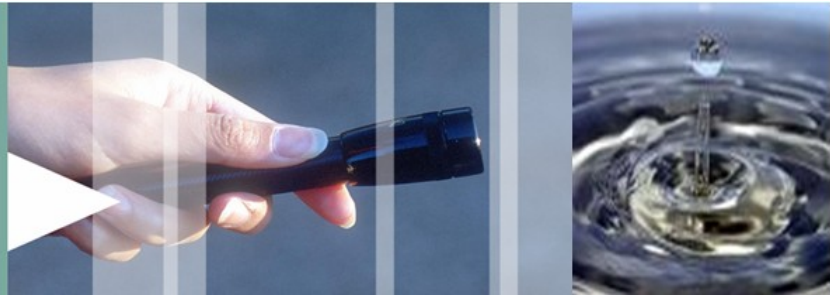


Hardware Sentry KM for PATROL®

Installation Guide



Supporting

Hardware Sentry KM for PATROL
Version 1.5.01

September 2008

Contacting BMC Software

You can access the BMC Software Web site at <http://www.bmc.com/>. From this Web site, you can obtain information about the company, its products, corporate offices, special events, and career opportunities.

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Customer Support

You can obtain technical support by using the Support page on the BMC Software Web site or by contacting Customer Support by telephone or e-mail. To expedite your inquiry, please see the section “[Before Contacting Sentry Software](#)” given below.

Support Web Site

You can obtain technical support from Sentry Software 24 hours a day, 7 days a week at http://www.bmc.com/support_home. From this Web site, you can

- read overviews about support services and programs that BMC Software offers
- find the most current information about BMC Software products
- search a database for problems similar to yours and possible solutions
- order or download product documentation
- report a problem or ask a question
- subscribe to receive e-mail notices when new product versions are released
- find worldwide BMC Software support center locations and contact information, including e-mail addresses, fax numbers, and telephone numbers

Support by Telephone or E-mail

In the United States and Canada, if you need technical support and do not have access to the Web, call 800 537 1813. Outside the United States and Canada, please contact your local support center for assistance. To find telephone and e-mail contact information for the BMC Software support center that services your location, refer to the Contact Customer Support section of the Support page on the BMC Software Web site at http://www.bmc.com/support_home

Before Contacting BMC Software

Before you contact Sentry Software, please ensure you have the following information available so that Customer Support can begin working on your problem immediately:

Product information

- product name
- product version (release number)
- license number and password (trial or permanent)

Operating system and environment information

- machine type
- operating system type, version, and service pack or other maintenance level such as PUT or PTF
- system hardware configuration
- serial numbers
- related software (database, application, and communication) including type, version, and service pack or maintenance level

Sequence of events leading to the problem

Commands and options that you used

Messages received (and the time and date that you received them)

- product error messages
- messages from the operating system, such as *file system full*
- messages from related software



Table of Contents

OVERVIEW	5
INSTALLATION PROCEDURE IN A NUTSHELL	6
GETTING STARTED.....	7
TARGETED COMPUTERS	8
THE PRODUCT PACKAGES.....	9
SUPPORTED PLATFORMS AND REQUIREMENTS	10
INSTALLING HARDWARE SENTRY	14
GETTING THE BMC SOFTWARE INSTALLATION UTILITY.....	15
EXTRACTING THE SETUP FILES	16
INSTALLING HARDWARE SENTRY KM FOR PATROL	17
PRELOADING HARDWARE SENTRY	22
TUNING THE PATROL AGENT.....	23
LICENSE KEYS	24
UN-INSTALLING HARDWARE SENTRY.....	25
UNINSTALL PROCEDURE	26

Overview

Hardware Sentry KM for PATROL enables administrators to monitor the hardware of their diverse servers. This is a single KM that is able to monitor the hardware of different server brands: IBM®, HP®, DELL®, Sun Microsystems®, NEC®, Fujitsu-Siemens® and many others.

Once installed, Hardware Sentry requires no configuration and automatically detects the environment and starts monitoring the hardware: status of the disks and the RAID controllers, temperature of the system, speed of the fans, power supplies, network interfaces etc.

As the solution connects to vendor-specific instrumentation agents on the servers to collect hardware information, it is vital to install these “agents” on your systems prior to installing the KM.

This document explains how to install and run Hardware Sentry KM for PATROL.

This Installation Guide gives details on the supported platforms and requirements, the packages to be installed, and how to install the solution.

The product consists of:

1. [Installation Guide](#) – current document
2. [User Guide](#) – for details on how to use the product
3. [Reference Guide](#) – for details on application classes, menu commands, parameters, configuration variables and connectors and platform details
4. [Release Notes](#) – tells you about the enhancements in this version.

