Distributor Technical Reference Bulletin

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BCM 3.6 Cumulative Patch 2.0 (Revised)

Introduction

The Business Communications Manager (BCM) offers small/medium businesses (SMB) and enterprise branch offices a choice between traditional voice, next generation convergence, and a combination of both technologies. This application rich platform integrates KSU/PBX capabilities, a Voice over IP (VOIP) Gateway, Quality of Service (QoS) data routing, and performance management in a single, cost effective solution. BCM release 3.6 became generally available on May 26, 2004.

An important capability of the BCM system is the ability to install modifications to one or another of the software services and applications in the field. The master software is included on the programmed hard drive of a BCM system and may be modified using the BCM Update Wizard. Under the BCM patching strategy, individual patches have been made available, between releases of BCM, to address issues of importance to Partners, end users or both. Individual patches for release 3.5 and 3.6 have included the BCM Update Wizard which manages the installation.

The revised BCM 3.6 Cumulative Patch 2.0 is available December 20, 2004 for download from the Nortel BCM technical support website or as a (no charge, orderable) CD. The **BCM 3.6 Cumulative Patch 2.0 replaces the 1.0 version**, released September 28, 2004. It combines a number of individual patches for the 3.6 software and a BCM Update Wizard that performs some additional functions that the individual patch wizard does not do. The BCM 3.6 Cumulative Patch 2.0 offers significant benefits for Partners. This bulletin describes these benefits, the individual patches and what they address.

Benefits of Cumulative Patch

Simplicity & Time Savings
- One download versus 18 downloads
- Installation of 1 patch versus 18 patches – time reduced to under 30 minutes representing a time savings of 80-90% versus installing 18 individual patches
- Automating patch management reduces user intervention & need for support calls
- Automatic version control reduces patch management complexity
- Productized patch CD completely eliminates download procedure and facilitates easy deployment and sharing between service technicians
- Use of BCM Network Configuration Manager (NCM) simplifies installation when managing multiple BCM systems

Quality
- Cumulative patch management ensures the highest quality of the software stream is achieved for the installed base
- System inventory management ensures accurate information about systems and the software stream

- Dependency management eliminates problems caused by installation sequence requirements between individual patches and ensures a successful installation each time

Overview of BCM 3.6 Cumulative Patch 2.0

1. **The size of the BCM 3.6 Cumulative Patch 2.0 is 105 MB**, which is much less than the sum of the sizes of the individual patches (176 MB). The reason for this is that there is only one BCM Update Wizard in the cumulative patch while there is one wizard in each of the individual patches. The download time when retrieving the cumulative patch is much less than that for retrieving all the individual patches due to the smaller total size and the fact that only one download operation is required.
2. The BCM Update Wizard in the cumulative patch differs from that in the individual patches in that it checks the versions of all software modules in the system being patched and manages the patch installation accordingly. For example, if it detects that the system has the patches from BCM 3.6 Cumulative Patch 1.0 installed, then it will bypass the patches in 2.0 that are common to 1.0 and install the other patches, including newer versions of 1.0 patches. This means it manages the installation based on what activities have previously been taken with each system and this results in a faster and more accurate update of the system software.
3. The BCM Update Wizard in the cumulative patch does not allow the user to select which patches to apply. It applies all the patches. If there are dependencies in the order of installation, it manages this. It means that the resulting software is at the highest quality possible and reduces the need for user intervention during the installation.
4. The BCM Update Wizard in the cumulative patch updates the system inventory, recording the new version information for each software module that has been updated. This ensures that the system has an accurate software inventory for system management and future updates.
5. The overall installation time using the BCM 3.6 Cumulative Patch 2.0 is estimated to be no greater than 30 minutes. There are only two system reboots during installation of the cumulative patch, versus up to 32 reboots during installation of all eighteen individual patches. (Two system reboots are required during software updates to the current BCM software release due to the software architecture and the requirements of Microsoft Windows NT 4 SP6 operating system.) This is much less than the time to install sequentially each of the eighteen individual patches. This reduces the burden on the user for multiple installations and reduces the potential for errors during the installation process.
6. The BCM Update Wizard in BCM 3.6 Cumulative Patch 2.0 corrects the issue found to prevent the installation of BCM 3.6 Cumulative Patch 1.0 on some BCM1000 systems. The issue is resolved by running the Core patch first and completing the core upload before proceeding to the next patch, and by leaving the SSM service running until the SSM patch, which is last, is applied. (Note: the order of installation of the Security Update for MS Windows is no longer a factor in this installation.)

