



# Release Note

Quanta OS 1.4.23.00

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## Support Hardware

Model	Description
T1048-LB9	L2/L3/L4 Ethernet switch with 48 10Base-T/100Base-TX/1000Base-T and 4 1/10G SFP+ ports in a compact rack unit size (fixed AC input)
T1048-LB9A	L2/L3/L4 Ethernet switch with 48 10Base-T/100Base-TX/1000Base-T and 4 1/10G SFP+ ports in a compact rack unit size (redundant and hot-swap AC power)
T3040-LY2	L2/3/4 Data Center Ethernet switch with 48 1/10G SFP+ ports and 4 40G QSFP+ ports in a compact rack unit size
T3048-LY2R	L2/L3/L4 Data Center Ethernet switch with 48 1/10G SFP+ ports and 4 40G QSFP+ ports in a compact rack unit size (PHYless design)
T3048-LY3	L2/L3/L4 Data Center Ethernet switch with 40 10GBase-T ports and 8 1/10G SFP+ ports in a compact rack unit size
T5016-LB8D	L2/L3/L4 Data Center Ethernet switch with 16 40G QSFP+ ports in a compact rack unit size
T3064-LY1R	L2/L3/L4 Data Center Ethernet switch with 64 1/10G SFP+ ports in a compact rack unit size (PHYless design)
T3024-P05	

## Kernel and Root

HW	T5016-LB8D	T1048-LB9	T1048-LB9A	T3040-LY3	T3048-LY2
<b>Linux kernel</b>	V2.6.35	V2.6.35	V2.6.35	V2.6.35	V2.6.35
<b>Quanta Kernel</b>	1.0.4.0	1.0.5.0	1.0.4.0	1.0.4.0	1.0.4.0
<b>Rootfs</b>	1.0.5.0	1.0.5.0	1.0.4.0	1.0.4.0	1.0.4.0
<b>Dtb</b>	1.0.2.0	1.0.3.0	1.0.2.1	1.0.2.2	1.0.2.0
<b>HW</b>	T3048-LY2R	T3064-LY1R			
<b>Linux kernel</b>	V2.6.35	V2.6.35			
<b>Quanta Kernel</b>	1.0.6.0	1.0.4.0			
<b>Rootfs</b>	1.0.6.0	1.0.4.0			
<b>Dtb</b>	1.0.0.1	1.0.0.2			

## Installation and Configuration Note

Refer to 0.



## New and Enhancement

Feature	Description	License
License	Change to single license key	

## Resolved Issues

Issue ID	Description
	<p>The aging time of ARP entry is floating between 0 ~ 10 continuously on routing port.</p> <p>apply attached command, the switch errors reset startup config flag and save running to incorrect file.</p>

## Open Caveats

Feature	Description	Notes
HTTP	<p>The system cannot be access through HTTPS by using Firefox.</p> <ul style="list-style-type: none"> <li>- This problem is present since Firefox 4, Firefox 3.x didn't have this problem.</li> <li>- When user press "Add exception" for IPv6 https connection, it will pop up an alert message (Peer's Certificate issuer is not recognized. (Error code: sec_error_unknown_issuer) and then show "Unable to obtain identification status for given site" in "Add Security Exception" dialog.</li> <li>- FF 12 will not pop up an alert message but will also show "Unable to obtain identification status for given site" in "Add Security Exception" dialog.</li> <li>- This defect is published in Firefox's bug tracking website and its bug id is 661118 and 633001. Link are <a href="https://bugzilla.mozilla.org/show_bug.cgi?format=multiple&amp;id=661118">https://bugzilla.mozilla.org/show_bug.cgi?format=multiple&amp;id=661118</a> and <a href="https://bugzilla.mozilla.org/show_bug.cgi?id=633001">https://bugzilla.mozilla.org/show_bug.cgi?id=633001</a></li> </ul>	Limited by Firefox
HTTP	<p>Use IPv6 link-local address to login WEBUI will create 6 login sessions at the same time &amp; Java applet can't work.</p> <ul style="list-style-type: none"> <li>- This session needs support of cookie, but in IE's IPv6 link-local address, Scope ID of "%25" make IE8 with IPv6 cannot create the cookie. That's why there are a lot of session because every webpage linking is a new session without cookie recording session id.</li> <li>- %25 also makes Java applet can't work.</li> </ul>	Limited by IE and Java