Installation Procedure in a Nutshell

1. Hardware Sentry is a KM for PATROL and therefore needs to be installed on every managed system with a PATROL Agent, Consoles, Console servers and PATROL Central Web-edition.
2. The minimum version of PATROL required is 3.4.11
3. Install the vendor-specific instrumentation agents or system management tools on the managed systems to be monitored *prior* to installing the KM.
4. Download the product packages from BMC EPD or the [Sentry Software Web site](#).
5. Download the latest BMC Software Installation Utility from the BMC FTP site or from the [Sentry Software Web site](#).
6. Store the installation utility and the product packages in the same folder
7. Click first on the installation utility and then on the product package file and follow the installation wizard.
8. For optimal performance, configure PATROL agents to preload the Hardware Sentry KM...and you are all set to use Hardware Sentry.

Getting Started

This section gives you details to help you get ready to install Hardware Sentry. It tells you where to obtain the product packages, and helps you understand all the prerequisites to be met before installation in order to ensure an optimal functioning of the KM.

Targeted Computers

Like most Knowledge Modules for PATROL, you need to install Hardware Sentry on the following components of your PATROL architecture:

- Every managed system with a PATROL Agent
- Every PATROL Console (Classic) that will show hardware-related information and alerts
- The Console Server
- PATROL Central – Web Edition

The Product Packages

The packages for Hardware Sentry KM for PATROL are available on the [BMC Software](#) EPD site, as well as on the [Sentry Software Web site](#). Download the package applicable to your system:

- For Windows-based systems: **mshw_windows_1501.exe**
- For UNIX and Linux systems: **mshw_unix_1501.tar**

Each package can be used to install Hardware Sentry on every PATROL component (Agent, Console, Console Server etc.).

Important

The Hardware Sentry packages are designed for use with the BMC Software Installation Utility (formerly known as Thorium). They need to be merged with the latest available version of the BMC Software Installation Utility. Please refer to the instructions in the section: [Getting the BMC Software Installation Utility](#).

Supported Platforms and Requirements

Requirements for Managed Systems

The BMC Software PATROL Agent must be installed, and its version should be at least 3.4.11.

For Hardware Sentry to collect information from a managed system, it requires specific instrumentation agents or system management tools to be present on the managed system.

Typical Platform	Operating System	Required Instrumentation Agent / System Tools
Dell PowerEdge	Windows	Dell OpenManage Server Administrator, WMI
Dell PowerEdge	Linux	Dell OpenManage Server Administrator, Linux system commands, SmartMonTools
Fujitsu-Siemens BX Blade servers	N/A	Fujitsu-Siemens Management Blade
Fujitsu-Siemens PRIMERGY	Windows	Fujitsu-Siemens Serverview / Fujitsu-Siemens ServerView RAID Agent / Promise FastTrack SNMP Agent / LSI GAM Server / LSI MegaRAID SAS SNMP Agent / LSI MegaRAID PowerConsole / Mylex GAM Server , WMI
Fujitsu-Siemens PRIMERGY	Linux	Fujitsu-Siemens Serverview / Fujitsu-Siemens ServerView RAID Agent / Promise FastTrack SNMP Agent / LSI GAM Server / LSI MegaRAID SAS SNMP Agent / LSI MegaRAID PowerConsole / Mylex GAM Server, Linux system commands, SmartMonTools
HP C-Class BladeSystem	Windows	HP Insight Management Agent + OA
HP C-Class BladeSystem	Linux	HP Insight Management Agent + OA
HP C-Class BladeSystem	Solaris	HP Insight Management Agent + OA + ILO
HP P-Class BladeSystem	Windows	HP Insight Management Agent
HP P-Class BladeSystem	Linux	HP Insight Management Agent
HP AlphaServer	Tru64	HP Insight Management Agent
HP 9000	HP-UX	HPU system tools
HP Integrity	Windows	HP Insight Management Agent
HP Integrity	Linux	HP Insight Management Agent

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Typical Platform	Operating System	Required Instrumentation Agent / System Tools
HP Integrity	HP-UX	HPUX system commands + MP/GSP
HP Proliant	Windows	HP Insight Management Agent, WMI
HP Proliant	Linux	HP Insight Management Agent, Linux system commands, SmartMonTools
HP Proliant	Solaris	HP Insight Management Agent
HP NetServer	Windows	TopTools
HP SuperDome (Itanium)	Windows	HP Insight Management Agent
HP SuperDome (Itanium)	Linux	HP Insight Management Agent
HP SuperDome (Itanium)	HP-UX	HP-UX system commands + MP/GSP
HP SuperDome (PA-RISC)	HP-UX	HP-UX system commands + MP/GSP
IBM RS/6000, pSeries, eServer p5	IBM AIX	IBM AIX system commands
IBM xSeries, IBM NetFinity	Windows	IBM Director Agent ,WMI
IBM xSeries, IBM NetFinity	Linux	IBM Director Agent, Linux system commands, SmartMonTools
NEC Express5800	Windows	NEC ESMPRO Agent, WMI
NEC Express5800	Linux	NEC ESMPRO Agent
Sun Fire (SPARC)	Solaris	Solaris system commands
Sun Fire (SPARC, T1, T2)	Solaris	Solaris system commands + Sun ALOM card (Sun Advanced Lights-Out Management)
Sun Fire F12K, F15K, F20K, F25K	Solaris	Solaris system commands + SMS utilities installed on the system controller
Sun Fire Mx000	Solaris	eXtended System Control Facility (XSCF)
Sun Fire X64	Solaris	Ipmitool, lsiutil

