

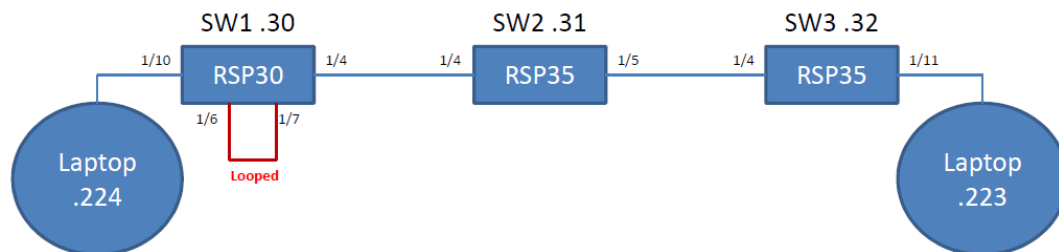
## HiOS: HTML- How to use RSPAN

John M - 2024-02-16 - HiOS

This guide is designed to assist in the configuration of RSPAN on the layer 2 switches. The configurations can be used in a 2 switch RSPAN network using SW1 and SW3 switch configurations. If the network is larger than 3 switches use the SW2 configuration in all the switches between the start and end switches.

### Network Topology

Switch 1 will be the switch that is doing the port mirroring. In this setup port 10 is being mirrored to port 6, port 6 is looped back to port 7 on VLAN 10, (it is important to turn RSTP off on ports 6 and 7 of switch 1), VLAN 10 is then forwarded across the uplinks to switch 3 port 11 where the mirrored packets can be monitored. **Note: the loop connection should be connected after switch 1 is fully configured.**



Switch Configuration:

### SW1

The VLANs will need to be configured as T for the uplink port and - for the looped ports in the comm vlan. Spanning tree needs to be disabled on the looped ports. Port mirroring needs to be enabled, the destination port selected, the source port enabled with the TX/RX selected for the type, and the RSPAN VLAN ID and the Destination VLAN ID need to be configured. See Screen shots below for reference.

| VLAN Configuration       |         |           |               |         |     |     |     |     |     |     |     |     |     |      |      |
|--------------------------|---------|-----------|---------------|---------|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|
| <input type="checkbox"/> | VLAN ID | Status    | Creation time | Name    | 1/1 | 1/2 | 1/3 | 1/4 | 1/5 | 1/6 | 1/7 | 1/8 | 1/9 | 1/10 | 1/11 |
| <input type="checkbox"/> | 1       | other     | 05s           | default | U   | U   | U   | T   | U   | -   | -   | U   | U   | U    | U    |
| <input type="checkbox"/> | 10      | permanent | 09s           |         | -   | -   | -   | T   | -   | -   | -   | -   | -   | -    | -    |

| Spanning Tree Port       |      |                                     |            |            |                |
|--------------------------|------|-------------------------------------|------------|------------|----------------|
| CIST                     |      | Guards                              |            |            |                |
| <input type="checkbox"/> | Port | STP active                          | Port state | Port role  | Port path cost |
| <input type="checkbox"/> | 1/1  | <input checked="" type="checkbox"/> | disabled   | disabled   | 0              |
| <input type="checkbox"/> | 1/2  | <input checked="" type="checkbox"/> | disabled   | disabled   | 0              |
| <input type="checkbox"/> | 1/3  | <input checked="" type="checkbox"/> | disabled   | disabled   | 0              |
| <input type="checkbox"/> | 1/4  | <input checked="" type="checkbox"/> | forwarding | root       | 200,000        |
| <input type="checkbox"/> | 1/5  | <input checked="" type="checkbox"/> | disabled   | disabled   | 0              |
| <input type="checkbox"/> | 1/6  | <input type="checkbox"/>            | manualFwd  | disabled   | 0              |
| <input type="checkbox"/> | 1/7  | <input type="checkbox"/>            | manualFwd  | disabled   | 0              |
| <input type="checkbox"/> | 1/8  | <input checked="" type="checkbox"/> | disabled   | disabled   | 0              |
| <input type="checkbox"/> | 1/9  | <input checked="" type="checkbox"/> | disabled   | disabled   | 0              |
| <input type="checkbox"/> | 1/10 | <input checked="" type="checkbox"/> | forwarding | designated | 200,000        |
| <input type="checkbox"/> | 1/11 | <input checked="" type="checkbox"/> | disabled   | disabled   | 0              |

| Port Mirroring  |                  |                                     |                |   |
|---|------------------|-------------------------------------|----------------|---|
| Operation   | Destination port |                                     | VLAN mirroring | RSPAN   |
| <input checked="" type="radio"/> On <input type="radio"/> Off | Primary port     | 1/6                                 | Source VLAN ID | 0   |
|   | Allow management | <input type="checkbox"/>            |                | Source VLAN ID <input type="text" value="0"/>       |
|   |                  |                                     |                | VLAN ID <input type="text" value="10"/>             |
|   |                  |                                     |                | Destination VLAN ID <input type="text" value="10"/> |
| <input type="checkbox"/>                                      | Source port      | Enabled                             | Type           |   |
| <input type="checkbox"/>                                      | 1/1              | <input type="checkbox"/>            | none           |   |
| <input type="checkbox"/>                                      | 1/2              | <input type="checkbox"/>            | none           |   |
| <input type="checkbox"/>                                      | 1/3              | <input type="checkbox"/>            | none           |   |
| <input type="checkbox"/>                                      | 1/4              | <input type="checkbox"/>            | none           |   |
| <input type="checkbox"/>                                      | 1/5              | <input type="checkbox"/>            | none           |   |
| <input type="checkbox"/>                                      | 1/6              | <input type="checkbox"/>            | none           |   |
| <input type="checkbox"/>                                      | 1/7              | <input type="checkbox"/>            | none           |   |
| <input type="checkbox"/>                                      | 1/8              | <input type="checkbox"/>            | none           |   |
| <input type="checkbox"/>                                      | 1/9              | <input type="checkbox"/>            | none           |   |
| <input type="checkbox"/>                                      | 1/10             | <input checked="" type="checkbox"/> | txrx           |   |
| <input type="checkbox"/>                                      | 1/11             | <input type="checkbox"/>            | none           |   |