	<ul style="list-style-type: none"> <li>- Refer to <a href="http://stackoverflow.com/questions/4649115/ipv6-scope-id-problem-with-ie-and-asp-net">http://stackoverflow.com/questions/4649115/ipv6-scope-id-problem-with-ie-and-asp-net</a> for detail information</li> </ul>	
SSH	When enabling SSH on a system that does not have the private keys, the CLI will be unresponsive while creating the RSA and DSA private keys	Will not fix
PIM-DM	Suggest enabling PIM-DM feature on no more 16 routing interfaces at the same time. There will be a performance issue.	Limited by hardware
ACL	Using MAC ACL rule to drop BPDUs in outbound direction cannot be achieved.	Will not fix
SSH	When the login authentication method is configured as enable or line to authenticate users using the enable or line password, then the user name is not required. The "User:" prompt is not displayed for console and Telnet users; however, SSH users are still prompted to provide the user details.	Will not fix
VRRP	When a router becomes the VRRP master, it sends a VRRP advertisement message to indicate that it is the master, and it sends a gratuitous ARP message to update neighbors' ARP cache entries for the VRRP IP address. If the previous master processes the ARP message before the VRRP advertisement, then it processes the ARP message while it believes it is still the VRRP master. The receiver considers this situation an IP address conflict and prints a log message to that effect. The conflict is resolved as soon as the old master processes the VRRP advertisement from the new master. This transient conflict does not cause any operational impact and the log messages can safely be ignored.	Will not fix

## Change History

### Revision: 1.4.22.00

#### New and Enhancement

Feature	Description	License
	Add LB9 PartNo 1LB9BZZ0007,1LB9BZZ0008,20LB9BU0030 Support	



## Revision: 1.4.21.00

### New and Enhancement

Feature	Description	License
ARP	microsoft NLB support.	
MLAG	LACP fallback	
VRRP	active-active support	

### Resolved Issues

Issue ID	Description
#157807	[System] After execute "clear config", the DUT will not return to login mode.
#158683	[BGP]DUT reboots and show LV7 exception error with task "emWeb" when enable/disable BGP.
#159472	[Package upgrade fail] Repeat copy package file, there is chance causing switch rebooting
#159498	static route over serviceport.
#159804	Customer ask to add a command for configure the loopback interface to be a rp-candidate.
#159602	[show tech-support] incorrect interface name for port channel
#160772	writePLDcommand2 error message
#160800	Cannot add Openflow flow entry to the system by using Opendaylight controller

## Revision: 1.4.20.00

### Resolved Issues

Issue ID	Description
	[LY2R] Remove Debug Message

## Revision: 1.4.19.00

### Resolved Issues

Issue ID	Description
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#157654	[Build 1.4.16.02][Mail alert][CLI] Hint typo of mail alert security configuration.
#157818	[Build 1.4.15.00][User management] After set password recovery, the system will delete user which is new create.
#157942	[Build 1.4.15.02][LY3] The storm-control rate will reset to default value automatically after rebooting with save config.
#157970	[Build 1.4.15.02][LY3] The storm-control rate will reset to default value automatically after enabling another storm-control feature via port mode.
#157980	[Build 1.4.15.02][LY3] The storm-control rate will reset to default value automatically after disable and enable port.
#158525	[FAE_JD]LY2R FAN LED does not light up when FAN is inactive
	P05 Support
	Support 1LY2BZZ001, 1LY2BZZ001E, 1LY2BZZ001D,1LY2BZZ001B, 1LY2BZZ0016, 1LY2BZZ0015.