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Typical Platform	Operating System	Required Instrumentation Agent / System Tools
Sun Fire X64	Linux	Ipmitool, lsiutil
VMWare ESXi	N/A	WBEM

Important

The vendor-specific instrumentation agents and system tools are generally provided with the servers and are available on the manufacturer website. Unless mentioned otherwise, these “agents” must be installed on the managed server for Hardware Sentry to function properly.

As Sentry Software is continuously working on the support of new hardware information, sources and new platforms that can be monitored with Hardware Sentry will continue to grow.

Please check our web site www.sentrysoftware.net to find the latest updates. Updates are in the form of patches for Hardware Sentry are free and do not need an upgrade of the KM itself, unless there are structural changes.

Hardware components monitored

Depending on the managed system, Hardware Sentry monitors:

- Disks (RAID and non-RAID disks)
- Disk Enclosures
- Fans
- Memory modules
- Network interfaces
- Power supplies
- Processors
- Temperature
- Voltage

Note

For details on what hardware components are detected on each system, please see the Connectors & Platforms Reference Table in the [Reference Guide](#) and click on the *Connector Name* applicable to your system/typical platform.

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Requirements for Console Systems

The minimum version supported of the BMC Software PATROL Console is 3.4.11.

Other console components (Console Server, PATROL Central, etc.) need to be updated with the latest available version from BMC Software.

On PATROL Agents

Only one version of Hardware Sentry can be installed on a PATROL Agent, therefore, a previous installation of Hardware Sentry will be overwritten by the latest version.

No specific migration operation is required and you do not need to uninstall the previous version of Hardware Sentry. Upon startup, Hardware Sentry will take the necessary action to complete the migration (migrating configuration variables if needed).

On PATROL Consoles (Classic)

Just as for PATROL Agents, only one version of Hardware Sentry can be installed on a PATROL Console (Classic). Logically, this could cause problems if a PATROL Console is connected several PATROL Agents with different versions of Hardware Sentry.

This latest version of Hardware Sentry on the PATROL Console allows you to connect seamlessly to Agents with previous versions of Hardware Sentry. Ensure that the PATROL Console has a more recent version than that on the PATROL Agents.

Important

It is essential to **update** the **console profiles** to include the new Hardware Sentry classes and Menu Commands. To do this:

Load **MS_HARDWARE_SENTRY1.kml** file in the **PATROL Console**

This will add any new connector-related classes. If you do not load the new classes in the console, Hardware Sentry will not work properly, that is, you will not be aware when a hardware agent used by Hardware Sentry has failed.

Warning!

Avoid the use of the **Developer** connection type in the PATROL Console and do not use the **Commit KMs** feature of the PATROL Console, especially when you deal with several versions of the same KM in your environment.

On Console Server, PATROL Central – Web Edition

As Console Server and PATROL Central can manage several versions of the same KM, you can install Hardware Sentry 1.5.01, 1.5.00, 1.4.00, 1.3.01, 1.3.00, 1.2.00 and 1.1.00 side-by-side on the same Console Server. The Console Server automatically uses the appropriate version of the KM depending on what is running on the displayed agent.

Important

It is still essential to **update** the **console profiles** to include the new Hardware Sentry classes. To achieve this:

Load the **MS_HARDWARE_SENTRY1.kml** file in the profile.

This will add any new connector-related classes. If you do not load the new classes in the profile, Hardware Sentry will appear to function normally, but the profile will remain unaware when a hardware agent used by Hardware Sentry has failed.



Installing Hardware Sentry

This section describes the installation procedure for Hardware Sentry on any PATROL component (Agents, Consoles, Console Server, etc.). As the setup is based on the BMC Software Installation Utility, this procedure applies to all operating systems supported by Hardware Sentry.

Although not covered by this section, the installation through the Distribution Server is fully supported. Please refer to the Distribution Server documentation for a detailed description of the deployment procedure.

Important

Ensure that the platform-specific hardware agents on the systems are installed *before* you install the KM.

