



Ethernet Routing Switch 2500

Software Release 4.2.2

1. Release Summary

Release Date: 18-February-2009

Purpose: Software patch release to address customer found software issues.

2. Important Notes Before Upgrading to This Release

None.

3. Platforms Supported

Ethernet Routing Switch 2500 (all models).

4. Notes for Upgrade

Please see "Nortel Ethernet Routing Switch 2500 Series Overview — System Configuration" (NN47215-500, available at <http://www.nortel.com/support> - select Routers & Routing Switches, then select the appropriate Ethernet Routing Switch 2500 model) for details on how to upgrade your Switch.

File Names For This Release

File Name	Module or File Type	File Size (bytes)
2500_10014_diag.bin	Diagnostic image	1,265,244
2500_422004.img	Agent code image	4,801,932
2500_422005s.img	Agent code image (SSH)	4,903,400

5. Version of Previous Release

Software Version 4.2.1.

6. Compatibility

This software release is managed with Java Device Manager (JDM) release 6.0.9 or later.

7. Changes in This Release

New Features in This Release

QoS Scheduling Enhancement

The purpose of this feature is to allow the changing of the scheduling algorithm for each QoS queue to either strict priority or weighted round robin. At this moment, the user can only modify the scheduling algorithm for all four queues and not for a specific queue.

1. Description of the current qos scheduling support

In the current 4.2 release, the QoS policy type (or scheduling algorithm) can be modified **for all queues at once** and its default value is set to WRR (Weighted Round Robin). For a factory default device, the output of 'show qos traffic-class policy' command will be:

```
2550T-PWR#show qos traffic-class policy
```

Current traffic class policy is WEIGHTED ROUND ROBIN

If the user wants to modify the policy type to Strict, the following command can be used:

```
2550T-PWR(config)#qos traffic-class policy strict
```

followed by 'show' command to verify that modification took place:

```
2550T-PWR(config)#show qos traffic-class policy
```

Current traffic class policy is STRICT

2. Description of the QOS Scheduling Enhancement

With this new enhancement, the user should be able to modify the policy type on a per-queue basis. This means that the CLI will be modified in order to accept as a parameter the queue type when the policy type is set through the CLI.

The new CLI command has the following syntax:

```
2550T-PWR(config)#qos traffic-class policy [bounded-round-robin | strict | weighted-round-robin] queue [high | highest | low | medium]
```

The weights won't be affected by this command and they can be easily modified using the same 'qos traffic-class queue' command as in the 4.2 release.

For a factory default switch the policy type for the highest queue will be set to Strict (Strict Priority) and for the other three queues (high, medium, low) the policy type will be set to WRR (Weighted Round Robin). For a factory default device, the output of 'show qos traffic-class policy' command will be:

```
2550T-PWR(config)#show qos traffic-class policy
```

Queue	Policy
-----	-----
Highest	Strict
High	Weighted Round Robin
Medium	Weighted Round Robin
Low	Weighted Round Robin

The default values for weights will be as above:

```
2550T-PWR(config)#show qos traffic-class queue weights
```

Queue	Low	Medium	High	Highest
-----	-----	-----	-----	-----
Weight	32	64	96	128

Note: Strict priority and Weighted Round Robin queue behaviour

When using strict priority, the packets from the queues with strict priority as traffic class policy will be sent first as long as there are packets in these queues. If there are no packets in the strict priority queues, packets are sent from other queues (those with Weight Round Robin policy) in a weighted round robin fashion. For example, if all queues are using strict priority as traffic class policy, then packets are sent first from highest priority queue until queue becomes empty and then from the other ones (high, medium and low). Another example: if Low queue uses strict priority as traffic class policy and Medium, High and Highest queues use Weighted Round Robin, then packets are sent first from Low queue as long as there are packets in there and then from the other three queues in a round robin manner.

Configuration examples

1. All queues using Strict Priority

```
2550T-PWR(config)#qos traffic-class policy strict
```

To verify that modification took place, use the 'show qos traffic-class' command as follows:

```
2550T-PWR(config)#show qos traffic-class policy
```

Queue	Policy
-----	-----
Highest	Strict
High	Strict
Medium	Strict
Low	Strict

2. All queues using WRR (Weighted Round Robin)

```
2550T-PWR(config)#qos traffic-class policy weighted-round-robin
```

To verify that modification took place, use the 'show qos traffic-class' command as follows:

```
2550T-PWR(config)#show qos traffic-class policy
```

Queue	Policy
-----	-----
Highest	Weighted Round Robin
High	Weighted Round Robin
Medium	Weighted Round Robin
Low	Weighted Round Robin

3. Two queues using Strict priority and the other two using WRR (Weighted Round Robin)

```
2550T-PWR(config)#show qos traffic-class policy strict queue highest
2550T-PWR(config)#show qos traffic-class policy strict queue medium
```

To verify that modification took place, use the 'show qos traffic-class' command as follows:

```
2550T-PWR(config)#show qos traffic-class policy
```

Queue	Policy
-----	-----
Highest	Strict
High	Strict
Medium	Weighted Round Robin
Low	Weighted Round Robin

Old Features Removed From This Release

None.

Problems Resolved in This Release

When VLACP put a port down, the next best static route is unavailable (**Q01978509-01**)

8. Outstanding Issues

None.

9. Known Limitations

None.

10. Documentation Corrections

For other known issues, please refer to the product release notes and technical documentation available from the Nortel Technical Support web site at: <http://www.nortel.com/support> .

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