## Revision: 1.4.18.00

### Resolved Issues

Issue ID      Description

#151862	[LY3][MSTP]The spanning tree state of non-instance 0 is incorrect.
#152961	[SSH][FAE][QCT_Propertytsolutions] after "clear arp", SSH client can't connect to switch
#152967	[Build 2.4.01.09][STP] Diabile STP port mode cannot work properly if BPDU guard ever trigged on the port
#152970	[Build 2.4.01.09][STP] Wrong Edge port Status after BPDU guard is triggered
#152977	[Build 2.4.01.09][STP] Interface command "spanning-tree bpduflood" does not work at all
#155262	[Build 1.4.15.03][ACL] System reboot when configure mac acl & ipv6 acl on the same port then clear config..
#155691	LY2R [Port] port link down and take a very long time to link up once reload. Disable parity check.

## Revision: 1.4.17.00

### Resolved Issues



Issue ID      Description

#151862	[LY3][MSTP]The spanning tree state of non-instance 0 is incorrect.
#152961	[SSH][FAE][QCT_Propertyolutions] after "clear arp", SSH client can't connect to switch
#152967	[Build 2.4.01.09][STP] Diabile STP port mode cannot work properly if BPDU guard ever trigged on the port
#152970	[Build 2.4.01.09][STP] Wrong Edge port Status after BPDU guard is triggered
#152977	[Build 2.4.01.09][STP] Interface command "spanning-tree bpduflood" does not work at all
#155262	[Build 1.4.15.03][ACL] System reboot when configure mac acl & ipv6 acl on the same port then clear config..
#155691	LY2R [Port] port link down and take a very long time to link up once reload. Disable parity check.

## Revision: 1.4.16.00

### Resolved Issues

Issue ID      Description

#688	[LACP] Enhance LACP to avoid mac flapping (LACP and NIM part.)
#689	[LACP] Enhance LACP to avoid mac flapping (STP part.)
#151871	[Build 1.4.13.04][MLAG] MLAG mac sync function can't work properly.
#152568	[Build 1.4.13.06][FIP snooping] FIP snooping can not work on default VLAN1
#152872	[Build 2.4.1.9][System][P2020] The MAC address in show system/show version suggest to change label/base MAC Fixed Web can't work issue Fix CLI hung issue when doing firmware upgrade via telnet/ssh Redirect all BCM ERROR Message to file bcmlog.txt MLAG member port is still in err-disable state after mac-flapping recovery time is up

## Revision: 1.4.15.00

### Resolved Issues

Issue ID      Description

#151088	[Build 2.4.01.03][File Transfer]DUT with IPv6 link local to upload config via SCP/SFTP/FTP method can not work.
#151263	[Web-GUI] After web time-out and ask user to re-login, the username display a word "logout"



[Build 1.4.13.06][System] The command speed-duplex 1000 cannot work after reload the system
[OSPF] The system will not send out flush LSU after disable OSPF.
[Build 1.4.13.06][System] After "IDLE TIMEOUT" occurred, several words "--More-- or (q)uit" came out right after "User: " login
[Build 1.4.13.06][DCBX ETS] The Max Traffic Class should not carry 0 in LLDP DCBX of packets.
[Build 1.4.13.06][i2c] System show i2c error when loop all interface.
[Build 1.4.13.06][LY3] Storm-control default value is 4160.
[Build 1.4.13.06][Link State][LY3] shutdown then no shutdown may cause the downstream port status from disable to enable.
[L2][FAE] unknown MAC will go to CPU increasing cpu loading
[Port-Backup] Mac entries learned from port-backup member port will be cleared when "Failback" function
[LACP] Incorrect comment of lacp event number
[MLAG] The system mac in primary will be overwritten by secondary.
[MLAG] Can't show system mac change in "show running-config" command if the system mac is 00:23:04:EE:BC:01
Fix CLI hung issue when doing firmware upgrade via telnet/ssh.
Fix CLI display issue for error-disabled interface.
Workaround device reset due to L3 interface delete fail issue as following log.
[LY1R/LY2R/LY4] Link down issue after change admin mode from disable to enable
Sync Part Number With PM

## Revision: 1.4.14.00

### New and Enhancement

Feature	Description	Advanced License
DOM	Enhance the early detection of DDM when insert the transceiver.	

