

Hitachi Tuning Manager Software

7.0.0 Release Notes

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About This Document

This document (RN-00HS262-20 30, Sep. 2010) provides late-breaking information about the Hitachi Tuning Manager Software 7.0.0-00. It includes information that was not available at the time the technical documentation for this product was published, as well as a list of known problems and solutions.

Intended Audience

This document is intended for customers and Hitachi Data Systems partners who license and use the Hitachi Tuning Manager Software.

Getting Help

The Hitachi Data Systems Support Center staff is available 24 hours a day, seven days a week. To reach us, please visit the support Web site for current telephone numbers and other contact information:

<http://www.hds.com/services/support/>. If you purchased this product from an authorized HDS reseller, contact that reseller for support.

About This Release

This release is a major release that adds new features and fixes a variety of bugs.

Product Package Contents

Medium	Components	Revision	Release Type	Prerequisite version of Service Pack
Software	Hitachi Tuning Manager	7.0.0-00	Full Package	-
	Hitachi Tuning Manager - Agent for Server System	7.0.0-00	Full Package	-
	Hitachi Tuning Manager - Agent for Oracle	7.0.0-00	Full Package	-
	Hitachi Tuning Manager - Agent for RAID	7.0.0-00	Full Package	-
	Hitachi Tuning Manager - Agent for Network Attached Storage	7.0.0-00	Full Package	-
	Hitachi Tuning Manager - Agent for SAN Switch	7.0.0-00	Full Package	-
	Hitachi Tuning Manager - Agent for Microsoft(R) SQL Server	7.0.0-00	Full Package	-
	Hitachi Tuning Manager - Agent for IBM(R) DB2(R) Universal Database(TM)	7.0.0-00	Full Package	-
Documents	Hitachi Command Suite Tuning Manager Software Installation Guide	MK-96HC141-10		
	Hitachi Command Suite Tuning Manager Software Server Administration Guide	MK-92HC021-21		
	Hitachi Command Suite Tuning Manager Software Agent Administration Guide	MK-92HC013-19		
	Hitachi Command Suite Tuning Manager Software Application Reports Reference	MK-95HC113-10		
	Hitachi Command Suite Tuning Manager Software User Guide	MK-92HC022-23		

New Features and Important Enhancements

	Hitachi Command Suite Tuning Manager Software Hardware Reports Reference	MK-95HC111-11
	Hitachi Command Suite Tuning Manager Software Operating System Reports Reference	MK-95HC112-10
	Hitachi Command Suite Tuning Manager Software Messages Reference	MK-95HC114-12
	Hitachi Command Suite Tuning Manager Software CLI User Guide	MK-96HC119-12
	Hitachi Command Suite Tuning Manager Software Getting Started Guide	MK-96HC120-08

New Features and Important Enhancements

For 7.0.0-00

#	New Features and Enhancements	Applied products	Applied OS
1	Hitachi Virtual Storage Platform is now supported. Tuning Manager server (Both of Main Console and Performance Reporter) can display information about Dynamic Provisioning of Hitachi Virtual Storage Platform.	Tuning Manager server, Agent for Server System, Agent for RAID	All ^(Note)
2	The following records for Dynamic Provisioning are now supported: <ul style="list-style-type: none"> ▪ Pool Summary (PI_PLS) ▪ Pool Tier Type Configuration (PD_PLTC) ▪ Pool Tier Type Operation Status (PD_PLTS) ▪ V-VOL Tier Type Configuration (PD_VVTC) 	Agent for RAID	All ^(Note)
3	The following information for MP Blade are now supported: <ul style="list-style-type: none"> ▪ Record: Logical Device Configuration (PD_LDC) Field : MP Blade (MP_BLADE) 	Agent for RAID	All ^(None)

New Features and Important Enhancements

4	<p>The following reports are now supported:</p> <ul style="list-style-type: none"> ▪ Logical Device 1 Read Response Rate Status (7.1) ▪ Logical Device 2 Read Response Rate Status (7.1) ▪ Logical Device 3 Read Response Rate Status (7.1) ▪ Logical Device Configuration (7.8) ▪ Logical Device Read Response Rate Status (7.1) ▪ Pool Performance Status (7.8) ▪ Pool Read Response Rate Status (7.8) ▪ Pool Tier Type Configuration (7.8) ▪ Pool Tier Type Performance Status (7.8) ▪ Pool Tier Type Usage Trend (7.8) ▪ Pool Tier Type Utilization Rate Status (7.8) ▪ Processor Busy Rate 2 - Top 10 (6.0) ▪ Virtual Volume Tier Type Configuration (7.8) ▪ Virtual Volume Tier Type Usage Trend (7.8) 	Agent for RAID	All ^(Note)
5	<p>The following hardware is now supported:</p> <ul style="list-style-type: none"> ▪ MSS that has the iSCSI port (Firmware version: 0893/B or later) 	Tuning Manager server, Agent for Server System, Agent for RAID	All ^(Note)
6	<p>The following hardware are now supported:</p> <ul style="list-style-type: none"> ▪ Hitachi AMS2000 series (Firmware version: v9.3 to v9.7) ▪ Hitachi SMS100 series (Firmware version: v9.3 to v9.7) 	Tuning Manager server, Agent for Server System, Agent for RAID	All ^(None)
7	<p>The following hardware are now supported:</p> <ul style="list-style-type: none"> ▪ USP V (Firmware version: v7) ▪ USP VM (Firmware version: v7) 	Tuning Manager server, Agent for Server System, Agent for RAID	All ^(Note)
8	<p>The host in which Agent for Server System is not installed can be now supported.</p> <p>For using this function, both of the following requirements must be satisfied:</p> <ul style="list-style-type: none"> ▪ The host is monitored by the connection target Device Manager of Tuning Manager server. ▪ The OS installed in the host is the same as an applicable OS of Agent for Server System. 	Tuning Manager server	All ^(None)
9	<p>The following records for process operating information are now supported:</p> <ul style="list-style-type: none"> - Application Process Overview (PD_APS) - Application Summary Extension (PD_APP2) - Application Process Detail (PD_APPD) - Application Process Interval (PD_APSI) 	Agent for Server System	All ^(None)

System Requirements

10	The following record for process operating information is now supported: - Application Service Overview (PD_ASVC)	Agent for Server System	Windows
11	The following alarms are now supported: - Process Existence - Application Status	Agent for Server System	All ^(None)
12	The following reports are now supported: - Application Status - Application Process Status - Application Process Count - Monitoring Process Detail	Agent for Server System	All ^(None)
13	Monitoring processor performance using the result of the sar command is now supported.	Agent for Server System	AIX
14	The following database is now supported: - Oracle Database 11g Release 2	Agent for Oracle	All ^(Note)

Note: Applies to all supported operating systems.

System Requirements

- **Tuning Manager server**
Refer to the following sections in the *Hitachi Command Suite Tuning Manager Software Installation Guide*.
 - *Product requirements*
 - + *Prerequisite software*
 - + *Prerequisite software for specific functions*
- **Agent for Server System**
Refer to the following section in the *Hitachi Command Suite Tuning Manager Software Installation Guide*.
 - *Preparing to install or upgrade Agents*
 - *Reviewing Agent-specific installation requirements*
 - + *Agent for Server System*
- **Agent for RAID**
Refer to the following section in the *Hitachi Command Suite Tuning Manager Software Installation Guide*.
 - *Preparing to install or upgrade Agents*
 - *Reviewing Agent-specific installation requirements*
 - + *Agent for RAID*
- **Agent for SAN Switch**
Refer to the following section in the *Hitachi Command Suite Tuning Manager Software Installation Guide*.
 - *Preparing to install or upgrade Agents*
 - *Reviewing Agent-specific installation requirements*
 - + *Agent for SAN Switch*

System Requirements

- Agent for Oracle
Refer to the following section in the *Hitachi Command Suite Tuning Manager Software Installation Guide*.
 - *Preparing to install or upgrade Agents*
 - *Reviewing Agent-specific installation requirements*
 - + *Agent for Oracle*
- Agent for NAS
Refer to the following section in the *Hitachi Command Suite Tuning Manager Software Installation Guide*.
 - *Preparing to install or upgrade Agents*
 - *Reviewing Agent-specific installation requirements*
 - + *Agent for NAS*
- Agent for SQL Server
Refer to the following section in the *Hitachi Command Suite Tuning Manager Software Installation Guide*.
 - *Preparing to install or upgrade Agents*
 - *Reviewing Agent-specific installation requirements*
 - + *Agent for Microsoft SQL Server*
- Agent for DB2
Refer to the following section in the *Hitachi Command Suite Tuning Manager Software Installation Guide*.
 - *Preparing to install or upgrade Agents*
 - *Reviewing Agent-specific installation requirements*
 - + *Agent for DB2*

Firmware Levels

- Supported Microcode versions for Storage Systems
Refer to the following section in the *Hitachi Command Suite Tuning Manager Software Installation Guide*.
 - *Product requirements*
 - + *Monitoring targets*

Note: Before running Tuning Manager (especially for Agent for RAID), check the micro program version of the storage system. Depending on the micro program version, some of the functionality of Agent for RAID cannot be used. For details about correspondence between micro program versions for storage systems and the functionality of Agent for RAID, refer to Section "Correspondence Between Microcode Versions for Storage Systems and Agent for RAID Functionality" in the *Hitachi Command Suite Tuning Manager Software Hardware Reports Reference*.
- Function level requirement
None

Prerequisite Programs

- Tuning Manager server
Device Manager must be running on a host that is connected over a network

to a server on which Tuning Manager server is running.

For the prerequisite programs for Tuning Manager server, refer to the following section in the *Hitachi Command Suite Tuning Manager Software Installation Guide*.