Getting the BMC Software Installation Utility

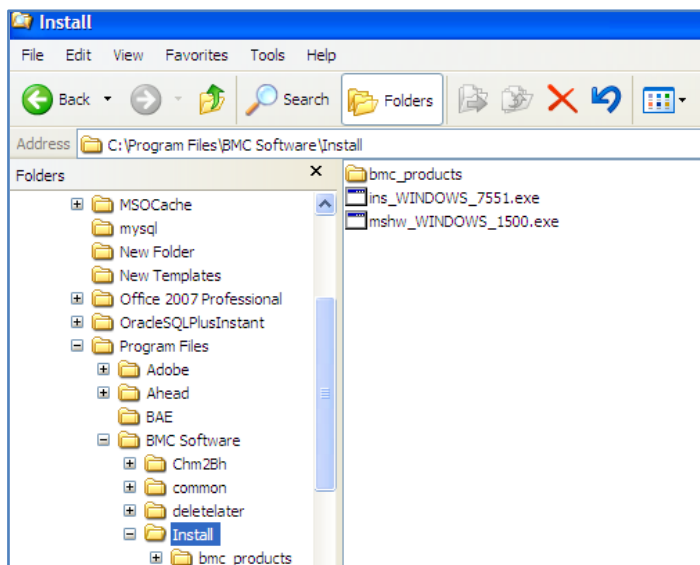
You can download the latest version of the Installation Utility from the BMC Software FTP site or from the [Sentry Software Website](#).

Choose the appropriate package depending on the platform on which you plan to install Hardware Sentry:

- For **UNIX/Linux** systems: **ins_ALL_<version number>.tar**
- For **Windows** systems: **ins_WINDOWS_<version number>.exe**

The packages are applicable for agents, consoles, Console Servers, etc.

Place the Installation Utility package in the same folder as the Hardware Sentry package.



Extracting the setup files

On Windows

Extract the packages for Windows by double-clicking in the following order:

1. ins_WINDOWS_<version number>.exe
2. mshw_windows_1501.exe

The files are extracted in a subfolder named bmc_products.

On UNIX/Linux

Extract the packages for UNIX/Linux using the tar utility:

1. tar xvf ins_ALL_<version number>.tar
2. tar xvf mshw_unix_1501.tar

The files are extracted in a sub-directory named bmc_products.

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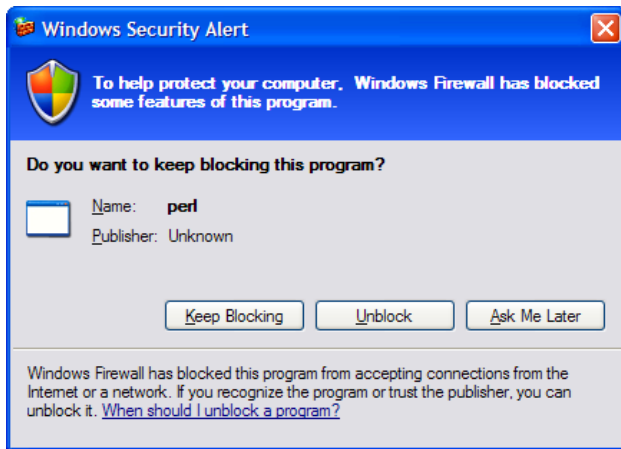
Installing Hardware Sentry KM for PATROL

```
patrol@cioran-linux/tmp/bmc_products
[patrol@cioran-linux Patrol3]$ cd /tmp
[patrol@cioran-linux tmp]$ cd bmc_products
[patrol@cioran-linux bmc_products]$ ls
cdname          imginfo_040628-184702  Inetall  setup.exe  uninstall.exe
[patrol@cioran-linux bmc_products]$ ./setup.sh
```

Go to the bmc_products folder where both the Hardware Sentry and the Common Installer files have been extracted.

On **Windows**: Launch **setup.exe** program

On **UNIX**: Launch **setup.sh** script

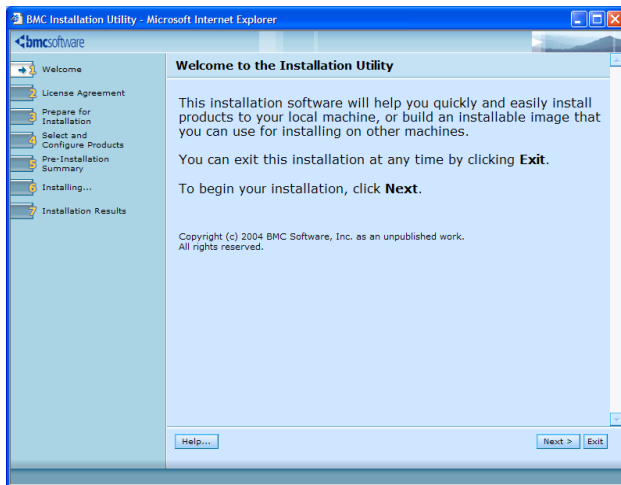


Latest versions of Windows XP and Windows 2003 may deploy a security alert dialog like in the screenshot.

