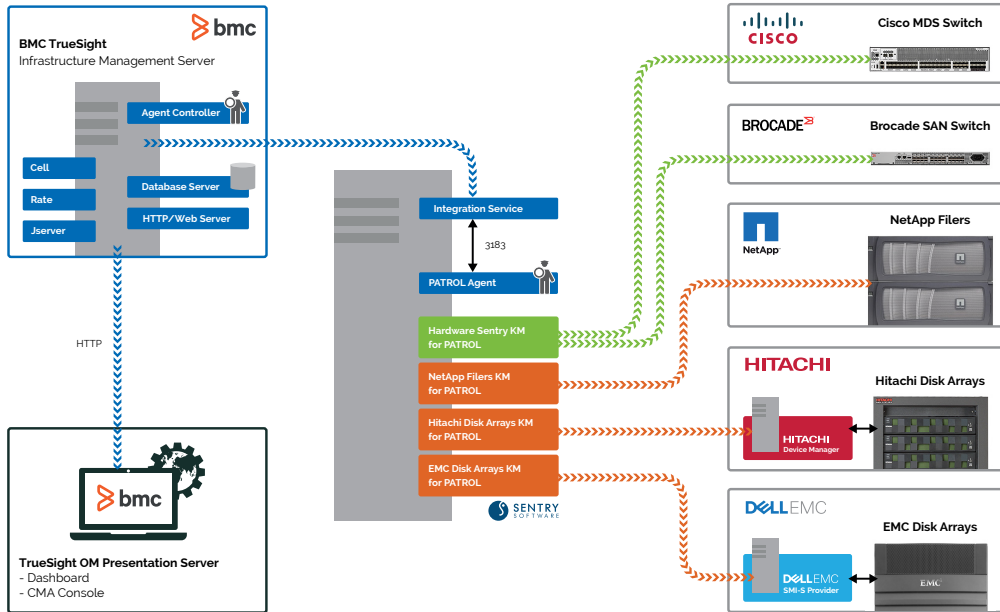


# STORAGE MONITORING

Sentry Software Monitoring for BMC TrueSight Operations Management



TECHNICAL  
DATASHEET

Architecture Diagram for the  
Storage Monitoring Solution

## MAIN FEATURES

### MONITORING

#### DISK ARRAYS

- Detects failures on the disks and controllers
- Monitors the environment (temperature, fans, power supplies) and the fiber links (external and internal)
- Monitors the fiber links (external and internal)
- Reports on all internal performance metrics from the physical disk activity to the overall array response time and the traffic on each LUN
- Reports on the consumed and available disk space (overall, per storage pool and per volume) with full support for thin provisioning
- Reports on the available disk space (total and per volume)
- Reports on the power consumption of the disk array (in Watts and kWh)

### MONITORING

#### FIBER SWITCHES

- Monitors the environment (temperature, fans, power supplies)
- Monitors the fiber links (port, light, connection, speed, etc.)
- Reports on the utilization of each fiber link (traffic, total amount of data per hour or per day, bandwidth utilization)
- Reports on the power consumption of the switch (in Watts and kWh)

### MONITORING

#### TAPE LIBRARIES

- Detects failures on the tape drives and robotics
- Monitors the environment (temperature, fans, power supplies)
- Notifies when drive cleaning is needed
- Reports on the tape drives utilization (mount count)
- Reports on the power consumption (in Watts and kWh)

### BACKUP

#### MONITORING

- Reports on backup and restore activity and performance
- Detects backup and restore errors
- Reports on devices and media
- Monitors log and database storage
- Reports on backup servers, services and daemons