- Product requirements
 - + Prerequisite software
- Agent for Server System
 - For the prerequisite programs for Agent for Server System, refer to the following sections in the *Hitachi Command Suite Tuning Manager Software Installation Guide*.
 - Product requirements
 - + Monitoring targets
 - + Prerequisite software
 - + Prerequisite software for specific functions
- Agent for RAID
 - For the prerequisite programs for Agent for RAID, refer to the following sections in the *Hitachi Command Suite Tuning Manager Software Installation Guide*.
 - Product requirements
 - + Monitoring targets
 - + Prerequisite software
 - + Prerequisite software for specific functions
- Agent for SAN Switch
 - For the prerequisite programs for Agent for SAN Switch, refer to the following sections in the *Hitachi Command Suite Tuning Manager Software Installation Guide*.
 - Product requirements
 - + Monitoring targets
 - + Prerequisite software
 - + Prerequisite software for specific functions
- Agent for Oracle
 - For the prerequisite programs for Agent for Oracle, refer to the following sections in the *Hitachi Command Suite Tuning Manager Software Installation Guide*.
 - Product requirements
 - + Monitoring targets
 - + Prerequisite software
 - + Prerequisite software for specific functions
- Agent for NAS
 - For the prerequisite programs for Agent for NAS, refer to the following sections in the *Hitachi Command Suite Tuning Manager Software Installation Guide*.
 - Product requirements
 - + Monitoring targets
 - + Prerequisite software
 - + Prerequisite software for specific functions
- Agent for SQL Server
 - For the prerequisite programs for Agent for SQL Server, refer to the following

sections in the *Hitachi Command Suite Tuning Manager Software Installation Guide*.

- Product requirements
 - + Monitoring targets
 - + Prerequisite software
 - + Prerequisite software for specific functions
- Agent for DB2
 - For the prerequisite programs for Agent for DB2, refer to the following sections in the *Hitachi Command Suite Tuning Manager Software Installation Guide*.
 - Product requirements
 - + Monitoring targets
 - + Prerequisite software
 - + Prerequisite software for specific functions

Memory and Disk Space Requirements

- Tuning Manager server
 - Memory requirements
 - For the required memory of Tuning Manager server, refer to the following section in the *Hitachi Command Suite Tuning Manager Software Installation Guide*.
 - Product requirements
 - + Estimating memory requirements
 - Disk space requirements
 - For the required disk space of Tuning Manager server, refer to the following section in the *Hitachi Command Suite Tuning Manager Software Installation Guide*.
 - Product requirements
 - + Estimating disk space requirements
- Tuning Manager agents
 - Memory requirements
 - For the required memory of Tuning Manager agents, refer to the following section in the *Hitachi Command Suite Tuning Manager Software Installation Guide*.
 - Product requirements
 - + Estimating memory requirements
 - Disk space requirements
 - For the required disk space of Tuning Manager agents, refer to the following sections in the *Hitachi Command Suite Tuning Manager Software Installation Guide*.
 - Product requirements
 - + Estimating disk space requirements
 - Disk space requirements for the Store database (Store version 1.0)
 - + Estimating disk space requirements when running in a cluster system

Fixed Problems

For 7.0.0-00

#	Fixed Problems	Applied products	Applied OS
1	<p>The following problem has been corrected.</p> <p>For the Summarization Unit of the performance information stored in the Store database, a value of the following fields in the summarized records of Daily, Weekly, Monthly, and Yearly, shifts for 1 hour.</p> <ul style="list-style-type: none"> - Date and Time (DATETIME) - Date (DATE) - Time (TIME) - GMT Offset (GMT_ADJUST) <p>This problem occurs when all of the following conditions are met:</p> <p>(1) Tuning Manager server or Tuning Manager agents are installed on the server by which the time zone where DST (Daylight Saving Time) is effective has been configured.</p> <p>(2) Collect historical data of PI records by Tuning Manager agents</p> <p>(3) About the record of (2), the value of the Date and Time field of a record which Summarization type is "Day", "Week", "Month", or "Year" satisfies either of the following conditions.</p> <ul style="list-style-type: none"> - The value of the Date and Time field is within the period from the first Sunday of April to the last Sunday of October, and it is the time when Summer Time is not applied in the host of (1). - The value of the Date and Time field is outside the period from the first Sunday of April to the last Sunday of October, and it is the time when Summer Time is applied in the host of (1). <p>(4) Refer the records of (3) by either of the following procedures.</p> <ul style="list-style-type: none"> - Display the Historical report with Tuning Manager server - Export the performance information to a text file with the "jpctool db dump" command 	<p>Tuning Manager server,</p> <p>Agent for Server System,</p> <p>Agent for RAID,</p> <p>Agent for SAN Switch,</p> <p>Agent for NAS,</p> <p>Agent for Oracle</p> <p>Agent for SQL,</p> <p>Agent for DB2</p>	All ^(Note)
2	<p>The following problem has been corrected.</p> <p>If Tuning Manager server is restarted during the start process of Tuning Manager agents, a status of Tuning Manager agents may be displayed incorrectly on the screen of Tuning Manager server.</p> <p>This problem may occur when Tuning Manager server is restarted during the start process of Tuning Manager agents.</p>	<p>Tuning Manager server</p>	All ^(Note)

Fixed Problems

3	<p>The following problem has been corrected.</p> <p>If the Logical Host Environment of Tuning Manager server is deleted, only the Health Check Agent is deleted unfairly and the Logical Host Environment of Tuning Manager server may become incorrect.</p> <p>This problem may occur when all of the following conditions are met:</p> <ul style="list-style-type: none"> (1) Set up Tuning Manager server on the Logical Host (2) Enable the Health Check Agent (3) Delete Tuning Manager server from the Logical Host with the "jpcasetup delete" command 	Tuning Manager server	All ^(Note)
4	<p>The following problem has been corrected.</p> <p>If the Logical Host Environment definition file other than Tuning Manager server is imported in the environment where Tuning Manager server has been set up on the Logical Host, a start of the Health Check Agent on a Physical Host fails.</p> <p>This problem occurs when all of the following conditions are met:</p> <ul style="list-style-type: none"> (1) Enable the Health Check function (2) Set up Tuning Manager server on the Logical Host (3) In the environment of (2), import the Logical Host Environment definition file other than Tuning Manager server (4) Reply "yes" to the "KAVE05150-Q" message displayed in (3) 	Tuning Manager server	Windows
5	<p>The following problem has been corrected.</p> <p>In the environment where Tuning Manager agents are connected to Tuning Manager server, a start of Tuning Manager server may fail.</p> <p>This problem may occur when all of the following conditions are met:</p> <ul style="list-style-type: none"> (1) Tuning Manager server has been installed on the server. (2) Start Tuning Manager server services after start of Tuning Manager agents connected to Tuning Manager server is completed (3) There are many Tuning Manager agents connected to Tuning Manager server. (Approximately 200 to 250 agents are connected to Tuning Manager server.) 	Tuning Manager server	All ^(Note)

Fixed Problems

6	<p>The following problem has been corrected.</p> <p>Although Tuning Manager agents are working normally, the status of Tuning Manager agents is incorrectly evaluated as "Incomplete".</p> <p>The status of services other than Agent Collector service is displayed as "Unknown" on the message text of the health check event displayed at this time.</p> <p>This problem occurs when all of the following conditions are met:</p> <ol style="list-style-type: none"> (1) Configure the monitor level of the Health Check function as "Service" (2) A monitoring target host stops and the status of an Agent becomes "Host Not Available". (3) After (2), The monitoring target host is started by the next polling by the Health Check function. <p>And a service of Agent on the host starts.</p>	Tuning Manager server	All ^(Note)
7	<p>The following problem has been corrected.</p> <p>When the condition that the communication load to Tuning Manager server is high continues for a long time, Master Manager service may stop incorrectly.</p> <p>This problem may occur when all of the following conditions are met:</p> <ol style="list-style-type: none"> (1) The condition of the Name Server is busy. (2) Acquisition of a node information to the Name Server service is required by the Master Manager service. (3) The processing in (2) takes a long time. (4) Moreover, Master Manager service receives another request, and the request is executed by Master Manager. 	Tuning Manager server	Windows
8	<p>The following problem has been corrected.</p> <p>When the reports of multiple Agents are displayed by the "jpcrpt" command, the "jpcrpt" command may become error with time-out.</p> <p>This problem occurs when all of the following conditions are met:</p> <ol style="list-style-type: none"> (1) Display reports of multiple Agents (2) In the display target Agents in (1), there is an Agent that has zero record corresponding to the search condition of a report. (3) In the display target Agents in (1), there is an Agent that has many records (*1) corresponding to the search condition of a report. <p>*1: Approximately over 1000 records</p>	Tuning Manager server	All ^(Note)

Fixed Problems

9	<p>The following problem has been corrected.</p> <p>When the Services Window is displayed with Performance Reporter, the View Server service may abnormally terminate.</p> <p>This problem may occur when both of the following conditions are met:</p> <p>(1) The communication load to Tuning Manager server is high.</p> <p>(2) Perform one of the following procedures with Performance Reporter</p> <ul style="list-style-type: none"> - Switch window to the Services Window from window other than the Services Window - Select "Refresh" in the Services Window - Select "Distribute Property" in the Services Window 	Tuning Manager server	All ^(Note)
10	<p>The following problem has been corrected.</p> <p>Values of the following fields in the File System Configuration(PD_FSC) record may be displayed incorrectly:</p> <ul style="list-style-type: none"> - Disk Group Name - File System Name <p>This problem occurs when all of the following conditions are met:</p> <p>(1) The monitoring target host is HP-UX 11i V3 (B.11.31).</p> <p>(2) A device file name to which character string in the front part of the device file name is corresponding, exists on the host.</p> <p>For the following examples, *2 is corresponding to *1 in the front part of the device file name, and the condition is met.</p> <p>[Example]</p> <p>/dev/rdisk/disk3 *1</p> <p>/dev/rdisk/disk30 *2</p> <p>/dev/rdisk/disk31 *2</p> <p>/dev/rdisk/disk32 *2</p> <p>(3) About the device files described in (2), one or more device files with longer string length of a device file name (*2 are met) are mounted or belong to Disk Group.</p>	Agent for Server System	HP-UX(IPF)
11	<p>The following problem has been corrected.</p> <p>The drive letter is not displayed in the File System Name field of the File System Configuration (PD_FSC) record.</p> <p>This problem occurs when all of the following conditions are met:</p> <p>(1) The OS is Windows Server 2008.</p> <p>(2) The configuration of the volume is any of the followings:</p> <ul style="list-style-type: none"> - Spanned volume - Striped volume - Mirrored volume - RAID-5 volume <p>(3) A drive letter is assigned to the volume described in (2)</p>	Agent for Server System	Windows2008