### Resolved Issues

Issue ID	Description
#519	[ FIP-snooping][SNMP] Some FIP-snooping issues of SNMP need to correct.
#548	System halt after create several port-channel groups.



Set baud rate to 9600, delete config all, reload. But console baud rate does not change to 115200.
Show tech-support does not support in Telnet/SSH session
add a command for filter the privilege of logging buffer entries.
[802.1x]802.1x with mac-base can not work normally.
[LB9] DDM test cannot read optomedia 10G AOC 1m/20m data
[LY2R] Wavelength cannot set properly with error message
LY3 does not support PART NUMBER 1LY3BZZ0ST7
Openssl issue CVE-2014-0224 which allows man-in-the-middle attackers to trigger use of a zero-length master key in certain OpenSSL-to-OpenSSL communications
[SSH] ssh client v1 will be disconnected when pressing any key.
[DOM] reads loopback transceiver issue.
Patch defect [openflow1.3] System reboot when connected to RYU controller.
LY3 udd will errDisable some ports when changing some port descriptions at the same time
LY2R 40G interface media type and pre-emphasis is not correct.
[L2][ARP] sync issue in heavy traffic and peer link up/down.
[PING] ping latency issue
[MLAG] Change MAC address from Cisco to Quanta
Check Power Module error

## Revision: 1.4.13.00

### New and Enhancement

Feature	Description	Advanced License
MLAG	<p>Enhancement</p> <ul style="list-style-type: none"> <li>- Support peer keepalive link.</li> <li>- MLAG secondary switch will be shutdown its member ports when peer link is link down and peer keepalive link is up.</li> <li>- MLAG secondary switch will be still acting as normal if peer keepalive link and perr link are both lost.</li> <li>- The member ports shutdown by MLAG secondary switch will be in an errdisable state Use 'show interface status err-</li> </ul>	



	disabled' to check the state. - 'mlog peer-keepalive {destination <ipAddr>   source <ipAddr>   timeout <3-20>}'
ACL	TCP flag support  - use command 'permit tcp any any flag <value>' to specify the tcp flag to be checked
DOM	Support  Improve the display time for show running-config command  when 4k VLANs are created
Watchdog timer	Support

### Resolved Issues

Issue ID	Description
	'mlog peer-keepalive source' command is incorrect in running-config
	Fix spanning-tree loop guard to be the same behavior as Cisco
	Fix error message popup after enabling storm control

### Revision: 1.4.12.00

#### New and Enhancement

Feature	Description	Advanced License
MAC flapping detection	When loop is detected, the port will be disabled automatically. And the disabled port will be bringing out the disable state if the err-disable recovery is enabled. Err-	



	disable recovery for mac flapping is enabled by default.	
Syslog facility setting	<ul style="list-style-type: none"> <li>- Allow user to configure the syslog facility</li> <li>- Use 'logging syslog facility &lt;0-23&gt;'</li> </ul>	
OpenFlow 1.3	Support	Must

### Resolved Issues

Issue ID	Description
	Loop might be occurred in MLAG environment
	Adjust system time or sync system time by SNTP will cause VRRP change state from backup to master
#142562	[Radius] After deadtime time out, DUT doesn't send request to the current Radius server.
#142579	Display wrong network number in UI when enable OSPF through network command
	Fix MTU command can't be set on a port-channel interface
	There should be no space between <PRI> and timestamp for syslog
#143164	[OSPF] The next hop of default route that is learned from link partner is wrong.
#142808	[OSPF] The value of P-bit is wrong when generate the default route from the ABR to NSSA area
#144103	Can't be ssh via python script
	System might be halted with a heavy traffic to CPU



