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Dell(TM) OpenManage(TM) Baseboard Management Controller Management
Utility Version 3.0 Readme

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NOTE: This readme provides information about the Dell OpenManage
    Baseboard Management Controller (BMC) Management Utility
    version 3.0.

NOTE: See the Server Administrator readme ("readme.txt") or the
    installation readme ("readme_ins.txt") on the
    "Systems Console and Agent" CD for the latest information
    and issues specifically related to Server Administrator.

This file contains the following sections:

* Criticality

* Supported Systems

* Release Highlights

* User Notes

* Known Issues

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Criticality
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3 - Optional

Optional = It is recommended that you review the specifics about the
update to determine if it applies to your system. The update contains
changes that impact only certain configurations, or provides new
features that may or may not apply to your environment.

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Supported Systems
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The Dell OpenManage Baseboard Management Controller Management
Utility supports the following Dell systems:
800, 830, 840, 850, 860, SC1425, SC1435, 1800, 1850, 1855, 1900,
1950, 1955, 2800, 2850, 2900, 2950, 2970, 6800, 6850, 6950, T105,
R805, R900, Dell PowerVault™ NX1950, PowerVault 100, PowerVault 500,
PowerVault 600

NOTE: All references in this document to PowerEdge 840, 2950,
and 2900 also apply to the PowerVault 100, PowerVault 500,
and PowerVault 600 systems respectively.

NOTE: R805 is scheduled to be to be available in December 2007.

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Release Highlights
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* Addition of ipmitool with Dell extensions for Linux and Windows
* Dell extensions include:
      -Dell formatted SEL and sensor reports
      -Sysinfo report
      -LCD control
      -Power Monitoring functionality

* ipmish and solproxy additions include:
      - LCD control
      - Power Monitor functionality

* Added support for Windows Server® 2008
  (includes Standard, Enterprise, and Web editions.)

NOTE: Microsoft Windows Server 2008 is scheduled to be available
in the first half of 2008. For latest information,
see http://www.microsoft.com/windowsserver2008/default.mspx.

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User Notes
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This section provides information to help enhance your experience
with your systems management software in particular implementations
and environments.

==
Notes For The BMC Management Utilities
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* Web browsers allow connecting to alternate ports including the
  Serial Over LAN (SOL) Proxy on IP port 623. If you connect from a
  Web browser, the data received from SOL Proxy will be jumbled, as
  the IP port implements the telnet protocol rather than the HTTP or
  FTP. For correct results, close the Web session and connect to SOL
  Proxy using a telnet program.

* On initiating a console redirection session using SOL Proxy
  while loading the Microsoft(R) Windows(R) operating system, you may
  not be able to send data to the serial port. As Windows can block
  the writing of data to the serial port, you may receive the
  following message on attempting to send data using keyboard input:

  "SOL not able to write to the system serial port."

  The SOL session closes after displaying this message. The main SOL
  menu displays to reconnect (or reconfigure settings).

* You can manage a system by accessing multiple IPMI instances at the
  same time as long as your system's BMC supports more than one
  concurrent connection. However, multiple sessions can lead to
  session failures under high network traffic.

* When attempting to gracefully shutdown a system running Novell(R)
  NetWare(R) or Red Hat(R) Linux through SOL Proxy, you may receive a
  message stating that the system is unable to power off the server
  because the "power_off_timeout" was reached. The
  "power_off_timeout" value specifies the time in seconds that SOL
  Proxy polls for the managed system's power status and is set to a
  default value of 60 seconds. If your managed system is running a
  supported NetWare or Red Hat Linux operating system, it may take
  more than 60 seconds for the operating system to complete the
  graceful shutdown. To avoid this, change the "power_off_timeout"
  parameter in the "solproxy.cfg" file to a higher value, such as 90
  seconds.

* To configure the BIOS settings for SOL Proxy for the Dell
  PowerEdge(TM) 1855, there is no option to set the "Serial Port 1"
  field under "Integrated Devices." Instead, navigate to the
  "Console Redirection" field and set it to "BMC SOL." You can then
  configure the "Failsafe Baud Rate" and "Remote Terminal Type"
  settings, if applicable.

* Using a direct connect cable with some 3COM 3C905-TX based network
  interface controller (NIC) adapters (including the 3C920), you may
  experience problems keeping the SOL connection active when
  performing a "reboot and activate" operation. Some drivers for the
  3C9xx series of adapters include an intentional cable detect delay
  that can exceed 10 seconds by default. You can correct it by
  editing the advanced properties of the NIC adapter and decreasing
  the values for "Cable Hold Off Timer" and "Cable To Detect Timer."

* If your network switch has the "Spanning Tree" feature enabled, and
  if you experience out of sequence packets or connection timeout
  errors, it is often due to the long delays experienced when the
  "Spanning Tree" feature is analyzing the network. Turn off the
  "Spanning Tree" feature to avoid long reconnection times.
  Alternately, you can edit "solproxy.cfg" and increase the
  retry_interval to 10. The exact value depends on the specific
  network and how long the spanning tree requires to complete its
  job. Restart the SOL Proxy service for the changes to take effect.