Fixed Problems

12	<p>The following problem has been corrected.</p> <p>Importing Alarms may fail.</p> <p>This problem occurs when both of the following conditions are met:</p> <p>(1) A correlation between the data model version of the alarm described to the Alarm Definition File and the data model version of the report related with the alarm satisfies following condition:</p> <p>[Condition] $(Va > Vr)$ and $(Ra < Rr)$</p> <p>[Legend] - "Va.Ra": The data model version of an alarm - "Vr.Rr": The data model version of an report</p> <p>(2) Execute the "jpctool alarm import" command with specifying the Alarm Definition File.</p>	Tuning Manager server	All ^(Note)
13	<p>The following problem has been corrected.</p> <p>The "jpcconf host hostname" command or the "jpcconf host hostmode" command may fail.</p> <p>This problem may occur when either of the "jpcconf host hostname" or the "jpcconf host hostmode" command is executed.</p>	Tuning Manager server, Agent for Server System, Agent for RAID, Agent for SAN Switch, Agent for Oracle, Agent for SQL, Agent for DB2	All ^(Note)
14	<p>The following problem has been corrected.</p> <p>When either of the "=" or the "<>" is specified in the Alarm Condition, the alarm may not be issued even if the Abnormal Condition is satisfied.</p> <p>This problem occurs when all of the following conditions are met:</p> <p>(1) Use either of the following alarm.</p> <ul style="list-style-type: none"> - The alarm in the solution set. - The alarm, copy from the solution set, is not edited by either of the following operation. <ul style="list-style-type: none"> (a) Select an alarm in the Alarms window of Performance Reporter, and click "Finish". (b) Overwrite the alarm by the "jpctool alarm import". <p>(2) The operand in the alarm condition is either "=" or "<>".</p> <p>(3) The alarm condition differs between the Warning condition and the Abnormal condition.</p> <p>(4) The alarm condition of (1) is satisfied.</p>	Tuning Manager server	All ^(Note)

Fixed Problems

15	<p>The following problem has been corrected.</p> <p>When Tuning Manager agents are started while the load of Tuning Manager server is high, Tuning Manager agents may stop incorrectly.</p> <p>This problem may occur both of the following conditions are met:</p> <p>(1) The load of Tuning Manager server is high.</p> <p>(2) Perform either of the following operation about Tuning Manager agents.</p> <ul style="list-style-type: none"> - Start Tuning Manager agents to which the Alarm Table is bound. - Change bind-status of Alarm Table about Tuning Manager agents. 	<p>Tuning Manager server, Agent for Server System, Agent for RAID, Agent for SAN Switch, Agent for Oracle, Agent for SQL, Agent for DB2</p>	All ^(Note)
16	<p>The following problem has been corrected.</p> <p>Start of Tuning Manager agents services may fail after executing the "jpcconf" command or after installation of Tuning Manager.</p> <p>This problem occurs when the following one or more conditions are met:</p> <p>[Condition 1]</p> <p>When all of the following conditions are met:</p> <ol style="list-style-type: none"> (1) Execute the "jpcinssetup" command or the "jpcinsunsetup" command. (2) Specify the host-name which is 7 bytes or more and starts with the "agt" to a value of the "-lhost" option or the "-inst" option. (3) Length of a host-name of a monitored host is 7 bytes or more, and starts with the "agt". <p>[Condition 2]</p> <p>When all of the following conditions are met:</p> <ol style="list-style-type: none"> (1) Execute the "jpcasetup import" command. (2) A logical host-name of an imported file or an instance-name of Tuning Manager agent service is 7 bytes or more, and starts with the "agt". (3) Length of a host-name of a monitored host is 7 bytes or more, and starts with the "agt". <p>[Condition 3]</p> <p>When both of (1) and (2) of the following conditions, or both of (1) and (3) of the following conditions are met:</p> <ol style="list-style-type: none"> (1) Execute the "jpcconf host hostmode" command. (2) The host-name (*1) is 7 bytes or more and starts with the "agt". <p>*1: - When a value of the "-mode" argument is "uname": the host-name resolved by the "uname" command</p> <ul style="list-style-type: none"> - When a value of the "-mode" argument is 	<p>Tuning Manager server, Agent for Server System, Agent for RAID, Agent for SAN Switch, Agent for NAS, Agent for Oracle, Agent for SQL, Agent for DB2</p>	All ^(Note)

Fixed Problems

	<p>"hostname": the host-name resolved by the "hostname" command</p> <ul style="list-style-type: none">- When a value of the "-mode" argument is "alias": the host-name specified to argument of the "-aliasname" option <p>(3) Length of a host-name of a monitored host is 7 bytes or more, and starts with the "agt".</p> <p>[Condition 4]</p> <p>When both of (1) and (2) of the following conditions, or both of (1) and (3) of the following conditions are met:</p> <ul style="list-style-type: none">(1) Execute the "jpcconf host hostname" command.(2) Specify the host-name which is 7 bytes or more and starts with the "agt" to a value of the "-lhost" option or the "-newhost" option.(3) Length of a host-name of a monitored host is 7 bytes or more, and starts with the "agt". <p>[Condition 5]</p> <p>When all of the following conditions are met:</p> <ul style="list-style-type: none">(1) Create an instance environment of Tuning Manager agents on the host where Tuning Manager server or Tuning Manager agent earlier than 6.3.0-00 has been installed.(2) The instance created in (1) satisfies either of the following conditions:<ul style="list-style-type: none">(a) The host-name of the monitored host where an instance is created is 7 bytes or more, and starts with the "agt".(b) The created instance-name is 7 bytes or more, and starts with the "agt".(3) After creating the instance-environment in (1), upgrade Tuning Manager server or Tuning Manager agents to the version 6.3.0-00 or later.		
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Known Problems

17	<p>The following problem has been corrected.</p> <p>The Agent Collector service of Agent for Oracle may output the following error message to the common log and terminate abnormally.</p> <p style="padding-left: 40px;">KAVF12023-E Agent Collector is going to stop because the error has occurred.</p> <p style="padding-left: 40px;">KAVF12004-E Agent Collector stopped abnormally.</p> <p>This problem occurs when all of the following conditions are met:</p> <p>(1) More than 200 Oracle Database sessions have been established.</p> <p>(2) One of the following operations is performed:</p> <p style="padding-left: 20px;">(a) Settings are defined so that history data for any of the records listed in following table is stored in Store database.</p> <p style="padding-left: 20px;">(b) Displaying a real-time report that contains any of the records listed in following table in the window of Performance Reporter.</p> <p style="padding-left: 20px;">(c) Output a real-time report that includes any of the records listed in following table by using the "jpcrpt" command of Performance Reporter.</p> <p style="padding-left: 20px;">(d) One of the following report provided in a solution set is displayed:</p> <p style="padding-left: 40px;">Disk Sort – Top 10 Session(4.0)</p> <p style="padding-left: 40px;">Memory Usage – Top 10 Session(4.0)</p> <p style="padding-left: 40px;">Session Statistics Detail(4.0)</p> <p style="padding-left: 20px;">(e) Evaluating the alarms for any of the records listed in following table in the window of Performance Reporter.</p> <table border="1" data-bbox="548 1087 1049 1211"> <tr> <td>Record name</td> <td>Record ID</td> </tr> <tr> <td>Session Statistics Summary</td> <td>PD_PDS2</td> </tr> <tr> <td>Session Stat Summary</td> <td>PI_PIS2</td> </tr> </table>	Record name	Record ID	Session Statistics Summary	PD_PDS2	Session Stat Summary	PI_PIS2	Agent for Oracle	All ^(Note)
Record name	Record ID								
Session Statistics Summary	PD_PDS2								
Session Stat Summary	PI_PIS2								

Note: Applies to all supported operating systems.

Known Problems

- Tuning Manager server
None
- Tuning Manager agents
None

Installation Precautions

- Tuning Manager server

#	Installation Precautions	Applied products	Applied OS
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Installation Precautions

1	When installing the Tuning Manager server, install it from the DVD media directly.	Tuning Manager server	Solaris
2	Do NOT install the Tuning Manager server in an unsupported OS.	Tuning Manager server	All ^(Note)
3	<p>When the remote host is specified as the connection target Device Manager server for Tuning Manager server, note that the following products cannot be installed on the host where Tuning Manager server is installed.</p> <ul style="list-style-type: none"> #Hitachi Device Manager #Hitachi Global Link Manager #Hitachi NAS Manager #Hitachi Storage Navigator Modular 2 <p>If the above products are expected to be installed on the host where Tuning Manager server is installed, execute the following commands to change the connection target Device Manager server from the remote host to the local host.</p> <ul style="list-style-type: none"> #hcmdsprmset command #htm-dvm-setup command <p>For how to use the above commands, refer to the <i>Hitachi Command Suite Tuning Manager Software CLI User Guide</i>.</p>	Tuning Manager server	All ^(Note)
4	<p>If you install Tuning Manager server into the host where the following products have been installed, install the Tuning Manager server and the connection-target Device Manager into the same host.</p> <ul style="list-style-type: none"> #Hitachi Global Link Manager #Hitachi NAS Manager #Hitachi Storage Navigator Modular 2 	Tuning Manager server	All ^(Note)
5	The installation of Tuning Manager server in a ZFS (zettabyte file system) on a Solaris 10 system is not supported.	Tuning Manager server	Solaris10
6	<p>The following message may be displayed during installation of Tuning Manager server for Solaris.</p> <p>KATN00240-E An internal command has timed out.</p> <p>Even if above message was displayed, installation of Tuning Manager server for Solaris is successfully completed if either of the following messages is displayed on the end of installation of Tuning Manager server for Solaris.</p> <p>"Tuning Manager server was successfully installed."</p> <p>"Tuning Manager server was successfully overwritten."</p>	Tuning Manager server	Solaris
7	If you attempt to install the Tuning Manager server in an environment where a version of Device Manager earlier than 5.0 has been installed, sometimes the message KATN00255-E is output and the Tuning Manager server installation prematurely ends. Install a supported version of Device Manager, and then install the Tuning Manager server.	Tuning Manager server	Windows

