

November 2015, Eldorado do Sul - Brazil

DATAKOM notifies the launching of the 14.6.2 firmware version for the DM4000 and DM4100 series products.

Changes from firmware version 14.6.

## Firmware Upgrading Procedure

- The firmware upgrade in devices or stacking topologies must be performed in all interface cards simultaneously, observing the supported versions, in order to avoid undesirable inconsistencies.
- For firmware upgrading from version 12.x (or less) to 14.x, it is required to perform a two-stages procedure, applying an upgrade to 13.8.6 (intermediate recommended version) and then to the final version 14.x.

Stage 1: firmware upgrade from version 12.x to 13.8.6 with subsequent reboot.

Stage 2: firmware upgrade from version 13.8.6 to 14.x with subsequent reboot

- The MPLS access interfaces must not be configured with the feature QinQ external mode. As an exception, is a combination of untagged access with vc-type vlan parameter in the VPN. Check the current configurations before upgrading from versions earlier than 14.2, in order to avoid traffic loss.
- The meters in *srTcm* and *trTcm* must be configured and associated again to the respective filters in the end of the firmware upgrade with 12.x and 13.x versions to the 14.x version.

Any doubt about the procedure above, get contact with DATAKOM Technical Support.

## Corrections

- Special characters UTF8 may reboot some processes.
- PCH-2 configuration via WEB erases PCH-1 members already created via CLI.
- Internal process unexpected reboot after creating PCH via WEB interface.
- In stacking scenarios, after a master/slave exchange, a failure occurs during registration of clients IP number in the DHCP Snooping database.
- The convergence time of VPNs VPLS was optimized.
- Failure corrections in forwarding traffic in scenarios with simultaneously L2VPN, QinQ, Vlan Translate and Local-tunnel.
- Correction of configuration problems in OSPFv3 after erasing of the first of two IP addresses in a single VLAN.
- After *firmware* version 14.6, DATAKOM modules 377.0168.00 and 377.0169.00 stops working.
- Unexpected reboots in the internal process DCSMS after a link instability in scenarios with MPLS/RSVP/L2VPN-TE.
- Adequacy of default values of Storm-Control to be consistent with the behavior of previous firmwares.
- Adjustment in the memory consumption of DM4001 models after 14.4 version.
- The command *show ip bgp label* causes the CLI blockade.
- Counter routes correction for the ECMP routes in the *show ip hw lpm-table* command.
- Changed the status of ERROR to DISABLED of the disabled VPNs.
- Correction of error message when the L2VPN access VLAN is in a EAPS group.
- The new field *dist\_prefix\_targeted\_session* was added to MIB CLDP.
- External alarm logs were being created, even while the feature were not configured.
- Correction of information provided by the *show intf-table* command.

- The *show egr-table* command does not display the ports of a PCH.
- Record, in the debug logs, the mismatch between MTUs in a PW.
- DM4100 did not generate logs of low memory for DmView server.

### Compatibilities and Restrictions

- This firmware version supports devices of DM4000 and DM4100 Family. The compatibility matrix between MPU and interface cards for DM4000 in chassis is displayed in the Annex 1.
- The lowest recommended version of DmView to use the CESoS feature is the 8.2.
- The interface cards E Series and STM1 H Series will not support a stacking mode operation in DM4001.
- DATACOM recommends that the DM4100 devices, in stacking, operates with the same software license installed. The software licenses currently available are: Bridge (L2), Router (L3) and MPLS.
- With the new support to LOPS (Detection of Loss) in the PWE3 H Series interface cards, the fail status of the local Bundle comes to be calculated by the amount of packets consecutively loss. The configuration command *packet-loss-threshold* was removed, and was introduced the new command *lops-limits*. This way, it will cause compatibility restrictions to earlier firmware versions.
- The VLAN 1 (default) usage is not recommended in L2 and L3 applications.
- MPLS is not supported in pizza box stacking.
- MPLS usage with external memory enabled for L3 routes requires the application of the command *memory external-resource vlan*.
- Is not guaranteed the commutation of RSVP tunnels sub-50ms in the DM4100 Series.
- Undesirable behavior in VPNs with RSVP

tunnels after switchover.