Using Network Configuration Manager

For customers with larger BCM networks, Nortel Networks recommends the use of the Network Configuration Manager (NCM) to automate the process of distributing and applying Patch Updates, including the BCM 3.6 Cumulative Patch 2.0, to a network of BCM systems over an IP network. With NCM 3.6, distribution and application of the BCM 3.6 Cumulative Patch 2.0 can be scheduled for BCM 3.6 systems, thereby dramatically reducing the time required to deploy the cumulative patch to many BCM systems. For more information about NCM, please consult the NCM Application Brief available on the Partner Information Center (PIC).

BCM 3.6 Cumulative Patch 2.0 Contents

The BCM 3.6 Cumulative Patch 2.0 contains eighteen individual patches addressing various issues for the release 3.6 software. The individual patches are available separately as well as within the cumulative patch. Five patches included in BCM 3.6 Cumulative Patch 1.0 remain the same in 2.0 (IPView Softboard, MS Security, T.38, Phase II F/W and QoS). Four patches have been up-issued to include additional fixes (UTPS, RCC, VM and Core). The remaining nine patches are new.

BCM 3.6 IPView SoftBoard v.2.0.007

This patch addresses CR Q00880351-01 identifying there is a need for the user of IPView to select the IP address. This patch provides the user with the ability to select an alternate IP address in the Echoing tab. The dialog box shows what IP address the IPView is currently connected to.

This patch is a non-critical patch with no dependencies. The size of this patch is 61 MB and installation using the BCM Update Wizard does not involve any system reboots.

BCM 3.6 Security Update for MS Windows (835730)

This is a patch addressing a number of recently-discovered Microsoft Windows vulnerabilities. These vulnerabilities are considered significant for BCM. An attacker who successfully exploited the most severe of these vulnerabilities could take complete control of an affected system, including installing programs; viewing, changing, or deleting data; or creating new accounts that have full privileges. This patch also contains an update to BCM software in order to establish compatibility between the fixes in MS04-011 and existing drivers on BCM 200/400 platforms.

The Security Update should be installed after installing the MS Core patch to ensure proper take of both patches. It is recommended that the Security Update be the last patch applied when installing a number of individual patches. The size of the patch is 3 MB and installation using the BCM Update Wizard involves two system reboots.

BCM 3.6 T.38 DSP Firmware Patch

This patch can be used to patch the DSP Firmware on either BCM 3.5 or BCM 3.6 systems. It will improve the performance of T.38 and allow BCM to interoperate with more fax machines. The patch resolves an initial fax protocol negotiation failure due to the timing of T.38 task creation. The T.38 will end the preamble and allow the T38 task to remain in the correct state to monitor both the local fax machine and the remote T38 task for activity. The patch also resolves a problem that can arise when the answering fax machine does not respond to the first End Of Page (EOP) transmission. T.38 can cease further fax transmissions and the fax machine could indicate a transmission failure. During EOP reception, the T.38 task will no longer enter a state where it will block further fax signaling.

This patch has no dependencies. The size of the patch is 2 MB and installation using the BCM Update Wizard involves two system reboots.

BCM 3.6 Phase II Set FW Upgrade Patch

This patch up-issues the Phase II IP set firmware to firmware issue D31 to address a number of changes to the firmware since the release of 3.6. BCM 3.6 delivers support for the Phase II IP sets. Due to the later release of the new IP sets in July 2004, changes to the firmware occurred after the 3.6 master software load was created.

A number of issues are addressed by this firmware up-issue including:
- Firmware upgrade or download issues
- Mute functionality
- Duplicate IP address detection
- Certain actions in Network Diagnostics or Ethernet Statistics menu and TPS mode
- 2004 IP set lock up and wrong FPP in first RTP package
- Default ringer volume and different tone for Short Click than in Phase I sets

This patch has no dependencies. The size of the patch is 6 MB and installation using the BCM Update Wizard involves two system reboots.