Upgrade Precautions

8	If you attempt to install the Tuning Manager server in an environment where a version of Device Manager earlier than 5.0 has been installed, sometimes the message KATN00243-E is output and the Tuning Manager server installation prematurely ends. Install a supported version of Device Manager, and then install the Tuning Manager server.	Tuning Manager server	Solaris
9	After installing of the Tuning Manager server 7.0.0, if the database of the Tuning Manager server which has been exported on version 6.0.0 to 6.4.0 was imported, the Tuning Manager server may take approximately 40 minutes to start at the first time after import.	Tuning Manager server	ALL ^(Note)

Note: Applies to all supported operating systems

- Tuning Manager agents

#	Installation Precautions	Applied products	Applied OS
1	If Tuning Manager server and Tuning Manager agents coexist in the same machine, you need to install Tuning Manager server which version is equal to or higher than Tuning Manager agents, so that the latest bug fix can be applied.	Tuning Manager agents	All ^(Note)

Note: Applies to all supported operating systems

Upgrade Precautions

- Tuning Manager server

#	Upgrade Precautions	Applied products	Applied OS
1	The upgrade installation of Tuning Manager server in a ZFS (zettabyte file system) on a Solaris 10 system is not supported.	Tuning Manager server	Solaris10
2	The following message may be displayed during upgrade installation of Tuning Manager server for Solaris. KATN00240-E An internal command has timed out. Even if above message was displayed, the upgrade installation of Tuning Manager server for Solaris is successfully completed if the following message is displayed on the end of upgrade installation of Tuning Manager server for Solaris. "Tuning Manager server was successfully upgraded."	Tuning Manager server	Solaris

Uninstallation Precautions

3	<p>The following message may be displayed during upgrade installation of Tuning Manager server for Solaris 7.0.0 from Tuning Manager server for Solaris earlier than 6.0.0.</p> <p style="text-align: center;">KATN00286-W A service failed to start. After installation processing finishes, use the hcmdssrv command to start the service manually.</p> <p>Even if above message was displayed, the upgrade installation of Tuning Manager server for Solaris is successfully completed if the following message is displayed on the end of upgrade installation of Tuning Manager server for Solaris.</p> <p>Therefore, you do not need to perform the Corrective Action mentioned in above messages.</p> <p style="text-align: center;">"Tuning Manager server was successfully upgraded."</p>	Tuning Manager server	Solaris
4	<p>If you upgraded the Tuning Manager server from version 6.0.0 to 6.4.0 to version 7.0.0, the Tuning Manager server may take approximately 40 minutes to start at the first time after upgrade.</p>	Tuning Manager server	ALL ^(Note)

Note: Applies to all supported operating systems

- Tuning Manager agents
None

Uninstallation Precautions

- Tuning Manager server

#	Uninstallation Precautions	Applied products	Applied OS
1	<p>Reboot the server before installation if you install the Tuning Manager server continuously after uninstalling.</p>	Tuning Manager server	All ^(Note)
2	<p>The following message might be displayed and uninstallation might stop during an uninstallation of the Tuning Manager server for Solaris:</p> <p style="text-align: center;">KATN00240-E An internal command has timed out.</p> <p>If the above message is displayed, make sure that all the Hitachi Command Suite product services have been stopped, and then try to uninstall the Tuning Manager server again.</p>	Tuning Manager server	Solaris

Note: Applies to all supported operating systems

- Tuning Manager agents
None

Usage Precautions

Precautions for displaying a list of installed programs

- Tuning Manager server

#	Usage Precautions	Applied products	Applied OS
1	<p>When the "Add or Remove Programs" dialog box is opened, the displayed icon of this product might switch from an icon displayed initially to the other icon (*1). *1: Any of the icons registered in Windows</p> <p>Even if this phenomenon occurs, the Tuning Manager server is operational normally.</p>	Tuning Manager server	Windows

- Tuning Manager agents
None

Precautions for using the online help

- Tuning Manager server

#	Usage Precautions	Applied products	Applied OS
1	<p>The online help of Tuning Manager server is developed by using RoboHelp of Adobe Systems Incorporated. Therefore, the behavior complies with the RoboHelp specifications. Note the following if you use the online help:</p> <p>(1) About fuzzy search The online help uses fuzzy search. The results of fuzzy search include the singular form of a noun even if you specify the plural form of a noun and the past form of a verb even if you specify the present form of a verb. For example, if you search for the word "appeared", then "appear" and "appears" might be found.</p> <p>(2) About searching for more than 30 words Specify less than 29 words when you search. Searches on more than 30 words may not run correctly.</p> <p>(3) About Help system operation with Internet Explorer 7.0 and Internet Explorer 8.0 Correct operation with Internet Explorer 7.0 or Internet Explorer 8.0 is guaranteed within the same usage range as Internet Explorer 6.0. Correct operation of functions such as tab browsing is not guaranteed.</p> <p>(4) About Help system operation with Mozilla version 1.7 on Solaris, HP-UX(IPF), or Linux Following is a list of notes on Help system operation with Mozilla 1.7 on Solaris, HP-UX(IPF), or Linux: - After using them several times, the forward or backward buttons above the topic viewing pane may not operate.</p>	Tuning Manager server	Applies to all supported operating systems

Usage Precautions

	<ul style="list-style-type: none"> - The Go icon in the help is highlighted. - The borderline between the body of Help and the buttons displayed in the top of the window is not visible. - Selected items are not highlighted for Index and Search functions. - When the back button is repeatedly clicked, it becomes inactive. 		
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- Tuning Manager agents
None

Precautions for port performance information collected by Agent for RAID

- Tuning Manager server
None
- Tuning Manager agents

#	Usage Precautions	Applied products	Applied OS
1	<p>Incorrect values*1 may be displayed for the port performance information of USP/NSC55 collected by Agent for RAID.</p> <p>*1: Port performance information may become as follows:</p> <ul style="list-style-type: none"> - The value is always 0 even though read or write operations are generated on the port - The value is too small. - The displayed values of minimum, average, and maximum are not in "minimum ≤ average ≤ maximum" order. <p>This problem occurs when both of the following conditions are met:</p> <ol style="list-style-type: none"> 1) The microprogram version of the monitored storage system is either of the following: <ul style="list-style-type: none"> - USP (microprogram version between 50-00 and 50-09-12) - NSC55 (microprogram version between 50-03 and 50-09-12) 2) The Monitoring Switch in Monitoring Options for Performance Monitor has never been set to Enable after the operation of the storage system started. <p>To avoid this problem, set the Monitoring Switch to Enable in Monitoring Options for Performance Monitor of USP or NSC55. Note that once Monitoring Switch is set to Enable, the correct port performance information can still be obtained even if it is subsequently set to Disable.</p>	Agent for RAID	Applies to all supported operating systems

Precautions for monitoring Brocade SAN switches

- Tuning Manager server
None
- Tuning Manager agents

#	Usage Precautions	Applied products	Applied OS
1	If Brocade SMI Agent v120.6.0x (x is "a" or later) or v120.7.1 is used for monitoring a fabric consisting of only Brocade switches whose firmware version is v5.2.0 or later, a blank might appear for "Model Name" and "Vendor Name" for these switches. Brocade has corrected this problem in Brocade SMI Agent v120.7.2. To monitor Brocade switches, use Brocade SMI Agent v120.7.2 or later.	Agent for SAN Switch	Applies to all supported operating systems
2	When you monitor a fabric consisting of Brocade switches, you need to set Gateway IP Address to the monitoring Brocade switches.	Agent for SAN Switch	Applies to all supported operating systems
3	If Brocade SMI Agent v120.8.0 or v120.9.0 is used for monitoring a fabric including Brocade switches whose firmware version is v5.2.x, Agent for SAN Switch might fail to collect the data necessary to create a record. Upgrade the firmware version of all switches in the same fabric to v5.3.x or later.	Agent for SAN Switch	Applies to all supported operating systems

Notes for trouble on an operation of Agent for SAN Switch

- Tuning Manager server
None
- Tuning Manager agents

#	Usage Precautions	Applied products	Applied OS
1	When Agent for SAN Switch causes trouble while monitoring CISCO switches, we may ask to gather material for investigation with the packet capture tool etc.	Agent for SAN Switch	Applies to all supported operating systems

Precautions for polling the Tuning Manager server

- Tuning Manager server

#	Usage Precautions	Applied products	Applied OS
1	When you set the polling schedule or perform the	Tuning Manager	All ^(Note)

Usage Precautions

	<p>manual polling of Tuning Manager server, make sure that the connection target Device Manager has completely collected the data.</p> <p>If you perform the polling of Tuning Manager server when Device Manager is collecting the data, the polling of Tuning Manager server may fail.</p> <p>#: Polling here means either the polling performed according to the schedule or the polling manually performed from the GUI.</p>	server	
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Note: Applies to all supported operating systems

- Tuning Manager agents
None

Precautions for displaying a correlation reports

- Tuning Manager server

#	Usage Precautions	Applied products	Applied OS
1	Even if a system failover is performed by the Universal Storage Platform V/VM series High Availability Manager functionality, the Tuning Manager server continues to display the active volume, not the standby volume, as related to the relevant device file.	Tuning Manager server	Applies to all supported operating systems

- Tuning Manager agents
None

Precautions for monitoring a storage system

- Tuning Manager server

#	Usage Precautions	Applied products	Applied OS
1	<p>If LDEVs are being configured by combining various LDEVs in multiple parity groups in a LUSE configuration, the [Write Hit Ratio] of the parity groups might temporarily exceed 100% depending on the level of measurement error used by the storage system. (In such a case, treat the value that exceeds 100% as 100%.)</p> <p>This problem might occur while the Thunder 9200 series, the Thunder 9500V series, or the Hitachi AMS/WMS series is being monitored.</p>	Tuning Manager server	Applies to all supported operating systems

- Tuning Manager agents
None

Precautions for monitoring again a Storage System or a Server which had been monitored in the past