## FEATURED PRODUCTS

### STORAGE MONITORING

- Dell Compellent KM for PATROL (agent-based | agent-less | CMA Compatible)
- Dell EMC Unity KM for PATROL (agent-based | CMA Compatible)
- EMC Disk Arrays KM for PATROL (agent-based | agent-less | CMA Compatible)
- EMC XtremIO KM for PATROL (agent-based | CMA Compatible)
- Hitachi Disk Arrays KM for PATROL (agent-based | agent-less | CMA Compatible)
- HP 3PAR KM for PATROL (agent-based | agent-less | CMA Compatible)
- HP EVA KM for PATROL (agent-based | agent-less | CMA Compatible)
- IBM DS 3000, DS 4000, DS 5000 Series KM for PATROL (agent-based)
- IBM DS 6000, DS 8000 Series KM for PATROL (agent-based | CMA Compatible)
- IBM SVC-Storwize KM for PATROL (agent-based | CMA Compatible)
- IBM XIV KM for PATROL (agent-based | CMA Compatible)
- NetApp Filers KM for PATROL (agent-based | agent-less | CMA Compatible)
- Pure Storage KM for PATROL (agent-based | CMA Compatible)

### BACKUP MONITORING

- CA ARCserve Backup KM for PATROL (agent-based)
- EMC NetWorker KM for PATROL (agent-based | CMA Compatible)
- HP Data Protector KM for PATROL (agent-based)
- Symantec Backup Exec KM for PATROL (agent-based)
- IBM Spectrum Protect KM for PATROL (Tivoli Storage Manager) (agent-based | CMA Compatible)
- Veritas NetBackup KM for PATROL (agent-based | CMA Compatible)

# SUPPORTED PLATFORMS

## STORAGE MONITORING

Vendor	Supported Platforms
Dell	<ul style="list-style-type: none"> <li>Any Dell Storage Center compatible with Dell Compellent Enterprise Manager 6.3</li> <li>Any Dell EMC Unity storage system with embedded SMI-S provider</li> </ul>
EMC	EMC Symmetrix (DMX, VMAX, VMAX3), EMC CLARiiON, EMC VNX, EMC Celerra, EMC NAS, EMC XtremIO
Hitachi	AMS, HUS, HUS VM, USP, USP-V/USP-VM, VSP
HP 3PAR	Any HP 3PAR Storage System with embedded SMI-S Provider
HP	HP EVA, HP StorageWorks XP, MSA
Huawei	OceanStor 9000, V3
IBM	IBM DS 3000, 4000, 5000, 6000, 8000 series, IBM SVC, IBM Storwize v7000/Unified, IBM XIV
NetApp	All NetApp storage filers
Pure Storage	Any flash array that supports Pure Storage REST API v1.6 and higher

## BACKUP MONITORING

Backup Software	Supported Version
CA ARCserve Backup	v6.5 and higher
EMC NetWorker	v8.x and higher
HP Data Protector	v4.0 and higher
Symantec Backup Exec	v10 and higher
IBM Spectrum Protect (Tivoli Storage Manager)	v5.1 and higher
Veritas NetBackup	v7.7 and higher

## BMC PLATFORMS

Platform	Supported Version
BMC PATROL	PATROL Agent v3.9 and higher
BMC PATROL	PATROL Console
BMC Portal	v2.5 and higher
BMC TrueSight	v9.0.00 and higher



# PREREQUISITES

## STORAGE MONITORING

Methods for Communicating with Storage Systems:

- SMI-S proxy (WBEM)
- Embedded SMI-S Provider (WBEM)
- Storage System's Management Interface (SSH/SNMP/Proprietary)
- Access to the embedded SNMP agent (for Huawei Storage Systems)