## Revision: 1.4.10.00

### New and Enhancement

Feature	Description	Advanced License
BGP4	Support	Must
IS-IS	Support	Must
OpenFlow 1.2	Support	Must
MLAG ISSU	<p>To minimum the traffic interrupt during one of MLAG pair is performed ISSU.</p> <p>Just use 'reload' command, no additional command is required.</p> <p>In L3 MLAG, the delay restore have to be configured to let the routing protocol ready before starting to forward/routing packet from this switch.</p>	
PBR w/ ECMP	<p>Allow to add multiple next hops. Those next hops will be behavior as ECMP.</p> <p>The OSPF packet will not be redirected by PBR policy. (PBR policy will ignore packet with MACDA is 01-00-5e-00-00-xx)</p> <p>PBR could be also applied on the vlan interface.</p>	
LACP Fallback mode	<p>Commands 'lACP fallback' and 'lACP fallback timeout &lt;1-100&gt;' are supported on port-channel interface.</p> <p>One of LACP links will be chosen to form a single link port-channel if the LACP is failed to negotiate.</p> <p>The lower lACP port priority or lower port interface number will have a higher priority to become active member.</p> <p>If MLAG is used, the port on primary MLAG will have a higher priority to become active member if both of the priority and port number are the same.</p>	



	<p>This feature usually applies for the PXE environment</p>
LACP Min. Links	<p>Command 'lACP min-links' is supported on port-channel interface.</p> <p>The port-channel will become UP while the number of the active links of the port-channel member is greater than the configured min. links.</p> <p>Otherwise, the port-channel will become link DOWN.</p>
Dead Gateway Detection	<p>ARP packet will be sent with 5 second interval periodically to the next hop of static routes (ECMP) to detect if the next hop is alive or not.</p> <p>If the next hop is not response more than 3 times, this next hop will be removed and to choose another alive next hop if ECMP is existed.</p> <p>After the dead next hop is back, the route will be re-inserted into chipset for packet routing.</p> <p>To improve performance of the VTP pruning operation.</p>

### Resolved Issues

Issue ID	Description
#139877	The source IP address of the SNMP reply is incorrect.

### Revision: 1.4.06.00

### New and Enhancement

Feature	Description	Advanced License
VRRP	Support preempt delay feature	

### Resolved Issues



Issue ID	Description
#139095	DUT hangs up when use command "show startup-config" with no pager
#139084	Show running is very slowly when telnet to switch VLAN routing port configured with IP MTU 9000.  There might be a memory problem if VTP is enabled and the VLAN ID greater than 1005 is created.

### Revision: 1.4.05.00

#### Resolved Issues

Issue ID	Description
#139095	SNMPUI cannot get responses from SNMP server when create a SNMP community and set access client IP.

### Revision: 1.4.04.00

#### New and Enhancement

Feature	Description	Advanced License
MLD Snooping	DO NOT learn the solicited-node multicast address to the trace table entry (hardware)	
STP	Disable STP for LB9/LB9A 32M Flash model to compatible with old setting of vxworks	
Email Alerting	Support	
CLI scheduler	Support	

#### Resolved Issues



Issue ID	Description
	[RIP] Running ANVL RIP case, high chances to see console lock
	[PIMSM] mcast data can't be forwarded correctly.
	[MLAG] MLAG member port will be set to software learning mode and can't forward packets before MLAG has been established.
	Net Buffer was not freed on DHCP relay function.
	Routing interfaces might not be up after system is booted.
	Fixed Security issue: format string vulnerability.
	System might be crashed if 'show run' is the first command to be executed after system is booted.

## Revision: 1.4.02.00

### New and Enhancement

Feature	Description	Advanced License
VLAN	Change the port-channel and vlan interface configuration behavior	
Source IP configuration	Support	
PBR	Support	
AAA Accounting	Support	
MLAG	Support	



/31 subnets	Support
RPCAP	Support
UDLD	Support
iSCSI Optimization	Support
Auto VoIP	Support



## Appendix A. Installation and Configuration Note

In general, the device will be shipped to you with this version of firmware. If you would like to upgrade an existing device, please follow the TFTP download instructions.