- Tuning Manager server

Usage Precautions

#	Usage Precautions	Applied products	Applied OS																																		
1	<p>If users accidentally delete a storage device or host from the list of targets to be monitored by Tuning Manager, or if users accidentally change the storage configuration, the Tuning Manager server might not properly display information even if the status of the storage device or host is restored. Table-1 describes the relationship between the devices monitored by the Tuning Manager server and the information that cannot be properly displayed.</p> <p>Table-1 Devices monitored by the Tuning Manager server and related error</p> <table border="1" data-bbox="467 590 1081 1493"> <thead> <tr> <th data-bbox="467 590 521 751" rowspan="2">Item</th> <th colspan="4" data-bbox="521 590 883 653">Devices monitored by the Tuning Manager server</th> <th data-bbox="883 590 1081 653" rowspan="2">Error</th> </tr> <tr> <th data-bbox="521 653 618 751">Storage</th> <th data-bbox="618 653 691 751">Host</th> <th data-bbox="691 653 789 751">Virtualization server</th> <th data-bbox="789 653 883 751">Oracle</th> </tr> </thead> <tbody> <tr> <td data-bbox="467 751 521 926">(a)</td> <td data-bbox="521 751 618 926">*</td> <td data-bbox="618 751 691 926"></td> <td data-bbox="691 751 789 926"></td> <td data-bbox="789 751 883 926"></td> <td data-bbox="883 751 1081 926">Relevant information between storage components is not properly displayed.</td> </tr> <tr> <td data-bbox="467 926 521 1100">(b)</td> <td data-bbox="521 926 618 1100">*</td> <td data-bbox="618 926 691 1100">*</td> <td data-bbox="691 926 789 1100"></td> <td data-bbox="789 926 883 1100"></td> <td data-bbox="883 926 1081 1100">Relevant information between storage devices and hosts is not properly displayed.</td> </tr> <tr> <td data-bbox="467 1100 521 1318">(c)</td> <td data-bbox="521 1100 618 1318">*</td> <td data-bbox="618 1100 691 1318"></td> <td data-bbox="691 1100 789 1318">*</td> <td data-bbox="789 1100 883 1318"></td> <td data-bbox="883 1100 1081 1318">Relevant information between storage devices and virtualization servers is not properly displayed.</td> </tr> <tr> <td data-bbox="467 1318 521 1493">(d)</td> <td data-bbox="521 1318 618 1493"></td> <td data-bbox="618 1318 691 1493">*</td> <td data-bbox="691 1318 789 1493"></td> <td data-bbox="789 1318 883 1493">*</td> <td data-bbox="883 1318 1081 1493">Relevant information between hosts and Oracle is not properly displayed.</td> </tr> </tbody> </table> <p data-bbox="467 1503 1081 1591">Legend: *: Monitored devices for which the error occurs Blank: Monitored devices for which the error does not occur</p> <p data-bbox="467 1640 1081 1692">The conditions that cause the error and the recovery procedure are as follows:</p> <p data-bbox="467 1738 1081 1862">1. Conditions This error might occur if either of the following operations is performed: (a) Operation 1:</p>	Item	Devices monitored by the Tuning Manager server				Error	Storage	Host	Virtualization server	Oracle	(a)	*				Relevant information between storage components is not properly displayed.	(b)	*	*			Relevant information between storage devices and hosts is not properly displayed.	(c)	*		*		Relevant information between storage devices and virtualization servers is not properly displayed.	(d)		*		*	Relevant information between hosts and Oracle is not properly displayed.	Tuning Manager server	Applies to all supported operating systems
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Usage Precautions

	<p>(i) Add the devices indicated by * in Table-1 (b), (c), or (d) to the list of targets to be monitored by the Tuning Manager server. Then, refresh the list of Agents on the Tuning Manager server.</p> <p>(ii) From the Tuning Manager server, perform automatic or manual polling on the monitoring targets that were added in step (i).</p> <p>(iii) After polling, delete the storage devices or hosts from the list of targets to be monitored by the Tuning Manager server by using one of the following operations:</p> <p>[For storage devices]</p> <ul style="list-style-type: none">- Delete Agent for RAID from the list of targets to be monitored by the Tuning Manager server.- Remove the storage devices from Device Manager. <p>[For hosts]</p> <ul style="list-style-type: none">- Delete Agent for Server System from the list of targets to be monitored by the Tuning Manager server (if the host is monitored in Agent mode).- Remove the host from Device Manager (if the host is monitored in Agent-less mode). <p>(iv) Refresh the list of Agents on the Tuning Manager server.</p> <p>(v) Add the monitoring targets that were deleted in step (iii) and whose configurations have not been changed since step (iii) to the list of targets to be monitored by the Tuning Manager server again by using one of the following operations:</p> <p>[For storage devices]</p> <ul style="list-style-type: none">- Add Agent for RAID to the list of targets to be monitored by the Tuning Manager server.- Add the storage devices to Device Manager. <p>[For hosts]</p> <ul style="list-style-type: none">- Add Agent for Server System to the list of targets to be monitored by the Tuning Manager server (if the host is monitored in Agent mode).- Add the host to Device Manager (if the host is monitored in Agent-less mode). <p>(vi) Refresh the list of Agents on the Tuning Manager server.</p> <p>(vii) From the Tuning Manager server, perform automatic or manual polling again on the monitoring targets on which polling was performed in step (ii).</p> <p>(b) Operation 2:</p> <p>(i) Add the devices indicated by * in Table-1 (a), (b), or (c) to the list of targets to be monitored by the Tuning Manager server. Then, refresh the list of Agents on the Tuning Manager server.</p> <p>(ii) From the Tuning Manager server, perform automatic or manual polling on the monitoring targets that were added in step (i).</p>	
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Usage Precautions

	<p>(iii) For the monitored storage devices, remove the hardware (port or disk) or delete the SLPR or CLPR.</p> <p>(iv) From the Tuning Manager server, perform automatic or manual polling again on the monitoring targets on which polling was performed in step (ii).</p> <p>(v) For the monitored storage devices indicated in step (iii), restore them to their status before step (iii) by installing the hardware (port or disk) or setting up an SLPR or CLPR.</p> <p>(vi) From the Tuning Manager server, perform automatic or manual polling again on the monitoring targets on which polling was performed in step (ii).</p> <p>Table-2 lists the information that is not properly displayed after Operation 1 or Operation 2 is performed.</p> <p>Table-2 Operations that cause this error and the information that is not properly displayed</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-bottom: 10px;"> <thead> <tr> <th style="width: 5%;">#</th> <th style="width: 30%;">Operation</th> <th style="width: 65%;">Information that is not properly displayed</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">1</td> <td>Operation 1</td> <td>Table-1 (b), (c), and (d)</td> </tr> <tr> <td style="text-align: center;">2</td> <td>Operation 2</td> <td>Table-1 (a), (b), and (c)</td> </tr> </tbody> </table> <p>2. Recovery procedure</p> <p>Perform one of the procedures below (from 1 to 3) indicated in Table-3 depending on the monitored device on which the error occurred.</p> <p>Table-3 Procedures for recovering from the error</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-bottom: 10px;"> <thead> <tr> <th style="width: 5%;">#</th> <th style="width: 55%;">Condition</th> <th style="width: 40%;">Recovery procedure</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">1</td> <td>The error occurs on a host that is being monitored in Agent-less mode.</td> <td>Procedure 1</td> </tr> <tr> <td style="text-align: center;">2</td> <td>The error occurs on a virtualization server.</td> <td>Procedure 2</td> </tr> <tr> <td style="text-align: center;">3</td> <td>In cases other than 1 and 2</td> <td>Procedure 3</td> </tr> </tbody> </table> <p>(a) Procedure 1:</p> <p>(i) Remove from Device Manager the storage device that contains volumes that are connected to the host.</p> <p>(ii) Use Device Manager to refresh the host indicated in step (i).</p> <p>(iii) From the Tuning Manager server, perform manual polling on Device Manager.#1</p> <p>(iv) Add the storage device that was removed from</p>	#	Operation	Information that is not properly displayed	1	Operation 1	Table-1 (b), (c), and (d)	2	Operation 2	Table-1 (a), (b), and (c)	#	Condition	Recovery procedure	1	The error occurs on a host that is being monitored in Agent-less mode.	Procedure 1	2	The error occurs on a virtualization server.	Procedure 2	3	In cases other than 1 and 2	Procedure 3		
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3	In cases other than 1 and 2	Procedure 3																						

Usage Precautions

	<p>Device Manager in step (i) to Device Manager again.</p> <p>(v) Use Device Manager to refresh the host indicated in step (i) again.</p> <p>(vi) From the Tuning Manager server, perform manual polling on Device Manager.#1</p> <p>#1: Be sure to wait at least one hour after the last polling was performed before you perform manual polling.</p> <p>(b) Procedure 2:</p> <p>(i) Delete the storage device that contains volumes being used as a datastore of the virtualization server from the list of targets to be monitored by the Tuning Manager server by using one of the following operations:</p> <ul style="list-style-type: none"> - Delete Agent for RAID from the list of targets to be monitored by the Tuning Manager server. - Remove the storage devices from Device Manager. <p>(ii) From the Tuning Manager server, perform manual polling on the Device Manager that manages the virtualization server indicated in step (i).#1</p> <p>(iii) Add the storage device that was removed from the list of targets to be monitored by the Tuning Manager server in step (i) to the list of monitoring targets again.</p> <ul style="list-style-type: none"> - Add Agent for RAID to the list of targets to be monitored by the Tuning Manager server. - Add the storage devices to Device Manager. <p>(iv) From the Tuning Manager server, perform manual polling on Device Manager.#1</p> <p>#1: Be sure to wait at least one hour after the last polling was performed before you perform manual polling.</p> <p>(c) Procedure 3:</p> <p>(i) Delete the monitoring targets whose information is not properly displayed from the list of targets to be monitored by the Tuning Manager server.</p> <p>(ii) Add the monitoring targets that were removed in step (i) to the list of targets to be monitored by the Tuning Manager server again.</p> <p>(iii) From the Tuning Manager server, perform manual polling on the Tuning Manager Agents that monitor the added targets.#1</p> <p>#1: Be sure to wait at least one hour after the last polling was performed before you perform manual polling.</p>		
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Documentation