To install Hardware Sentry:

Allow the perl.exe program to unblock this port:

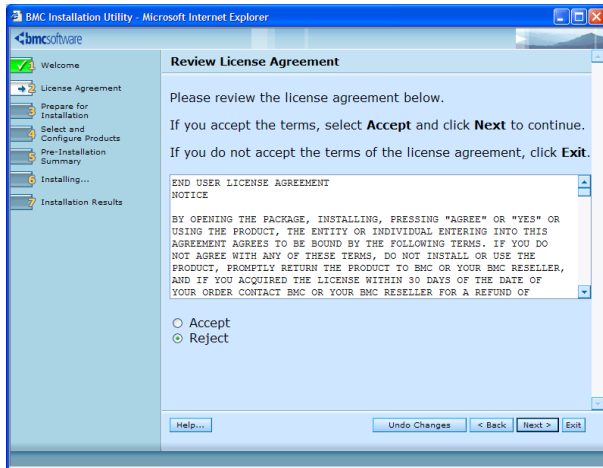
Click **Unblock**.



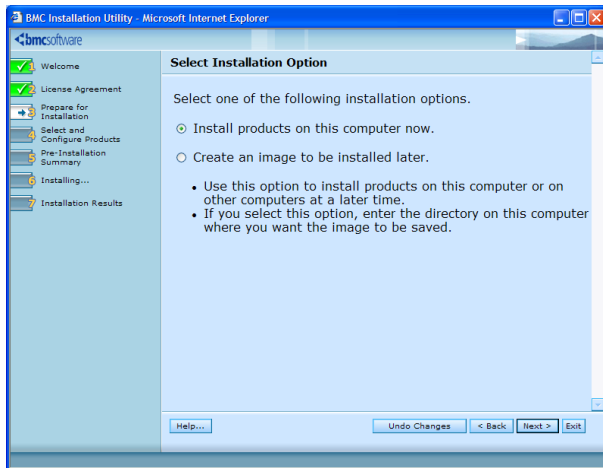
The welcome screen of the installer appears:

Click **Next**.

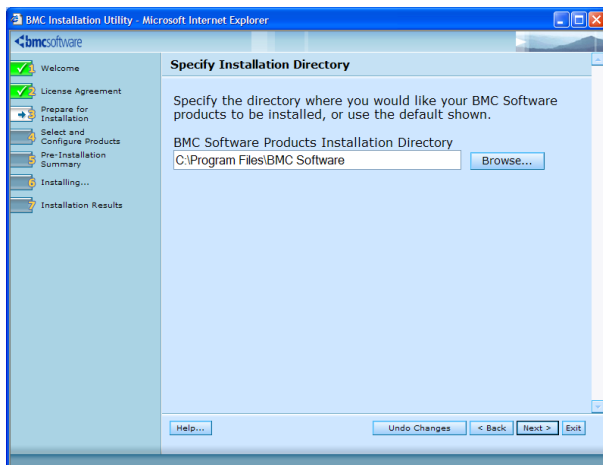
SENTRY SOFTWARE



Read and accept the terms of the license agreement.

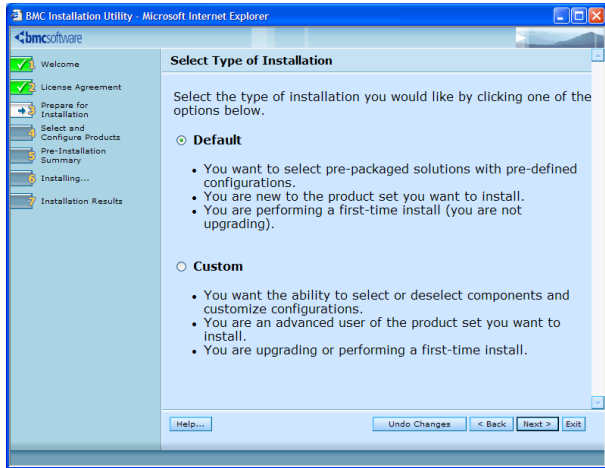


Select the option: **Install the products on this computer now**



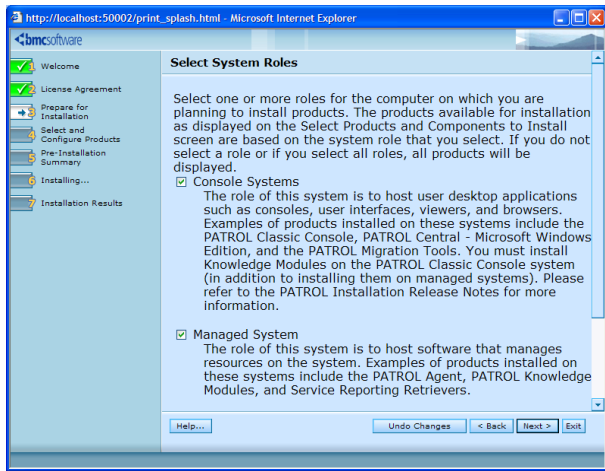
Specify the BMC Software products folder.
See BMC Software documentation for more information about the BMC Software products folder.