## SW2

The VLANs will need to be configured as T for the uplink ports. In the Port mirroring tab RSPAN VLAN ID needs to be configured. See Screen shots below for reference

| VLAN Configuration          |           |               |         |     |     |     |     |     |     |     |     |     |      |      |  |
|-----------------------------|-----------|---------------|---------|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|--|
| VLAN ID                     | Status    | Creation time | Name    | 1/1 | 1/2 | 1/3 | 1/4 | 1/5 | 1/6 | 1/7 | 1/8 | 1/9 | 1/10 | 1/11 |  |
| <input type="checkbox"/> 1  | other     | 05s           | default | U   | U   | U   | T   | T   | U   | U   | U   | U   | U    | U    |  |
| <input type="checkbox"/> 10 | permanent | 09s           |         | -   | -   | -   | -   | T   | -   | -   | -   | -   | -    | -    |  |

| Port Mirroring   |  |  |   |
|--|--|--|---|
| Operation  | Destination port   | VLAN mirroring                                 | RSPAN   |
| <input type="radio"/> On<br><input checked="" type="radio"/> Off | Primary port: <input type="text" value="-"/><br>Allow management: <input type="checkbox"/> | Source VLAN ID: <input type="text" value="0"/> | Source VLAN ID: <input type="text" value="0"/><br>VLAN ID: <input type="text" value="10"/><br>Destination VLAN ID: <input type="text" value="0"/> |

| <input type="checkbox"/> | Source port | Enabled                  | Type |
|--------------------------|-------------|--------------------------|------|
| <input type="checkbox"/> | 1/1         | <input type="checkbox"/> | none |
| <input type="checkbox"/> | 1/2         | <input type="checkbox"/> | none |
| <input type="checkbox"/> | 1/3         | <input type="checkbox"/> | none |
| <input type="checkbox"/> | 1/4         | <input type="checkbox"/> | none |
| <input type="checkbox"/> | 1/5         | <input type="checkbox"/> | none |
| <input type="checkbox"/> | 1/6         | <input type="checkbox"/> | none |
| <input type="checkbox"/> | 1/7         | <input type="checkbox"/> | none |
| <input type="checkbox"/> | 1/8         | <input type="checkbox"/> | none |
| <input type="checkbox"/> | 1/9         | <input type="checkbox"/> | none |
| <input type="checkbox"/> | 1/10        | <input type="checkbox"/> | none |
| <input type="checkbox"/> | 1/11        | <input type="checkbox"/> | none |

## SW3

Finally use the screen shots to as a guide for switch 3 configuration of VLANs and port mirroring/RSPAN The VLANs will need to be configured as T for the uplink port and - for the destination port in the comm vlan. Port mirroring needs to be enabled, the destination port selected, and the RSPAN Source VLAN ID and the VLAN ID need to be configured. See Screen shots below for reference.

| VLAN Configuration          |           |               |         |     |     |     |     |     |     |     |     |     |      |      |  |
|-----------------------------|-----------|---------------|---------|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|--|
| VLAN ID                     | Status    | Creation time | Name    | 1/1 | 1/2 | 1/3 | 1/4 | 1/5 | 1/6 | 1/7 | 1/8 | 1/9 | 1/10 | 1/11 |  |
| <input type="checkbox"/> 1  | other     | 05s           | default | U   | U   | U   | T   | U   | U   | U   | U   | U   | U    | -    |  |
| <input type="checkbox"/> 10 | permanent | 09s           |         | -   | -   | -   | -   | -   | -   | -   | -   | -   | -    | -    |  |

| Port Mirroring   |   |  |  |
|--|---|--|--|
| Operation  | Destination port  | VLAN mirroring                                 | RSPAN  |
| <input checked="" type="radio"/> On<br><input type="radio"/> Off | Primary port: <input type="text" value="1/11"/><br>Allow management: <input type="checkbox"/> | Source VLAN ID: <input type="text" value="0"/> | Source VLAN ID: <input type="text" value="10"/><br>VLAN ID: <input type="text" value="10"/><br>Destination VLAN ID: <input type="text" value="0"/> |

| <input type="checkbox"/> | Source port | Enabled                  | Type |
|--------------------------|-------------|--------------------------|------|
| <input type="checkbox"/> | 1/1         | <input type="checkbox"/> | none |
| <input type="checkbox"/> | 1/2         | <input type="checkbox"/> | none |
| <input type="checkbox"/> | 1/3         | <input type="checkbox"/> | none |
| <input type="checkbox"/> | 1/4         | <input type="checkbox"/> | none |
| <input type="checkbox"/> | 1/5         | <input type="checkbox"/> | none |
| <input type="checkbox"/> | 1/6         | <input type="checkbox"/> | none |
| <input type="checkbox"/> | 1/7         | <input type="checkbox"/> | none |
| <input type="checkbox"/> | 1/8         | <input type="checkbox"/> | none |
| <input type="checkbox"/> | 1/9         | <input type="checkbox"/> | none |
| <input type="checkbox"/> | 1/10        | <input type="checkbox"/> | none |
| <input type="checkbox"/> | 1/11        | <input type="checkbox"/> | none |