- Tuning Manager agents
None

Precautions for displaying a report with the Tuning Manager server

- Tuning Manager server

#	Usage Precautions	Applied products	Applied OS
1	<p>When all of the following conditions are met, the hyperlink for a related host is not displayed on a report displayed by procedures described in the [How to display a report].</p> <p>[Conditions]</p> <p>(1) Connect the Agent for Oracle to the Tuning Manager server.</p> <p>(2) Monitor the host in which the Agent for Oracle has been installed by the Agent for Server System.</p> <p>(3) The hostname mentioned in (2) contains a lower-case letter.</p> <p>[How to display a report]</p> <p>(a) Select the [Resources]-[Applications] in the Explorer area.</p> <p>(b) Select the [Oracle] in the Navigation area.</p> <p>(c) Select the [Oracle Instances] tab in the Information area(Correlation View).</p> <p>If you want to display a report for the host related to an Oracle instance, select the host from the resource tree.</p>	Tuning Manager server	Applies to all supported operating systems

- Tuning Manager agents
None

Documentation

Available Documents

Manual Name	Manual No.	Issue Date
Hitachi Command Suite Tuning Manager Software Installation Guide	MK-96HC141-10	September, 2010
Hitachi Command Suite Tuning Manager Software Server Administration Guide	MK-92HC021-21	September, 2010
Hitachi Command Suite Tuning Manager Software Agent Administration Guide	MK-92HC013-19	September, 2010
Hitachi Command Suite Tuning Manager Software Application Reports Reference	MK-95HC113-09	September, 2010
Hitachi Command Suite Tuning Manager Software User	MK-92HC022-23	September,

Guide		2010
Hitachi Command Suite Tuning Manager Software Hardware Reports Reference	MK-95HC111-11	September, 2010
Hitachi Command Suite Tuning Manager Software Operating System Reports Reference	MK-95HC112-09	September, 2010
Hitachi Command Suite Tuning Manager Software Messages Reference	MK-95HC114-12	September, 2010
Hitachi Command Suite Tuning Manager Software CLI User Guide	MK-96HC119-11	September, 2010
Hitachi Command Suite Tuning Manager Software Getting Started Guide	MK-96HC120-08	September, 2010

Documentation Errata

From 7.0.0-00 Rev.0 to 7.0.0-00 Rev.1

Contents of corrections of the *Hitachi Command Suite Tuning Manager Software Server Administration Guide*:

No.	Location to be corrected	Corrections											
1	Error handling procedures Collecting maintenance information Table 7-16: Specification of the Tuning Manager server host	Before	Table 7-16: Specification of the Tuning Manager server host <table border="1"> <thead> <tr> <th colspan="2">Specification</th> </tr> </thead> <tbody> <tr> <td>CPU</td> <td>Intel Core 2 Duo E6850 (3.0 GHz)</td> </tr> <tr> <td>Memory</td> <td>4 GB</td> </tr> <tr> <td>OS</td> <td>Windows Server 2003 Enterprise Edition</td> </tr> <tr> <td>Installed programs</td> <td>Tuning Manager server version 6.3 Device Manager version 6.3</td> </tr> </tbody> </table>	Specification		CPU	Intel Core 2 Duo E6850 (3.0 GHz)	Memory	4 GB	OS	Windows Server 2003 Enterprise Edition	Installed programs	Tuning Manager server version 6.3 Device Manager version 6.3
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2	Error handling procedures Collecting maintenance information	Before	Table 7-17: Specification of the Agent host <table border="1"> <thead> <tr> <th colspan="2">Specification</th> </tr> </thead> <tbody> <tr> <td>CPU</td> <td>Intel Core 2 Duo E6850 (3.0 GHz)</td> </tr> <tr> <td>Memory</td> <td>4 GB</td> </tr> <tr> <td>OS</td> <td>Windows Server 2003 R2 Enterprise Edition</td> </tr> <tr> <td>Installed programs</td> <td>Agent for RAID version 6.3</td> </tr> </tbody> </table>	Specification		CPU	Intel Core 2 Duo E6850 (3.0 GHz)	Memory	4 GB	OS	Windows Server 2003 R2 Enterprise Edition	Installed programs	Agent for RAID version 6.3
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Memory	4 GB												
OS	Windows Server 2003 R2 Enterprise Edition												
Installed programs	Agent for RAID version 6.3												
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Memory	4 GB												
OS	Windows Server 2003 R2 Enterprise Edition												
Installed programs	Agent for RAID version 6.3												

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Table 7-17: Specification of the Agent host	After	Table 7-17: Specification of the Agent host	
		Specification	
		CPU	Intel Core 2 Duo E6850 (3.0 GHz)
		Memory	4 GB
		OS	Windows Server 2003 R2 Enterprise Edition
		Installed programs	Agent for RAID version 7.0

Contents of corrections of the *Hitachi Command Suite Tuning Manager Software User Guide*:

No.	Location to be corrected	Corrections																											
1	Logging in to a Tuning Manager server Client system requirements Table 2-1: Client system requirements	Before	<table border="1"> <thead> <tr> <th colspan="2" data-bbox="560 367 1412 399">Table 2-1: Client system requirements</th> </tr> <tr> <th data-bbox="560 399 998 451">OS</th> <th data-bbox="998 399 1412 451">Browser</th> </tr> </thead> <tbody> <tr> <td data-bbox="560 451 998 514">Windows XP Professional Edition SP2 (x86)</td> <td data-bbox="998 451 1412 514" rowspan="14">Microsoft Internet Explorer 6.0, Windows Internet Explorer 7.0, or Windows Internet Explorer 8.0</td> </tr> <tr> <td data-bbox="560 514 998 577">Windows Server 2003 Standard Edition (x86)</td> </tr> <tr> <td data-bbox="560 577 998 640">Windows Server 2003 Standard Edition SP1 (x86)</td> </tr> <tr> <td data-bbox="560 640 998 703">Windows Server 2003 Standard Edition SP2 (x86)</td> </tr> <tr> <td data-bbox="560 703 998 766">Windows Server 2003 Enterprise Edition (x86)</td> </tr> <tr> <td data-bbox="560 766 998 829">Windows Server 2003 Enterprise Edition SP1 (x86)</td> </tr> <tr> <td data-bbox="560 829 998 892">Windows Server 2003 Enterprise Edition SP2 (x86)</td> </tr> <tr> <td data-bbox="560 892 998 955">Windows Server 2003 Enterprise Edition (IPF)</td> </tr> <tr> <td data-bbox="560 955 998 1018">Windows Server 2003 Enterprise Edition SP1 (IPF)</td> </tr> <tr> <td data-bbox="560 1018 998 1081">Windows Server 2003 Enterprise Edition SP2 (IPF)</td> </tr> <tr> <td data-bbox="560 1081 998 1144">Windows Server 2003 R2 Standard Edition (x86)</td> </tr> <tr> <td data-bbox="560 1144 998 1207">Windows Server 2003 R2 Standard Edition SP1 (x86)</td> </tr> <tr> <td data-bbox="560 1207 998 1270">Windows Server 2003 R2 Standard Edition SP2 (x86)</td> </tr> <tr> <td data-bbox="560 1270 998 1333">Windows Server 2003 R2 Enterprise Edition (x86)</td> </tr> <tr> <td data-bbox="560 1333 998 1396">Windows Server 2003 R2 Enterprise Edition SP1 (x86)</td> </tr> <tr> <td data-bbox="560 1396 998 1459">Windows Server 2003 R2 Enterprise Edition SP2 (x86)</td> </tr> <tr> <td data-bbox="560 1459 998 1522">Windows Server 2008 Datacenter (x86)</td> <td data-bbox="998 1459 1412 1522" rowspan="4">Windows Internet Explorer 7.0, or Windows Internet Explorer 8.0</td> </tr> <tr> <td data-bbox="560 1522 998 1585">Windows Server 2008 Datacenter SP2 (x86)</td> </tr> <tr> <td data-bbox="560 1585 998 1648">Windows Server 2008 Datacenter (x64)</td> </tr> <tr> <td data-bbox="560 1648 998 1711">Windows Server 2008 Datacenter SP2 (x64)</td> </tr> </tbody> </table>	Table 2-1: Client system requirements		OS	Browser	Windows XP Professional Edition SP2 (x86)	Microsoft Internet Explorer 6.0, Windows Internet Explorer 7.0, or Windows Internet Explorer 8.0	Windows Server 2003 Standard Edition (x86)	Windows Server 2003 Standard Edition SP1 (x86)	Windows Server 2003 Standard Edition SP2 (x86)	Windows Server 2003 Enterprise Edition (x86)	Windows Server 2003 Enterprise Edition SP1 (x86)	Windows Server 2003 Enterprise Edition SP2 (x86)	Windows Server 2003 Enterprise Edition (IPF)	Windows Server 2003 Enterprise Edition SP1 (IPF)	Windows Server 2003 Enterprise Edition SP2 (IPF)	Windows Server 2003 R2 Standard Edition (x86)	Windows Server 2003 R2 Standard Edition SP1 (x86)	Windows Server 2003 R2 Standard Edition SP2 (x86)	Windows Server 2003 R2 Enterprise Edition (x86)	Windows Server 2003 R2 Enterprise Edition SP1 (x86)	Windows Server 2003 R2 Enterprise Edition SP2 (x86)	Windows Server 2008 Datacenter (x86)	Windows Internet Explorer 7.0, or Windows Internet Explorer 8.0	Windows Server 2008 Datacenter SP2 (x86)	Windows Server 2008 Datacenter (x64)	Windows Server 2008 Datacenter SP2 (x64)
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Windows Server 2003 R2 Standard Edition (x86)																													
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Windows Server 2008 Datacenter (x64)																													
Windows Server 2008 Datacenter SP2 (x64)																													