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Select the **Default** option.

You do not need to customize anything for the installation of Hardware Sentry.

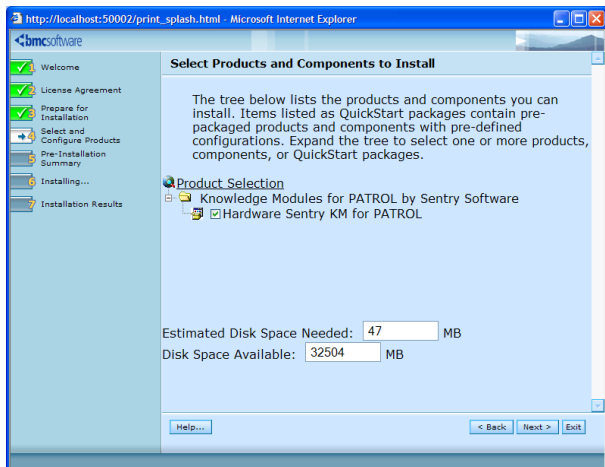


Select Systems Roles:

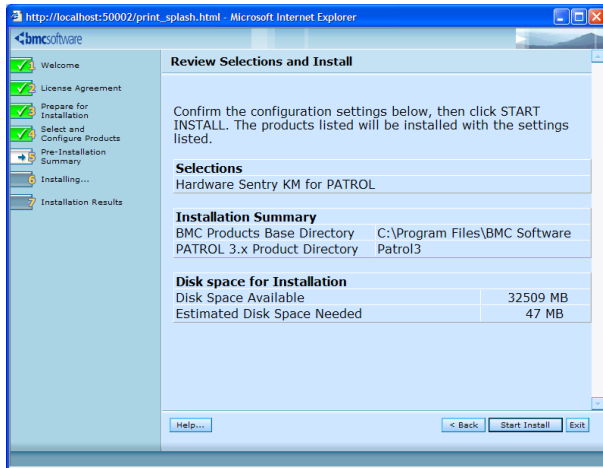
- **Console Systems** role: On a PATROL Classic Console
- **Managed System** role: On a PATROL Agent
- **Common Services** role: On a Console Server or on PATROL Central-Web Edition

Note

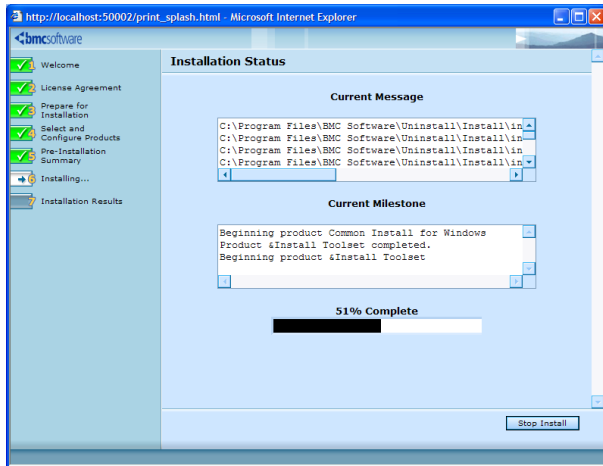
You can select several options at one time.



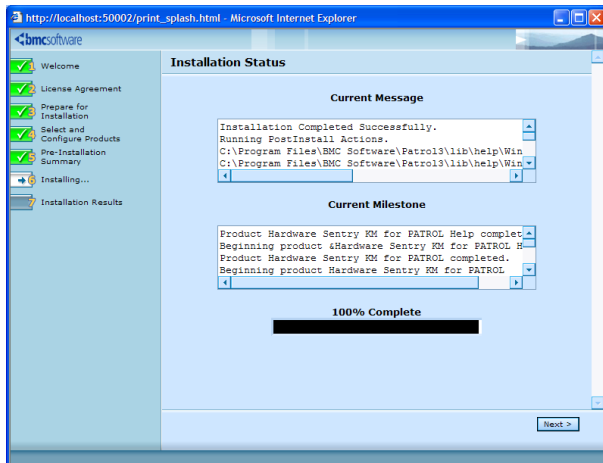
Select **Hardware Sentry KM for PATROL**. It should be selected by default.



Review the summary and click **Start Install**.