* The SOL Proxy server is unable to start a console redirection
  session from the Windows command prompt (you can access the Windows
  command prompt by clicking "Start" and selecting "Run," and typing
  "cmd.exe" in the "Run" dialog box). The following message is
  displayed on the management station:

  "SOL not able to write to the system serial port."

  Cause: Console redirection is not enabled in the BIOS setup.

* The Linux operating system shell prompt has a path cache that
  can under some circumstances cause a different ipmish to be
  invoked if ipmish is execute immediately after it is installed.
  To resolve this, type "hash -r" at the same shell prompt to clear
  the cache and then execute ipmish.

* To run ipmitool inband on Windows 2003 R2 systems, the Windows
  IPMI driver needs to be installed. For instructions on how to
  install the driver, visit the following web address:
  http://technet2.microsoft.com/windowsserver/en/library/8c6c90e8-16b8-4d51-bf1e-efad5f5a61081033.mspx?mfr=true

* Running ipmitool on Linux systems requires the OpenIPMI driver
  to be installed and running. Use the command "service ipmi start"
  to start the ipmi service at runtime, and "chkconfig ipmi on" to
  start the services automatically at boot.

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Known Issues
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This section provides information concerning open issues with systems
management software.

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Issues For Dell PowerEdge(TM) 1855 System
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The following apply only for the Dell PowerEdge 1855 system:

* Any host application that communicates with port 623 cannot be
  executed from LOM_1 (the first one) of a server module. If you
  attempt this, the network packets will be sent to the BMC instead
  of the host. So use LOM_2, and ensure that the IP address, IP
  subnet mask, and the gateway settings for the LOM_1 and the BMC
  match to prevent possible network disruptions.

* The following subsection explains how to identify and resolve a
  possible IP address conflict.

  Problem: An "IP address conflict" message is displayed after
  assigning identical IP addresses to Local Area Connection and the
  BMC as instructed.

  Cause: When the operating system first detects hardware devices
  such as the onboard network adapters, the order in which the
  devices are enumerated is not guaranteed. Therefore, LOM_1
  (the first one) may be assigned Local Area Connection #2 and LOM_2
  may be assigned Local Area Connection #1. Due to this switch, when
  you assigned identical addresses to the BMC and Local Area
  Connection, in reality, identical addresses are being assigned to
  the BMC and LOM_2. This creates the IP address conflict.

NOTE: The lower-number MAC address will be LOM_1.

Workaround: Go to "Start" and select "Network Connections." Click
"View" and select "Details." This will display the Local Area
Connections information. Right-click "Local Area Connection" and
rename it as "Local Area Connection #2." Rename the already
existing "Local Area Connection #2" to "Local Area Connection."
This ensures that the Local Area Connection names match the correct
onboard NICs. Then assign identical IP addresses to Local Area
Connection and the BMC.

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Issues For The BMC Management Utilities
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* After IPMISH is installed, if you open a command prompt and type
  "ipmish" without being in the
  "C:\Program Files\Dell\SysMgt\bmc" directory, you will receive an
  error stating that the command could not be found. This is because,
  by default, the IPMISH directory is not added to the system path.
  You must either manually add the system path to the command line,
  or go to the specified directory before running the IPMISH
  application.

* Microsoft SAC does not implement hardware control flow. Therefore,
  when console redirection is enabled with EMS SAC, you will see
  corrupted data. As SAC does not implement hardware flow control use
  lower baud rates to effectively use SOL Proxy under redirection to
  EMS SAC.

* While performing console redirection through SOL Proxy, you may see
  a few garbled characters. This can occur while the SOL Proxy server
  refreshes the screen.

* You can verify your redirected output by using the same telnet
  client over the serial port to ensure that your telnet client
  supports console redirection features. If you see the same garbled
  text through the serial port, you may use another telnet client
  for better performance.

* If you issue the graceful shutdown command using SOL Proxy option 4
  (Reboot and Activate Console Redirection) on a system running
  Microsoft Windows 2000 with an ACPI-compliant BIOS, Windows
  performs an emergency shutdown instead of a graceful shutdown.
  Windows does not send WM_QUERYENDSESSION and WM_ENDSESSION messages
  to the running programs; therefore, the programs cannot notify the
  user to save data and quit gracefully. This could result in data
  corruption or data loss.

* Storage controllers from PERC 4 and earlier use <ctrl>+M to enter
  configuration during BIOS POST. This is the same ASCII value
  normally set by the <enter> key so <ctrl>+M will not react as
  expected when in a SOL session during boot. Use <esc><ctrl><M> to
  enter PERC 4 setup.

Alternate key strokes are provided as BIOS starts up for a number
of special keys. See the "Dell OpenManage Baseboard Management
Controller Utilities User's Guide" for the complete list.

* If you get the message "already installed" when trying to install
  the ipmitool Linux .rpm file, use the --force option. E.x.
  rpm -Uvh --force <rpm filename>

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Server Administrator uses the OverLIB JavaScript library. This
library can be obtained from "http://www.bosrup.com/web/overlib/."

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September 2007