

Step 22. In the *Power Trap Threshold* field, enter the usage threshold that is a percentage of the power limit. An alarm is initiated if the power exceeds this value. The default value is 95.

POE Settings

Power Mode: Port Limit Class Limit

Legacy: Enable

SNMP Traps: Enable

Power Trap Treshold: % (Range:1-99, Default: 95)

Note: The PoE Properties Table displays the counters for each configured port.

- Operational Status — The operation status of the configured port.
- Nominal Power — The total amount of power the switch can supply to all the connected PDs.
- Consumed Power — Amount of power currently being consumed by the PoE ports.
- Allocated Power — Amount of power allocated for the port.
- Available Power — The nominal power (the amount of consumed power).

POE Properties Table				
Operational Status	Nominal Power	Consumed Power	Allocated Power	Available Power
	120w	0w	0w	120w

Step 23. Click **Apply**.

POE Settings

Power Mode: Port Limit Class Limit

Legacy: Enable

SNMP Traps: Enable

Power Trap Treshold: % (Range:1-99, Default: 95)

POE Properties Table				
Operational Status	Nominal Power	Consumed Power	Allocated Power	Available Power
	120w	0w	0w	120w

Step 24. (Optional) To save the configuration permanently, go to the Copy/Save Configuration page or click the  icon at the upper portion of the page.

You should now have successfully configured the PoE settings on your RV345P Router.