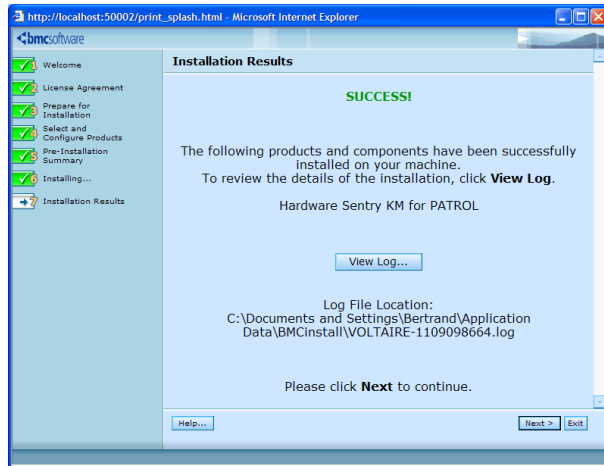


Let the setup program perform the installation.



If successful, the setup shows this screen.

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The next screen must show a successful installation result.

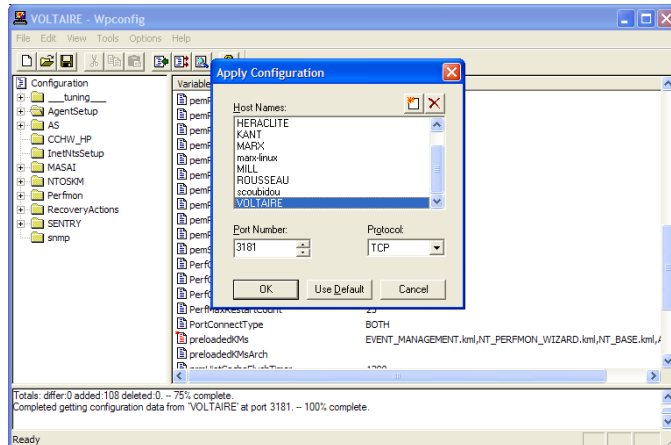
Click **Next** and then **Finish**.

Note

You can cancel the installation setup at any step by simply clicking the **Exit** button.

Preloading Hardware Sentry

To optimize the performance of Hardware Sentry, it is strongly recommended to configure the PATROL Agent to preload the KM. This enables the PATROL Agent to automatically load Hardware Sentry on startup and not wait for a console requesting the KM.



To do this:

1. Set the **/AgentSetup/preloadedKMs** configuration variable of each PATROL Agent where Hardware Sentry has been installed. To set a configuration variable, use either of the following options: **PATROL Configuration Manager (PCM)**, **wpconfig.exe** for **Windows** or **xpconfig** for **UNIX/Linux**.

Please refer to the BMC Software PATROL documentation for detailed information on these tools. **/AgentSetup/preloadedKMs** is a comma-separated list of KM files or KM lists that are to be loaded by the agent upon startup. Basically, it will look like the following:

```
EVENT_MANAGEMENT.kml,NT_PERFMON_WIZARD.kml,NT_BASE.kml,AS_EVENTSPRING.kml
```

2. Add **MS_HARDWARE_SENTRY1.kml** to this list as shown below and then apply the configuration:

```
EVENT_MANAGEMENT.kml,NT_PERFMON_WIZARD.kml,NT_BASE.kml,AS_EVENTSPRING.kml,MS_HARDWARE_SENTRY1.kml
```

Tuning the PATROL Agent

Since version 1.3.01 of Hardware Sentry, there is no longer any need to tune the infinite loop detection mechanism of the PATROL Agent. Changes have been made in Hardware Sentry to avoid this error message as well as any side effects.

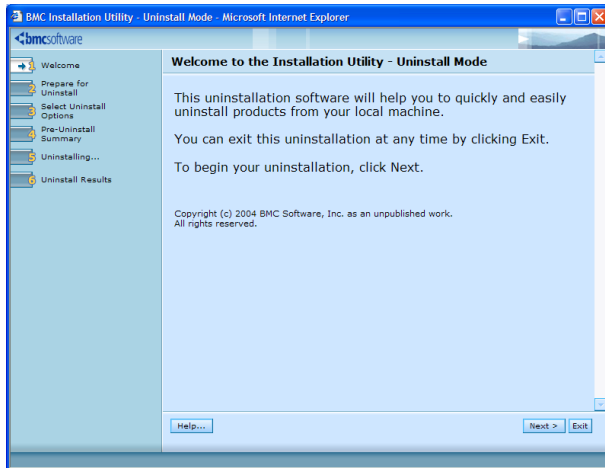
License Keys

License keys are no longer required to activate the product.