Products	Prerequisites
Dell Compellent KM for PATROL	<ul style="list-style-type: none"> <li>Dell Compellent Enterprise Manager 6.3 and higher</li> <li>JRE 1.8 and higher</li> </ul>
Dell EMC Unity KM for PATROL	<ul style="list-style-type: none"> <li>Embedded SMI-S enabled</li> <li>A user with operator role created in Unisphere</li> <li>JRE 1.8 and higher</li> </ul>
EMC Disk Arrays KM for PATROL	<ul style="list-style-type: none"> <li>EMC SMI-S Provider (ECOM) 4.6 or later (SAN Monitoring)</li> <li>Statistics enabled</li> <li>Embedded SMI-S Provider enabled (NAS Monitoring)</li> <li>JRE 1.8 and higher</li> </ul>
EMC XtremIO KM for PATROL	<ul style="list-style-type: none"> <li>EMC XtremIO Management Server</li> <li>JRE 1.8 and higher</li> </ul>
Hitachi Disk Arrays KM for PATROL	<ul style="list-style-type: none"> <li>Hitachi Device Manager 6.3 and higher</li> <li>JRE 1.8 and higher</li> </ul>
HP 3PAR KM for PATROL	<ul style="list-style-type: none"> <li>3PAR embedded SMI-S provider</li> <li>SMI-S Provider enabled</li> <li>JRE 1.8 and higher</li> </ul>
HP EVA KM for PATROL	<ul style="list-style-type: none"> <li>HP StorageWorks 9.1 and higher</li> <li>JRE 1.6 update 43 and higher</li> </ul>
IBM DS 3000, DS 4000, DS 5000 Series KM for PATROL	<ul style="list-style-type: none"> <li>Latest version of IBM Storage Manager</li> <li>JRE 1.5 and higher</li> </ul>
IBM DS6000, DS 8000 Series KM for PATROL	<ul style="list-style-type: none"> <li>Latest version of IBM Storage Manager</li> <li>JRE 1.5 and higher</li> </ul>
IBM SVC-Storwize KM for PATROL	<ul style="list-style-type: none"> <li>WBEM access rights</li> <li>JRE 1.8 and higher</li> </ul>
IBM XiV KM for PATROL	<ul style="list-style-type: none"> <li>IBM XiV embedded SMI-S Provider</li> <li>JRE 1.6 and higher</li> </ul>
NetApp Filers KM for PATROL	<ul style="list-style-type: none"> <li>All NetApp storage filers with Data ONTAP up to version 9.x (both 7-mode and C-mode)</li> <li>JRE 1.8 and higher</li> </ul>

## BACKUP MONITORING

Products	Prerequisites	Security Requirements
CA ARCserve Backup KM for PATROL	Executable access to the aserver.exe and tapetest.exe files	
EMC NetWorker KM for PATROL	Operating Systems: <ul style="list-style-type: none"> <li>Oracle Solaris 8 and higher</li> <li>HP UX 11 and higher</li> <li>IBM AIX 5.1 and higher</li> <li>Red Hat Linux 7.2</li> <li>Microsoft Windows 2003, 2008, 2008 R2</li> </ul>	Administrative privileges to read and execute EMC NetWorker application programs and file systems
HP Data Protector KM for PATROL	Operating Systems: <ul style="list-style-type: none"> <li>HP-UX</li> <li>Solaris</li> <li>Linux</li> <li>Windows</li> </ul>	Administrative privileges to run HP Data Protector CLIs
Symantec Backup Exec KM for PATROL	Any Microsoft Windows operating system supported by Symantec Backup Exec and PATROL Agent	
IBM Spectrum Protect KM for PATROL (Tivoli Storage Manager)	Operating Systems: <ul style="list-style-type: none"> <li>Oracle Solaris 8 and higher</li> <li>HP UX 11 and higher</li> <li>IBM AIX 5.1 and higher</li> <li>Red Hat Linux 7.2</li> <li>Microsoft Windows 2003, 2008, 2008 R2, 2012</li> </ul>	Administrative privileges to read and execute Tivoli Storage Manager application programs and access file systems
Veritas NetBackup KM for PATROL	Operating Systems: <ul style="list-style-type: none"> <li>Oracle Solaris 8 and higher</li> <li>HP UX 11 and higher</li> <li>IBM AIX 5.1 and higher</li> <li>Red Hat Linux All distributions</li> <li>Microsoft Windows 2008 and higher</li> </ul>	Administrative privileges to read and execute Veritas NetBackup application programs and access file systems



### ABOUT SENTRY SOFTWARE

Sentry Software, a BMC MarketZone Direct and Technology Alliance Partner, provides monitoring solutions that expand and enhance the capabilities of BMC TrueSight Operations Management, thus enabling up to 100-percent coverage of any infrastructure. Sentry Software specializes in single solutions for multi-platform monitoring of hardware, storage, custom applications, or any IT infrastructure component. Its products are deployed in diverse industry sectors around the globe. To learn more, please visit [sentrysoftware.com/about](http://sentrysoftware.com/about).



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