### CLI commands:

```
(Quanta)#conf
(Config)#serviceport proto none
(Config)#serviceport ip 192.168.2.1 255.255.255.0 192.168.2.254
(Quanta)#exit
(Quanta)#copy tftp://TFTP_Server_IP/Package_name package
(Quanta)#copy tftp://TFTP_Server_IP/Image_name image IMAGE_NAME
(Config)#boot op IMAGE_NAME
(Quanta)#reload
```

### Default Settings:

Default IP Address  
IP: none  
Login User/Password: (*admin/*)  
SNMP OID: 1.3.6.1.4.1.7244



## Appendix B. Firmware Upgrade by MLAG ISSU

From version 1.4.14.00, the default MLAG system MAC is changed to integrate Quanta's MAC address.

If your existing device has enabled MLAG with "default System MAC" and you would like to upgrade firmware to version later than 1.4.14.00 (included) by MLAG ISSU function, please follow below procedure.

1. Start upgrading the primary MLAG switch. Please use the following command to check which the primary switch is.

> Show mlag

```
(Quanta) #show mlag
Admin Mode..... Enabled
Domain Id..... 1
MLAG Status..... Running
Configuration Consistency Status.. Success
MLAG Role..... Primary
mlag system-mac..... 00:23:04:EE:BC:01
MLAG Local System-Mac..... 00:23:04:EE:BC:01
Number of MLAG Configured..... 4
Peer Gateway Mode..... Enabled
Delay Restore Time..... 0 seconds
Keepalive Timeout..... 5 seconds
Member Port Link Down Mode..... Disabled

Peer KeepAlive Status..... In-active
Peer KeepAlive Destination Addre.. 0.0.0.0
Peer KeepAlive Source Address..... 0.0.0.0
Peer KeepAlive Timeout (seconds).. 5
Peer KeepAlive Interval (msec).... 1000

MLAG Peer-link Status:
Interface      Status Active vlans
```

This is primary switch

2. Assume the startup config file name as default.cfg (please based on your real case changing to the correct startup config file)

date	file name	file type	startup	size (byte)
2013/03/13	uh-1.0.2.4.img	UHTxacos image	N	12227432
2000/01/01	default.cfg	Config File	Y	1669
2014/04/08	lg2r-r-1.4.12.00.img	Operation	N	12552584
2013/11/14	lg2r-r-1.4.10.00.img	Operation	N	12530833

startup config file

3. Copy the startup config from the MLAG A to the local PC.

> Copy startup-config tftp://TFTP\_SERVER\_IP/default.cfg

4. Record the current MLAG system Mac as below

```
Admin Mode..... Enabled
Domain Id..... 1
MLAG Status..... Running
Configuration Consistency Status.. Success
MLAG Role..... Primary
MLAG System-Mac..... 00:23:04:EE:BC:01
mlag Local System-Mac.....
Number of MLAG Configured..... 4
Peer Gateway Mode..... Enabled
Delay Restore Time..... 0 seconds
Keepalive Timeout..... 5 seconds
Member Port Link Down Mode..... Disabled
```

5. Add the following command to the startup config file which downloads in step 1.



```
m1ag
```

```
m1ag system-mac 00:23:04:EE:BC:01
```

Add this command next to m1ag command

6. Upload this modified config file back to MLAG A by the following command.  
> Copy tftp://TFTP\_SERVER\_IP/default.cfg startup-config new\_default.cfg
7. Use the following command to change the uploaded config file as next boot config file.  
> Boot config new\_default.cfg
8. Start to upload the new image file (version later than 1.4.14.00), using LY2R as an example.  
> Copy tftp://TFTP\_SERVER\_IP/ly2r-r-1.4.14.00.img image ly2r-r-1.4.14.00.img
9. Select the new image as next boot image by the following command.  
> Boot op ly2r-r-1-4.14.00.img
10. Reboot the switch  
> Reload
11. Once MLAG primary switch has boot up again, next to upgrade the MLAG secondary switch.
12. To Upgrade MLAG secondary switch, please repeat step 2 ~ 10 again.