Un-installing Hardware Sentry

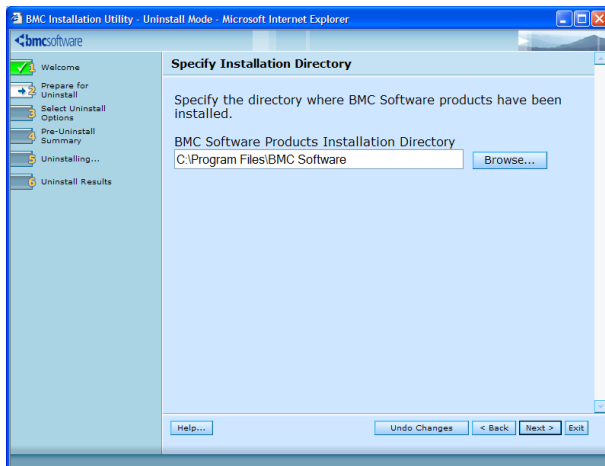
This section describes the procedure to uninstall Hardware Sentry from a computer (Agent, Console or Console Server).

Uninstall procedure



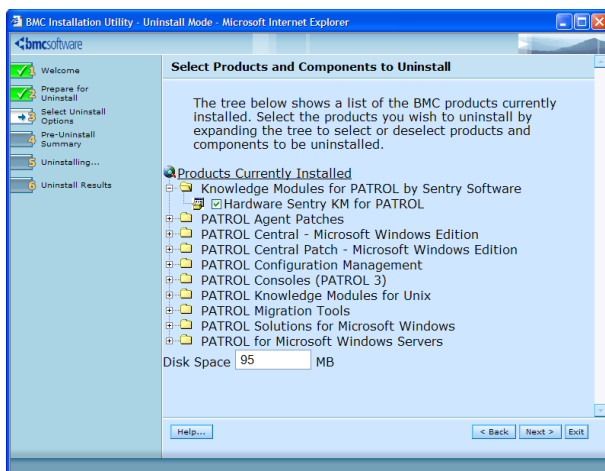
Browse to the Uninstall directory under the BMC products directory (typically under C:\Program Files\BMC Software, or /opt/bmc)

- On **Windows** systems: Launch **uninstall.exe**
- On **UNIX**: Launch **uninstall.sh**



Specify the BMC Software products folder.

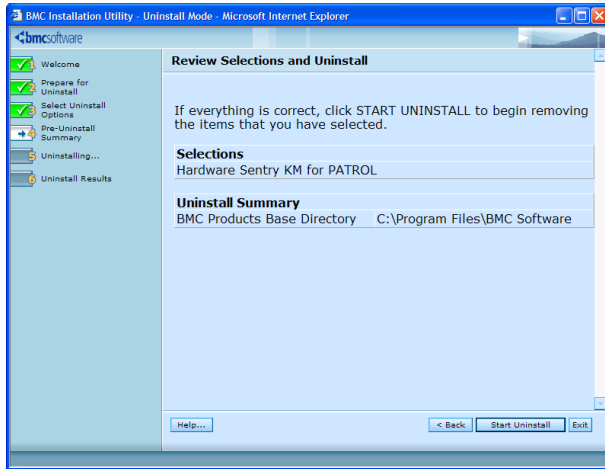
See the BMC Software documentation for more information about the BMC Software products folder.



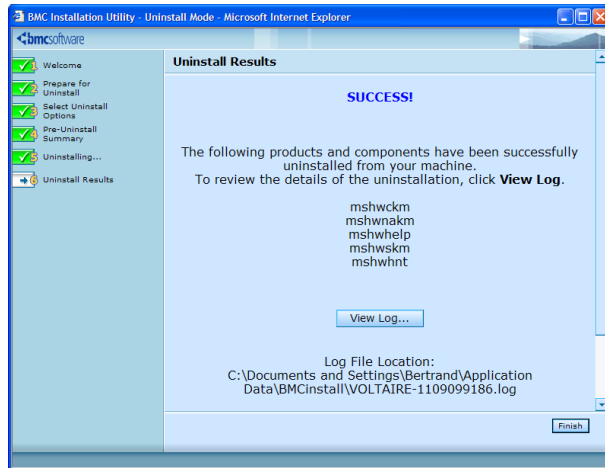
To uninstall the KM:

Check the **Hardware Sentry KM for PATROL** box.

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Click **StartUninstall** to run the un-installation program.



A page displaying **SUCCESS** indicates that Hardware Sentry KM for PATROL is now uninstalled.

About BMC® Software

BMC Software, Inc. NYSE:BMC, is a leading provider of enterprise management solutions that empower companies to manage their IT infrastructure from a business perspective. Delivering Business Service Management, BMC Software solutions span enterprise systems, applications, databases, and service management. Founded in 1980, BMC Software has offices worldwide and fiscal 2004 revenues of more than \$1.4 billion. For more information about BMC Software, visit www.bmc.com.

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