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		Windows Server 2008 R2 Datacenter (x64)	
		Microsoft(R) Windows Vista(R) Business (x86)	Windows Internet Explorer 7.0, or Windows Internet Explorer 8.0
		Microsoft(R) Windows Vista(R) Enterprise (x86)	
		Microsoft(R) Windows Vista(R) Ultimate (x86)	
		Solaris 8 (SPARC) (32-bit)	Mozilla 1.4
		Solaris 8 (SPARC) (64-bit)	
		Solaris 9 (SPARC) (32-bit)	Mozilla 1.7
		Solaris 9 (SPARC) (64-bit)	
		Solaris 10 (SPARC) (32-bit)	
		Solaris 10 (SPARC) (64-bit)	
		Solaris 10 (SPARC) (32-bit)	Firefox 2.0
		Solaris 10 (SPARC) (64-bit)	
		Solaris 10 (x64)	
		HP-UX 11i V3 (IPF)	
		Red Hat Enterprise Linux Advanced Platform 5.3 (x86)	Firefox 3.0
After	Table 2-1: Client system requirements		
		OS	Browser
		Windows XP Professional Edition SP2 (x86) , or Windows XP Professional Edition SP3 (x86)	Microsoft Internet Explorer 6.0, Windows Internet Explorer 7.0, or Windows Internet Explorer 8.0
		Windows Server 2003 R2 Standard Edition (x86)	
		Windows Server 2003 R2 Standard Edition SP1 (x86)	
		Windows Server 2003 R2 Standard Edition SP2 (x86)	
		Windows Server 2003 R2 Enterprise Edition (x86)	
		Windows Server 2003 R2 Enterprise Edition SP1 (x86)	
		Windows Server 2003 R2 Enterprise Edition SP2 (x86)	
		Windows Server 2008 Datacenter (x86)	
		Windows Server 2008 Datacenter SP2 (x86)	
		Windows Server 2008 Datacenter (x64)	
		Windows Server 2008 Datacenter	

			SP2 (x64)																																														
			Windows Server 2008 R2 Standard (x64), Windows Server 2008 R2 Enterprise (x64), or Windows Server 2008 R2 Datacenter (x64)	Windows Internet Explorer 8.0																																													
			Microsoft(R) Windows Vista(R) Business (x86 or x64)	Windows Internet Explorer 7.0, or Windows Internet Explorer 8.0																																													
			Microsoft(R) Windows Vista(R) Enterprise (x86 or x64)																																														
			Microsoft(R) Windows Vista(R) Ultimate (x86 or x64)																																														
			Solaris 10 (SPARC) (32-bit)	Firefox 3																																													
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2	Logging in to a Tuning Manager server Setting up your browser Table 2-2: Browser settings	Before	Table 2-2: Browser settings																																														
			<table border="1"> <thead> <tr> <th rowspan="2">Item</th> <th colspan="3">Settings</th> </tr> <tr> <th>Internet Explorer</th> <th>Mozilla</th> <th>Firefox</th> </tr> </thead> <tbody> <tr> <td>Cookies</td> <td colspan="3">Enable this item.</td> </tr> <tr> <td>File Download</td> <td>Enable this item.</td> <td colspan="2">Not applicable</td> </tr> <tr> <td>Image Display</td> <td colspan="3">Enable this item.</td> </tr> <tr> <td>JavaScript™</td> <td colspan="3">Enable this item.</td> </tr> <tr> <td>Languages</td> <td>Specify the language you want to use.</td> <td colspan="2">Specify the language you want to use. <i>Note:</i> Specify the same language for the browser and the X-terminal. If these settings are not the same, the character string in the title bar might be displayed incorrectly.</td> </tr> <tr> <td>Page Cache</td> <td>Specify that the latest information be displayed each time the user accesses a page.</td> <td colspan="2">Not applicable</td> </tr> <tr> <td>Popup Blocker</td> <td>Disable this item. Also make sure that other utilities that block pop-up windows are not installed.</td> <td colspan="2">Not applicable</td> </tr> <tr> <td>Security Policies</td> <td>Specify Medium as the security level.</td> <td colspan="2">Not applicable</td> </tr> <tr> <td>Text Size</td> <td>Specify Medium or Larger as the text size. If you specify Largest,</td> <td>Specify Standard or 120% as the text size.</td> <td colspan="2">Use the default text size. If you specify a value larger than</td> </tr> </tbody> </table>			Item	Settings			Internet Explorer	Mozilla	Firefox	Cookies	Enable this item.			File Download	Enable this item.	Not applicable		Image Display	Enable this item.			JavaScript™	Enable this item.			Languages	Specify the language you want to use.	Specify the language you want to use. <i>Note:</i> Specify the same language for the browser and the X-terminal. If these settings are not the same, the character string in the title bar might be displayed incorrectly.		Page Cache	Specify that the latest information be displayed each time the user accesses a page.	Not applicable		Popup Blocker	Disable this item. Also make sure that other utilities that block pop-up windows are not installed.	Not applicable		Security Policies	Specify Medium as the security level.	Not applicable		Text Size	Specify Medium or Larger as the text size. If you specify Largest,	Specify Standard or 120% as the text size.	Use the default text size. If you specify a value larger than	
Item	Settings																																																
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File Download	Enable this item.	Not applicable																																															
Image Display	Enable this item.																																																
JavaScript™	Enable this item.																																																
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Software Installation Guide:*

No.	Location to be corrected	Corrections	
1	Product requirements Applicable OSs Tuning Manager server Windows	Before	Windows <ul style="list-style-type: none"> • Microsoft Windows Server 2003, Standard Edition (Service Pack 2) • Microsoft Windows Server 2003, Enterprise Edition (Service Pack 2) • Microsoft Windows Server 2003 R2, Standard Edition (Service Pack 2) • Microsoft Windows Server 2003 R2, Enterprise Edition (Service Pack 2) • Microsoft Windows Server 2003, Standard x64 Edition (Service Pack 2) (see ¹) • Microsoft Windows Server 2003, Enterprise x64 Edition (Service Pack 2) (see ¹) • Microsoft Windows Server 2003 R2, Standard x64 Edition (Service Pack 2) (see ¹) • Microsoft Windows Server 2003 R2, Enterprise x64 Edition (Service Pack 2) (see ¹) • Microsoft Windows Server 2008 Standard (No Service Pack, Service Pack 2) (see ¹ and ²) • Microsoft Windows Server 2008 Enterprise (No Service Pack, Service Pack 2) (see ¹ and ²) • Microsoft Windows Server 2008 Datacenter (No Service Pack, Service Pack 2) (see ¹ and ²) • Microsoft Windows Server 2008 R2 Standard (No Service Pack) (see ¹ and ²) • Microsoft Windows Server 2008 R2 Enterprise (No Service Pack) (see ¹ and ²) • Microsoft Windows Server 2008 R2 Datacenter (No Service Pack) (see ¹ and ²) • Microsoft Windows Server 2008 Standard 32-bit (No Service Pack, Service Pack 2) (see ²) • Microsoft Windows Server 2008 Enterprise 32-bit (No Service Pack, Service Pack 2) (see ²) • Microsoft Windows Server 2008 Datacenter 32-bit (No Service Pack, Service Pack 2) (see ²)
		After	Windows <ul style="list-style-type: none"> • Microsoft Windows Server 2003 R2, Standard Edition (Service Pack 2) • Microsoft Windows Server 2003 R2, Enterprise Edition (Service Pack 2) • Microsoft Windows Server 2003 R2, Standard x64 Edition (Service Pack 2) (see ¹) • Microsoft Windows Server 2003 R2, Enterprise x64 Edition (Service Pack 2) (see ¹) • Microsoft Windows Server 2008 Standard (No Service Pack, Service Pack 2) (see ¹ and ²) • Microsoft Windows Server 2008 Enterprise (No Service Pack, Service Pack 2) (see ¹ and ²) • Microsoft Windows Server 2008 Datacenter (No Service Pack, Service Pack 2) (see ¹ and ²) • Microsoft Windows Server 2008 R2 Standard (No Service Pack) (see ¹ and ²) • Microsoft Windows Server 2008 R2 Enterprise (No Service Pack) (see ¹ and ²) • Microsoft Windows Server 2008 R2 Datacenter (No Service Pack) (see ¹ and ²) • Microsoft Windows Server 2008 Standard 32-bit (No Service Pack, Service Pack 2) (see ²)

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			<p>2) (see ²)</p> <ul style="list-style-type: none"> • Microsoft Windows Server 2008 Enterprise 32-bit (No Service Pack, Service Pack 2) (see ²) • Microsoft Windows Server 2008 Datacenter 32-bit (No Service Pack, Service Pack 2) (see ²)
2	<p>Product requirements</p> <p>Applicable OSs</p> <p>Agent for RAID</p> <p>Windows</p>	<p>Before</p> <p>Windows</p> <ul style="list-style-type: none"> • Microsoft Windows Server 2003, Standard Edition (Service Pack 2) • Microsoft Windows Server 2003, Enterprise Edition (Service Pack 2) • Microsoft Windows Server 2003, Standard x64 Edition (Service Pack 2) • Microsoft Windows Server 2003, Enterprise x64 Edition (Service Pack 2) • Microsoft Windows Server 2003 R2, Standard Edition (Service Pack 2) • Microsoft Windows Server 2003 R2, Enterprise Edition (Service Pack 2) • Microsoft Windows Server 2003 R2, Standard x64 Edition (Service Pack 2) • Microsoft Windows Server 2003 R2, Enterprise x64 Edition (Service Pack 2) • Microsoft Windows Server 2008 Standard (No Service Pack, Service Pack 2) (see ¹ and ²) • Microsoft Windows Server 2008 Enterprise (No Service Pack, Service Pack 2) (see ¹ and ²) • Microsoft Windows Server 2008 Datacenter (No Service Pack, Service Pack 2) (see ¹ and ²) • Microsoft Windows Server 2008 Standard 32-bit (No Service Pack, Service Pack 2) (see ²) • Microsoft Windows Server 2008 Enterprise 32-bit (No Service Pack, Service Pack 2) (see ²) • Microsoft Windows Server 2008 Datacenter 32-bit (No Service Pack, Service Pack 2) (see ²) • Microsoft Windows Server 2008 R2 Standard (No Service Pack) (see ¹ and ²) • Microsoft Windows Server 2008 R2 Enterprise (No Service Pack) (see ¹ and ²) • Microsoft Windows Server 2008 R2 Datacenter (No Service Pack) (see ¹ and ²) <p>After</p> <p>Windows</p> <ul style="list-style-type: none"> • Microsoft Windows Server 2003 R2, Standard Edition (Service Pack 2) • Microsoft Windows Server 2003 R2, Enterprise Edition (Service Pack 2) • Microsoft Windows Server 2003 R2, Standard x64 Edition (Service Pack 2) • Microsoft Windows Server 2003 R2, Enterprise x64 Edition (Service Pack 2) • Microsoft Windows Server 2008 Standard (No Service Pack, Service Pack 2) (see ¹ and ²) • Microsoft Windows Server 2008 Enterprise (No Service Pack, Service Pack 2) (see ¹ and ²) • Microsoft Windows Server 2008 Datacenter (No Service Pack, Service Pack 2) (see ¹ and ²) • Microsoft Windows Server 2008 Standard 32-bit (No Service Pack, Service Pack 2) (see ²) • Microsoft Windows Server 2008 Enterprise 32-bit (No Service Pack, Service Pack 2) (see ²) • Microsoft Windows Server 2008 Datacenter 32-bit (No Service Pack, Service Pack 2) (see ²) • Microsoft Windows Server 2008 R2 Standard (No Service Pack) (see ¹ and ²) • Microsoft Windows Server 2008 R2 Enterprise (No Service Pack) (see ¹ and ²) • Microsoft Windows Server 2008 R2 Datacenter (No Service Pack) (see ¹ and ²) 	

