MOTOROLA *SOLUTIONS*

DOCUMENT NUMBER: MTN-0058-17-NA
APC: 147
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Bulletin Type: Warranty

Motorola Solutions Technical Notification (MTN)

TITLE: Periodic miss of packets from a subnet with paired redundant routers after some specific link failure and recovery events have taken place.

TECHNOLOGY:
Susceptible are any A7.x routers in the redundant configuration that share the common IP address on a subnet through Virtual Router Redundancy Protocol (VRRP). Additionally both routers are to be enabled for OSPF dynamic routing on a physical port connected to that network.
So far the issue was seen in few IP simulcast sites with paired S2500 subsite routers however the failure might be encountered also on site routers.

SYMPTOMS:
User might hear periodic cracks or missed syllables.
The other possible symptom is Infrastructure Link Alarm even though routers are stable.

MODELS / SYSTEM RELEASES / KITS / DATECODES AFFECTED:
SQM01SUM0194A S2500 MULTIPROTOCOL WAN ROUTER
SQM01SUM0205A GGM 8000 CORE GATEWAY
SQM01SUM0294A SRC7500 SWITCHING ROUTING CENTER SOFTWARE UPGRADE/EXPANSION

SEVERITY RECOMMENDATION:
Medium / Operational - Schedule to implement

ROOT CAUSE / DEFINITIVE TEST:
This is a defect in EOS software. The problem intermittently occurs on the Open Shortest Path First (OSPF) LAN segment when a router port goes down and up, e.g. due to link failure, and consequently OSPF service for this port goes down and up. Another precondition is that Virtual Router Redundancy Protocol (VRRP) is configured on the port.
It might happen that EOS software triggers OSPF Designated Router (DR) election process faster than changing the port status from down to up. In such case, EOS doesn't start the periodic Hello Timer (default is 1 sec) responsible for sending of Hello messages.
When the other router encounters no OSPF Hello packets, it presumes after 4 missed Hellos (4 seconds) that its peer is dead which is advertised in the OSPF LAN. The peer replies that it is still alive and both routers are synchronizing OSPF routing information whereas they are missing some network traffic. Because of missing Hellos, the situation is repeated in 4 seconds again.

The user may confirm that the redundant routers are in the bad state by examining the output from OSPF statistics on both routers:
```
SHow -SYS STATistics -OSPF
```

In such case, the number of OSPF Hello messages received differs from transmitted Hellos significantly whereas they should be close to each other since there are 2 OSPF neighbor routers in the network.

WORKAROUNDS AND CORRECTIVE ACTIONS:
None.

RESOLUTIONS AND REPAIR PROCEDURES:

Upgrade to the appropriate version as listed in the "PARTS REQUIRED (HARDWARE/SOFTWARE):" section below, based on the model.

To obtain software:

1. Initiate a software request case through Motorola Solution, Inc. System Support Center (SSC) at 1-800-221-7144 (1-302-444-9800)
2. Await confirmation email from UOST with instructions
3. Complete the Upgrade Operations Software Team (UOST) Software Order Form:
    a. Reference **MTN-0058-17-NA** in the 'Reason for Software/Hardware Change' section of the software order form.
    b. List the part number (**KC #** as listed under "PARTS REQUIRED (HARDWARE/SOFTWARE)" below) in the 'Part # or Version #' section of the software order form.
4. Email completed Software Order Form to UOST for processing

PARTS REQUIRED (HARDWARE/SOFTWARE):

ASTRO Release	KC number/EOS version
A7.16	KC147C079000071604: - EOS 16.8.4.03 for S6000 and GGM 8000 - EOS 16.2.9.52 for S2500
A7.14	KC147C079000071404: - EOS 16.6.4.02 for S6000 and GGM 8000 - EOS 16.2.9.10 for S2500
A7.17	EOS Box Release is targeted by the end of May 2017
A7.15	EOS delivery is planned in early July 2017

ADDITIONAL INFORMATION:

As A7.17 and A7.15 software is released this MTN will be updated

REFERENCE THE FOLLOWING DOCUMENTS/PROCESSES FOR INSTALLATION PROCEDURES:

N/A

WHEN TO APPLY RESOLUTION:

After reboot __
After (re)installation __
After upgrade __
After power cycle __
After database restoration __
After failure _X_
On FRU replacement __
During maintenance _X_
Immediately __
As instructed __
Information only __

LABOR ALLOWANCE:

o Applies to **U.S. Domestic** Partners/Customers only. Other regions should follow their own warranty/reimbursement procedures.
o Labor up to **10** minutes per **Box, p**lus travel up to **2** hours maximum, per **site**.
o Labor and travel reimbursement will be provided to Authorized Service Partners under the terms of the Labor Warranty Guidelines (v.21), and applies to **in-warranty** units only. Labor and travel for out of warranty units will not be reimbursed.

NOTE: please type 'MTN-0058-17-NA' in the SP Authorization No field, and 'SQM01......' in the Model Number field on the MOL claim being submitted.

For assistance with this bulletin please contact your MSI Technical support centre
https://www.motorolasolutions.com/en_us/support.html

~ The Software Order Form Below is for Field use only and is not a requirement for this template ~

MOTOROLA *SOLUTIONS*
Upgrade Operations Software Team

Software Order Form
Phone Number: (800) 221-7144

SECTION 1: General Information

NOTE: PRICE QUOTES GIVEN BY UOST ARE VALID FOR ONLY 90 DAYS

Date		Case Number	
System ID		Site ID	
System Name		Site Name	
Customer Name			
Form Completed by		Field Contact	
Organization		Organization	
Phone Number		Phone Number	
Pager Number		Pager Number	
Fax Number		Fax Number	

SECTION 2: Order Information

Product Type: _____   Serial Number _____

Reason for Software / Hardware Change:
Downgrade? If so, list current and target releases.

Software / Hardware Description:

Part # or Version # _____   Quantity _____

Date Required _____

SECTION 3: Shipping / Billing Information

Ship To: _____   Bill To: _____

Email: _____
Attn: _____   Attn: _____

Phone: _____   Phone: _____

Customer Billing		**Internal Billing**	
P.O. #:		PROJECT #:	
CUST #:		FSB #:	
TAG #:		DEPT #:	
		APC #:	

° This form has been sent to you because you have requested an order from the Upgrade Operations Software Team.

° Please fill out the order form and email back to the Upgrade Operations Software Team

° If desired, please provide your email address on the order form and we will provide a tracking number when your order ships for your convenience.

° Orders will normally be processed in 3-5 business days once all information has been received.

° If additional space is required for software information, please use the optional addendum on page 3 below in addition to the original order form. This form is for use with large orders with multiple part numbers.

NOTE:

1) If this in an SSA CUSTOMER please order via Motorola factory order.
2) Limited Liability is Implied to the maximum of order amount.
3) Price quotes provided by UOST are valid for 90 days

Thank you and have a good day!

Supplemental Order Information Addendum

(Optional)

Software Description   _____

Part# or Version #   _____

Quantity: _____

Software Description   _____

Part# or Version #   _____

Quantity: _____

Software Description   _____

Part# or Version #   _____

Quantity: _____

Software Description   _____

Part# or Version #   _____

Quantity: _____

Software Description   _____

Part# or Version #   _____

Quantity: _____

Software Description   _____

Part# or Version #   _____

Quantity: _____