

BCM 2.5 Feature Pack 1 Maintenance Release MSPQoS patch

Problem:

There have been a number of QoS issues at various customer sites, so it was decided that the QoS issues that have been fixed since the 2.5 Feature Pack maintenance release should be made available.

Solution:

This patch provides fixes numerous QoS and NAT problems. These were fixed for a future release. See the list below.

CRs Resolved:

- Q00417742: mspQoSMP Event 4042 errors seen in Event Viewer System many times.
- Q00498713: Reboot & memory dump on alpha trial BCM system.
- Q00112353: VPN and NAT Not Working on Same Interface.
- Fixed a problem in IPSec which would cause tunnel renegotiation to occur every 3 minutes regardless of what value any of the timers were set.
- Q00534028: Devon Fire & Rescue – BCM Reset
- Q00523919 - No voice path in both direction between remote IP sets over WAN (NAT is on)
- Q00533832 - BCM30 beta 3 Remote i200x making VoIP call through router (ARN) fails
- Fixed problem where private IP addresses would leak into H.225 alerting and connect messages.
- Fixed problem where we did not compare the correct logical channel numbers from an H.225 fast start message.
- Handle H245 address swapping in H225 setup message. H245 address is present in the Setup message when Symbol sets have a RAS IP of a remote BCM. We need to swap this H245 address, otherwise the internal IP of the Symbol set will be leaked out.
- Corrected an event logging problem where we didn't free some memory.
- Fixed a problem where NAT entries in the NatInstances list were not cleaned up on timeout.
- Q00432725: Using BCM as a router causes BCM to reset; if QoS is disabled, it does not.
- Missing adapter pointer caused bluescreen.

- Fixed a call transfer and conference problem (PT entries existed after one day).
- Fixed the problem with the port table entries that caused two Event Log messages to appear at boot time (4021 & 4028).

Software components changed:

There are 3 files included in this change:

- mspQoS.sys
- IPSecIKE.exe
- ikeLog.dll

Designer Sanity:

Tests for each of the problems were as follows:

1. mspQoS.sys was put on the Load Test box in Santa Clara and tested over a period of 5 days. I understand that over 500,000 calls were made with a 97% success rate.
2. Basic NAT functionality was tested in the lab. Setup Web Server on private PC and accessed from outside. Passed
3. Basic telephony functionality was tested in the lab. Tried calls between phones on same BCM and calls to phones on other BCMs. Tested call forwarding. Passed
4. Basic Firewall functionality was tested in the lab. Created Pass and Block firewalls successfully. Checked Firewall logging. Passed
5. IPSec Branch Office Tunnel connectivity was tested in the lab. Also tested the new NAT/IPSec behavior. Passed
6. Tested wanexam to make sure that it was not broken.