- High stress level tests of link-flap, in L2VPNTE (RSVP) scenarios, are presenting instabilities.
- Improvements in CPU-Protect feature may require reconfiguration of this feature after a firmware upgrade to version 14.2 or superior. Get contact with DATACOM Technical Support.
- For 1GB and 10GB interfaces (multicast / broadcast / unicast), the default values for storm-control were changed in FW14.6.2. The 1GB interfaces changed from 1000pps to 10000pps and the 10GB interfaces from 10000pps to 100000pps.
- Removed the blocking parameters for broadcast, multicast and arp request from the feature block of the CPU-DoS-Protect. From firmware version 14.2 on, a selective and flexible control is included to perform the blocking or limitation of packets to the CPU, including broadcast, multicast, arp request between other protocols, totaling 48 queues of control (command: *cpu-dos-protect queue*).
- There are some restrictions of usage of 8k hosts in DM4100 L3 24P. Get contact with DATACOM Technical Support.
- The lowest recommended firmware version for MPU384 Quali-II is the 14.6 (product code: 800.0442.10).
- After execution of units *reboot* command, the iBGP sessions take a long time to recover again.
- Interruption of sending BGP and BDF packets after a unit reboot. The OSPF stays under indirect influence, it means, only when it is combined with the protocols BGP and/or BFD.
- After the master swap in a stacking mode, the client IP register fails in the database of DHCP Snooping. The workaround is to deactivate and reactivate the feature through the command *ip dhcp snooping*.
- Incompatibility of configuration of LDP-IGP Sync in interfaces that contains only IPv6

address.

- Unexpected restarts in the internal process DCSMS after a shut/no shut stress in loopback 0; LDP adjacent does not recover in a L2VPNTE scenarios.
- Unexpected restarts in the internal process DCSMS may occur after shut/no\_shut in the te-tunnel interfaces.
- LDP protocol stays as NonExistent and PW stays as LwLrDown after stress tests of interface down.
- PW stays inoperable due to LwLrDown after few iterations of down of LDP in the uplink interface.
- BFD shoots down OSPF sessions after a momentary high consumption of the CPU.
- Delay in send packets commutation for redundant path via ECMP route provide the down of protocols BGP and BFD.
- BFD limited to 40 adjacencies.
- The *show ip bfd neighbors* command with insufficient information for troubleshooting.
- The convergence of VPNs between neighbors increase 3 seconds in scenarios that contain more than 25 VPNs, when simulate stress conditions in a frequency of up to 15 transitions per second (shut/no shut) in the uplink interface.
- In scenarios with two BGP neighbors, RFC3107 does not converge after an interface shutdown.
- In STP scenarios, topology change causes loss of traffic after shutdown/no shutdown in

AD interface.

- Permanent blocking of link-flap if the units reboots during the link-flap.
- Audit of L2VPN (PWE3 or VC TYPE VLAN) showing incorrect values to the access port ID and hardware status after removal of unit that this ports belongs to.
- Improper entry flushes in the MAC table related to port-channels with members up.
- Port-security does not block traffic when it is configured in a port-channel.
- To change the status from shutdown to no shutdown in port-channel with LACP, it is necessary to perform the configurations in the interfaces.
- In DM4100 - ETH44GT+4GC+2XX+S it is recommended the usage of up to 7 STP instances.
- Expansion slots to SFP+ are not detected and report Read Error.
- Due to introduction of new meters modes that permit the association of hierarchical meters to the filters, there are compatibilities breaks of meters with srTcm and trTcn mode between firmware versions 12.x and 13.x to version 14.x. These meters are removed from the configuration during the firmware upgrading process. It is necessary to set them and associate them again to the filters after do upgrading process is completed.
- The feature ipfix is not released to devices DM4100-24p.

Get contact with DATACOM Technical Support by e-mail to [support@datacom.ind.br](mailto:support@datacom.ind.br) or via phone call (+55 51 3933 3122) in order to obtain additional information about supported features, upgrading procedures and compatibility of firmware versions, modules and accessories.

**Annex 1: Compatibility Matrix to DM4000 in Chassis**

The following table displays the compatibility between MPU and interface cards to DM4000 in chassis, for the firmware version 14.6.2:

<b>Interface Cards</b>	<b>MPU384</b>	<b>MPU512</b>
ETH24GX H Series	✓	✓
ETH24GX E Series	✓	✓
ETH24GX L Series <sup>(*)</sup>	--	--
ETH24GT H Series	✓	✓
ETH48GX H Series	✓	✓
ETH48GT H Series	✓	✓
ETH24GX+2x10GX H Series	✓	✓
ETH24GX+2x10GX E Series	✓	✓
ETH2x10GX H Series	✓	✓
ETH4x10GX H Series	✓	✓
ETH4x10GX E Series	✓	✓
PWE3 ETH20GX+32E1 H Series	✓	✓
PWE3 ETH20GX+2x10GX+32E1 H Series	✓	✓
PWE3 ETH16GX+4STM1 H Series	✓	✓
PWE3 ETH16GX+2x10GX+4STM1 H Series	✓	✓

<sup>(\*)</sup> - L Series devices is compatible only in a standalone operation through the usage of a chassis DM4001 or DM4001 L.