BCM 3.6 QoS version 3.6.0.12

A number of issues with how Quality of Service (QoS) operates on the BCM 3.6 are addressed by this patch.
- SIP Client connecting through a BCM to an MCS5100 does not work. This was caused by the driver incorrectly modifying part of the UDP packet. **Solution:** The driver no longer incorrectly modifies the SIP UDP packet.
- During file transfer through the firewall, eventually the transfer would stop. This was caused by the TCP window value being adjusted and then the amount of data in the packet would go over the new window size. **Solution:** The window values stored in the firewall state are now the maximum values negotiated over the entire TCP session.
- The MSP QoS driver crashed in one of the SIP parser routines when one of the fields in a SIP packet passing through the BCM was zero. It is not known why this value is zero (it shouldn't be) but the BCM should not crash if it is. **Solution:** Code has been added which checks to see if the field in the SIP packet is null.
- SIP packets passing through the BCM are causing large numbers of event log messages to be generated. This was caused by not understanding certain SIP messages that passed through the BCM. **Solution:** Added a check for unknown but valid SIP messages.
- To manage SNMP on the BCM a specified interface IP address is required. This is because the system will assign the IP address of the interface where the packet will be sent out of. In certain instances behind firewalls, it is desirable to set this to use only one of the interface addresses. **Solution:** Modified NAT to be able to put the IP address of any of the interfaces in the Public field and the IP address of this NAT interface in the Private field.

This patch has no dependencies. The size of the patch is 1 MB and installation using the BCM Update Wizard involves two system reboots.

BCM 3.6 UTPS v. 36.170.10.12

UTPS is a core telephony service which translates between the STIM communications protocol and UNISTIM. UTPS has a number of features including DN Alive, DN Keep Alive, Hot Desking, etc, which have been added over time.

One problem addressed by this patch is that DN Keep Alive takes too long to be active. The root cause is related to the fact that a call is presented to the offline set and it is issued commands to start and close audio streams. The communication channel reports a transmission failure when given the fact that the set is not physically present. The communication is lost and the FTE is killed. Changing low level transmit routine to disable transmissions to offline sets solves this problem. In addition,

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when the Nortel Networks 802.11 wireless sets (2210/2211) are off-line, they appear in BCM OAM as 2004 IP sets. This has been corrected.

This patch has no dependencies. The size of the patch is 1 MB and installation using the BCM Update Wizard involves two system reboots.

BCM 3.6 Reporting for Call Center Client 2.1.044

This patch includes fixes for a number of issues. (Note – some of these fixes were provided in RCC 21.041 which was released in BCM 3.6 Cumulative Patch 1.0 in September 2004).

- RCC Install shield fixes.
- 1 second refresh of wallboard messages (down from 3 seconds).
- Improved security related to user permissions and restrictions.
- Real time reporting performance improvements.
- Corrections to a number of reports – Call Average, Call Profile, Agent Audit, Activity Code, Answered, Abandoned and Agent Capacity. In addition corrections to print schedules have been included to allow the user to report on any agent, skill set or activity code ever configured as opposed to just current ones.
- Reduced CPU usage when IPView wallboard active.
- Ensured Monitor Time does not reset in supervisor monitoring.
- Some documentation & troubleshooting tip changes.
- Improvements to report printing to correct things like information being cut off, truncated or running off the page.

Voicemail 36.00.64.22 should be used with this patch (VM 36.00.61.22 or HIGHER must be used as a minimum). The previous version of Voicemail should be removed and replaced prior to replacing the Reporting for Call Center client (see below in BCM 3.6 Voicemail 36.00.64.22 Update section).

For existing BCM 3.6 sites running the GA version of Reporting for Call Center the following actions must be taken:
1. In Add/Remove Programs uninstall Reporting for Call Center.
2. DO NOT uninstall Java or MySQL.
3. Run the Reporting for Call Center install.

The size of the patch is 67 MB and installation using the BCM Update Wizard does not involve any system reboots.

BCM 3.6 Voicemail 36.00.64.22 Update

This patch provides resolution for a number of issues, some involving how Reporting for Call Center works and related to the fixes provided in the RCC Build 44 patch. This includes: display of Real Time Data in RCC, display of answered Call Center calls in reports, Call Center transfer to Auto Attendant routing and express messaging/FAX. The beep tone provided in forced answer calls in Call Center has been shortened to 2 seconds in the United Kingdom profile.

If the RCC client 21.044 is installed and used, the Voicemail 36.00.64.22 should also be installed. The size of the patch is 6 MB and installation using the BCM Update Wizard involves two system reboots.

BCM 3.6 MSC Core wi06.04

This patch provides a new core telephony image for the Media Services Card in the BCM 3.6 system. It provides resolution to some issues with speech path, cross talk, Hunt Group processing, DPNSS, Call Timer and Redirect Number (provided in Cumulative Patch 1.0). In addition, a number of issues found when the BCM-ASM8+ analog station module is installed are resolved including: support of CLID for the United Kingdom protocol, pulse dialing (Poland), support for double density mode and disabling DS and CLID in the Australia profile and improved voice quality during three-way conferencing.

The MSC Core patch should be applied before the Security Update. The size of the patch is 15 MB and installation using the BCM Update Wizard involves two system reboots.

