

FreeNAS - Feature #23978

Enable VLAN priority code point (vlanpcp) for CoS classification

05/15/2017 09:23 PM - Vinícius Ferrão

Status:	Resolved	Estimated time:	0.00 hour
Priority:	Nice to have		
Assignee:	William Grzybowski		
Category:	Middleware		
Target version:	11.1-BETA1		
Severity:	New	Needs Merging:	Yes
Reason for Closing:		Needs Automation:	No
Reason for Blocked:		Support Suite Ticket:	n/a
Needs QA:	No	Hardware Configuration:	
Needs Doc:	Yes		

Description

It would be great and extremely interesting in datacenter environments to have control about the VLAN priority code point to classify storage traffic on a given VLAN interface.

FreeBSD 11.0-STABLE [<https://svnweb.freebsd.org/base?view=revision&revision=301496>] already supports this, and it's just a question of enabling a field on the web interface to set the 3 byte value of the CoS field on the 802.1q frame.

I've done simple tests on FreeNAS 11.0-RC and I was able to set the vlanpcp over the CLI:

```
[root@freenas ~]# ifconfig vlan1
vlan1: flags=8843<UP,BROADCAST,RUNNING,SIMPLEX,MULTICAST> metric 0 mtu 1500
  options=3<RXCSUM, TXCSUM>
  ether 00:0c:29:06:33:14
  nd6 options=9<PERFORMNUD,IFDISABLED>
  media: Ethernet autoselect (1000baseT <full-duplex>)
  status: active
  vlan: 10 vlanpcp: 0 parent interface: em0
  groups: vlan
```

```
[root@freenas ~]# ifconfig vlan1 vlanpcp 4
```

```
[root@freenas ~]# ifconfig vlan1
vlan1: flags=8843<UP,BROADCAST,RUNNING,SIMPLEX,MULTICAST> metric 0 mtu 1500
  options=3<RXCSUM, TXCSUM>
  ether 00:0c:29:06:33:14
  nd6 options=9<PERFORMNUD,IFDISABLED>
  media: Ethernet autoselect (1000baseT <full-duplex>)
  status: active
  vlan: 10 vlanpcp: 4 parent interface: em0
  groups: vlan
```

```
[root@freenas ~]
```

Enabling this would be breakthrough for implement Lossless iSCSI traffic on DCB Enabled switches that relies on CoS Classification to match the iSCSI traffic.

Associated revisions

Revision 58cf38bd - 07/13/2017 09:04 AM - William Grzybowski

feat(gui): UI bits for VLAN priority code point feature

Ticket: #23978

Revision a4de011f - 07/13/2017 09:07 AM - William Grzybowski

feat(gui): refer PCP to CoS

Ticket: #23978

Revision 456ee5e9 - 07/13/2017 09:33 AM - William Grzybowski

feat(rc): add vlanpcp if any

Ticket: #23978

Revision 0d2e624d - 07/13/2017 10:03 AM - William Grzybowski

feat(middlewared): sync VLAN PCP

Ticket: #23978

Revision feaf5baa - 07/13/2017 10:24 AM - William Grzybowski

Update py-netif for VLAN PCP support

Ticket: #23978

Revision 57fccdc3 - 07/14/2017 05:23 AM - William Grzybowski

Merge pull request #234 from freenas/feature/vlanpcp

VLAN PCP support

Ticket: #23978

Revision c77d8f7e - 07/21/2017 05:44 PM - William Grzybowski

feat(gui): UI bits for VLAN priority code point feature

Ticket: #23978

Revision 698b8b32 - 07/21/2017 05:44 PM - William Grzybowski

feat(gui): refer PCP to CoS

Ticket: #23978

Revision 82696ce1 - 07/21/2017 05:44 PM - William Grzybowski

feat(rc): add vlanpcp if any

Ticket: #23978

Revision 3c466cf6 - 07/21/2017 05:44 PM - William Grzybowski

feat(middlewared): sync VLAN PCP

Ticket: #23978

Revision 5f1034a5 - 10/09/2017 10:23 AM - Dru Lavigne

Doc new VLAN CoS feature.

Ticket: #23978

History

#1 - 05/16/2017 06:01 AM - William Grzybowski

- Status changed from Unscreened to 15

Can't you just use the auxiliary options field for that?

#2 - 05/16/2017 01:09 PM - Vinícius Ferrão

Definitely I can do this. But since it's a new feature from 11.0-STABLE and it's working on FreeNAS 11.0-RC backend would be really cool if this got a field on the web interface.

The major reason I'm asking this is because of the visibility and placement of FreeNAS/TrueNAS on the Datacenter. Some comercial appliances already does that as part of it's DCB [[https://en.wikipedia.org/wiki/Data_center_bridging]] implementation. NetApp for instance does this transparently: [[<https://kb.netapp.com/support/s/article/ka21A0000000kgkQAA/does-the-storage-system-set-the-cos-field-on-a-vlan-tagged-frame>]]

And finally, it appears to be a really simple feature to be implemented on the web interface. CoS 4 is the commonly used value for iSCSI traffic for instance, a simply checkbox with something like: "Enable this VLAN for CoS tagging" and defaulting to vlanpcp 4 would be sufficient and error free.

#3 - 05/16/2017 01:16 PM - William Grzybowski

- Status changed from 15 to Screened

- Target version set to 11.1

#4 - 07/13/2017 09:34 AM - William Grzybowski

- Status changed from Screened to Fix In Progress

#5 - 07/13/2017 12:50 PM - William Grzybowski

- Status changed from Fix In Progress to Needs Developer Review

- Assignee changed from William Grzybowski to Marcelo Araujo

<https://github.com/freenas/freenas/pull/234>

#6 - 07/14/2017 12:44 AM - Marcelo Araujo

- Status changed from Needs Developer Review to Reviewed by Developer

- Assignee changed from Marcelo Araujo to William Grzybowski

LGTM!

#7 - 07/14/2017 05:26 AM - William Grzybowski

- Status changed from Reviewed by Developer to Ready For Release

#8 - 09/09/2017 10:31 AM - Dru Lavigne

- Subject changed from Enable VLAN priority code point (vlanpcp) for CoS classification on Web Interface to Enable VLAN priority code point

(vlanpcp) for CoS classification

#9 - 09/26/2017 10:17 AM - Dru Lavigne

- *Target version changed from 11.1 to 11.1-BETA1*

#10 - 10/24/2017 04:47 AM - Dru Lavigne

- *Status changed from Ready For Release to Resolved*

#11 - 11/26/2017 05:08 PM - Nick Wolff

- *Needs QA changed from Yes to No*

- *QA Status Test Passes FreeNAS added*

- *QA Status deleted (Not Tested)*

Verified priority is setting on interface properly and also via tcpdump. Test passes