IP Paging Performance Improvement

This patch provides a modification to the Media Services by enabling the unidirectional channels feature of IP Telephony. This reduces the overhead VOIP traffic that can cause delays for paging to IP sets.

This patch has no dependencies. The size of the patch is 1 MB and installation using the BCM Update Wizard involves one system reboot.

Unified Manager Update

A couple of minor issues with Unified Manager are addressed by this patch including displaying all programmed remote gateways and providing user control of VOIP payload size. Some RAS Callback fixes have been included.

This patch has no dependencies. The size of the patch is 1 MB and installation using the BCM Update Wizard involves two system reboots.

802.11 Support Update

Two services of BCM – UTPS and Unified Manager – are modified by this patch to properly recognize and provide correct details for the Nortel Networks 802.11 wireless sets supported on BCM (2210/2211).

This patch has no dependencies. The size of the patch is 2 MB and installation using the BCM Update Wizard involves two system reboots.

Apache Configuration Update

The BCM 3.6 software includes shareware Apache software for web browsing associated with the use of Unified Manager (see the BCM 3.6 Programming Operations Guide, P0609326_01, dated March 23, 2004 for the software license agreement). An update to this software is provided for the browsing log directory.

This patch has no dependencies. The size of the patch is 1 MB and installation using the BCM Update Wizard involves two system reboots.

SSM 37.01.02.11

The System Status Monitor (SSM) features of the BCM400 and BCM200 platforms provide system status and performance information through the LED panel on the front of these BCM base systems and in Alarm & SNMP Services. The following SSM changes will improve the performance of the platform when temporary site environmental or power conditions occur.

- Improve temperature monitoring and tolerance for the responding to temperatures exceeding the maximum thresholds.
- Chassis cooling fan speed monitoring and changes to the actions when fan speed is out of tolerances. If the fan speed is <10 pulses per second for 1 minute, an error message to investigate will be generated and the Red LED light will be cleared. For fan speed at <60% of selected speed for more than 10 minutes an information SNMP/Alarm trap will be generated to prompt investigation and the fan speed will be set to the next higher setting.

This patch has no dependencies. The size of the patch is 2 MB and installation using the BCM Update Wizard involves two system reboots.

IPSec Update

IPSec allows a secure tunnel communication path to be created when a BCM is involved in a Virtual Private Network solution with multiple sites. This patch ensures the BCM sends the proper Initial Contact Payload when a new tunnel is being created in all cases.

This patch has no dependencies. The size of the patch is 1 MB and installation using the BCM Update Wizard involves two system reboots.

IVR Update

This patch addresses issues encountered during upgrading BCM systems from earlier releases to 3.6 when IVR is activated on the system. It also improves performance of IVR by fixing some memory leak conditions.

This patch has no dependencies. The size of the patch is 1 MB and installation using the BCM Update Wizard involves two system reboots.

Voice CTE Update

This patch includes an update to the Voice CTE services in BCM as well as an updated LAN CTE client. Improvements provided include fixing the race condition that occurs when an incoming call can't be answered while an outgoing call is in progress and ensuring proper return of events regardless of the number of devices connected.

To use the updated client software, please uninstall the current version of your LANCTE Client software, apply this patch, then download and install the updated LANCTE Client package.

This patch has no dependencies. The size of the patch is 3 MB and installation using the BCM Update Wizard involves two system reboots.

VOIP Gateway (FEPS) Update
A number of issues are addressed in this patch.
- Correcting a VOIP trunk lockup condition.
- Changes to conferencing involving VOIP trunks to improve the call release performance.
- Revised KeepAlive to eliminate unwanted VOIP gateway registration expiry, to reduce the incidence of dropped calls.
- Improved performance of the Radvision stack and the VOIP gatekeeper.

This patch has no dependencies. The size of the patch is 2 MB and installation using the BCM Update Wizard involves two system reboots.

References and Related Documents
All individual patches, and the cumulative patch, may be obtained as downloads on the BCM technical support web site. This site may be accessed from the Nortel Networks* support site at http://www.nortelnetworks.com/support.

The Partner Information Center (PIC) login site can be found at:
https://app12.nortelnetworks.com/cgi-bin/mynn/home/NN_home.jsp?curOid=12460

Ordering Guidelines and Procedures
The BCM 3.6 Cumulative Patch 2.0 is being made available as a CD product which may be ordered through Customer Order Management. The product is available globally in all market regions.

PEC	CPC	Description	MSRP	WPP
NTAB3664	N0014631	BCM 3.6 Cumulative Patch 2.0 CD	$0	$0

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