3	Product requirements	Before	Windows
	Applicable OSs		<ul style="list-style-type: none"> • Microsoft Windows Server 2003, Standard Edition (Service Pack 2) • Microsoft Windows Server 2003, Enterprise Edition (Service Pack 2) • Microsoft Windows Server 2003, Standard x64 Edition (Service Pack 2) (see ¹) • Microsoft Windows Server 2003, Enterprise x64 Edition (Service Pack 2) (see ¹)
	Agent for Server System		<ul style="list-style-type: none"> • Microsoft Windows Server 2003 R2, Standard Edition (Service Pack 2) • Microsoft Windows Server 2003 R2, Enterprise Edition (Service Pack 2) • Microsoft Windows Server 2003 R2, Standard x64 Edition (Service Pack 2) (see ¹) • Microsoft Windows Server 2003 R2, Enterprise x64 Edition (Service Pack 2) (see ¹)
	Windows		<ul style="list-style-type: none"> • Microsoft Windows Server 2008 Standard (No Service Pack, Service Pack 2) (see ¹ and ²) • Microsoft Windows Server 2008 Enterprise (No Service Pack, Service Pack 2) (see ¹ and ²) • Microsoft Windows Server 2008 Datacenter (No Service Pack, Service Pack 2) (see ¹ and ²) • Microsoft Windows Server 2008 Standard 32-bit (No Service Pack, Service Pack 2) (see ²) • Microsoft Windows Server 2008 Enterprise 32-bit (No Service Pack, Service Pack 2) (see ²) • Microsoft Windows Server 2008 Datacenter 32-bit (No Service Pack, Service Pack 2) (see ²) • Microsoft Windows Server 2008 R2 Standard (No Service Pack) (see ¹, ², and ⁴) • Microsoft Windows Server 2008 R2 Enterprise (No Service Pack) (see ¹, ², and ⁴) • Microsoft Windows Server 2008 R2 Datacenter (No Service Pack) (see ¹, ², ³ and ⁴)
		After	Windows
			<ul style="list-style-type: none"> • Microsoft Windows Server 2003 R2, Standard Edition (Service Pack 2) • Microsoft Windows Server 2003 R2, Enterprise Edition (Service Pack 2) • Microsoft Windows Server 2003 R2, Standard x64 Edition (Service Pack 2) (see ¹) • Microsoft Windows Server 2003 R2, Enterprise x64 Edition (Service Pack 2) (see ¹) • Microsoft Windows Server 2008 Standard (No Service Pack, Service Pack 2) (see ¹ and ²) • Microsoft Windows Server 2008 Enterprise (No Service Pack, Service Pack 2) (see ¹ and ²) • Microsoft Windows Server 2008 Datacenter (No Service Pack, Service Pack 2) (see ¹ and ²) • Microsoft Windows Server 2008 Standard 32-bit (No Service Pack, Service Pack 2) (see ²) • Microsoft Windows Server 2008 Enterprise 32-bit (No Service Pack, Service Pack 2) (see ²) • Microsoft Windows Server 2008 Datacenter 32-bit (No Service Pack, Service Pack 2) (see ²) • Microsoft Windows Server 2008 R2 Standard (No Service Pack) (see ¹, ², and ⁴) • Microsoft Windows Server 2008 R2 Enterprise (No Service Pack) (see ¹, ², and ⁴)

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			<ul style="list-style-type: none"> • Microsoft Windows Server 2008 R2 Datacenter (No Service Pack) (see ¹, ², ³ and ⁴)
4	Product requirements	Before	<p>Windows</p> <ul style="list-style-type: none"> • Microsoft Windows Server 2003, Standard Edition (Service Pack 2) • Microsoft Windows Server 2003, Enterprise Edition (Service Pack 2) • Microsoft Windows Server 2003, Standard x64 Edition (Service Pack 2)* • Microsoft Windows Server 2003, Enterprise x64 Edition (Service Pack 2)*
	Applicable OSs		<ul style="list-style-type: none"> • Microsoft Windows Server 2003 R2, Standard Edition (Service Pack 2) • Microsoft Windows Server 2003 R2, Enterprise Edition (Service Pack 2) • Microsoft Windows Server 2003 R2, Standard x64 Edition (Service Pack 2)* • Microsoft Windows Server 2003 R2, Enterprise x64 Edition (Service Pack 2)* • Microsoft Windows Server 2008 Standard (No Service Pack, Service Pack 2)* • Microsoft Windows Server 2008 Enterprise (No Service Pack, Service Pack 2)* • Microsoft Windows Server 2008 Datacenter (No Service Pack, Service Pack 2)* • Microsoft Windows Server 2008 Standard 32-bit (No Service Pack, Service Pack 2) • Microsoft Windows Server 2008 Enterprise 32-bit (No Service Pack, Service Pack 2) • Microsoft Windows Server 2008 Datacenter 32-bit (No Service Pack, Service Pack 2) • Microsoft Windows Server 2008 R2 Standard (No Service Pack)* • Microsoft Windows Server 2008 R2 Enterprise (No Service Pack)* • Microsoft Windows Server 2008 R2 Datacenter (No Service Pack)*
	Agent for SAN Switch		
	Windows		
		After	<p>Windows</p> <ul style="list-style-type: none"> • Microsoft Windows Server 2003 R2, Standard Edition (Service Pack 2) • Microsoft Windows Server 2003 R2, Enterprise Edition (Service Pack 2) • Microsoft Windows Server 2003 R2, Standard x64 Edition (Service Pack 2)* • Microsoft Windows Server 2003 R2, Enterprise x64 Edition (Service Pack 2)* • Microsoft Windows Server 2008 Standard (No Service Pack, Service Pack 2)* • Microsoft Windows Server 2008 Enterprise (No Service Pack, Service Pack 2)* • Microsoft Windows Server 2008 Datacenter (No Service Pack, Service Pack 2)* • Microsoft Windows Server 2008 Standard 32-bit (No Service Pack, Service Pack 2) • Microsoft Windows Server 2008 Enterprise 32-bit (No Service Pack, Service Pack 2) • Microsoft Windows Server 2008 Datacenter 32-bit (No Service Pack, Service Pack 2) • Microsoft Windows Server 2008 R2 Standard (No Service Pack)* • Microsoft Windows Server 2008 R2 Enterprise (No Service Pack)* • Microsoft Windows Server 2008 R2 Datacenter (No Service Pack)*
5	Product requirements	Before	<p>Windows</p> <ul style="list-style-type: none"> • Microsoft Windows Server 2003, Standard Edition (Service Pack 2) • Microsoft Windows Server 2003, Enterprise Edition (Service Pack 2) • Microsoft Windows Server 2003, Standard x64 Edition (Service Pack 2)* • Microsoft Windows Server 2003, Enterprise x64 Edition (Service Pack 2)
	Applicable OSs		<ul style="list-style-type: none"> • Microsoft Windows Server 2003 R2, Standard Edition (Service Pack 2) • Microsoft Windows Server 2003 R2, Enterprise Edition (Service Pack 2) • Microsoft Windows Server 2003 R2, Standard x64 Edition (Service Pack 2)* • Microsoft Windows Server 2003 R2, Enterprise x64 Edition (Service Pack 2)* • Microsoft Windows Server 2008 Standard (No Service Pack, Service Pack 2)* • Microsoft Windows Server 2008 Enterprise (No Service Pack, Service Pack 2)* • Microsoft Windows Server 2008 Datacenter (No Service Pack, Service Pack 2)* • Microsoft Windows Server 2008 Standard 32-bit (No Service Pack, Service Pack 2) • Microsoft Windows Server 2008 Enterprise 32-bit (No Service Pack, Service Pack 2) • Microsoft Windows Server 2008 Datacenter 32-bit (No Service Pack, Service Pack 2) • Microsoft Windows Server 2008 R2 Standard (No Service Pack)* • Microsoft Windows Server 2008 R2 Enterprise (No Service Pack)* • Microsoft Windows Server 2008 R2 Datacenter (No Service Pack)*

	Agent for NAS Windows		<p>2)*</p> <ul style="list-style-type: none"> • Microsoft Windows Server 2003 R2, Standard Edition (Service Pack 2) • Microsoft Windows Server 2003 R2, Enterprise Edition (Service Pack 2) • Microsoft Windows Server 2003 R2, Standard x64 Edition (Service Pack 2)* • Microsoft Windows Server 2003 R2, Enterprise x64 Edition (Service Pack 2)*
		After	<p>Windows</p> <ul style="list-style-type: none"> • Microsoft Windows Server 2003 R2, Standard Edition (Service Pack 2) • Microsoft Windows Server 2003 R2, Enterprise Edition (Service Pack 2) • Microsoft Windows Server 2003 R2, Standard x64 Edition (Service Pack 2)* • Microsoft Windows Server 2003 R2, Enterprise x64 Edition (Service Pack 2)*
6	Product requirements Applicable OSs Agent for Oracle Windows	Before	<p>Windows</p> <ul style="list-style-type: none"> • Microsoft Windows Server 2003, Standard Edition (Service Pack 2) • Microsoft Windows Server 2003, Enterprise Edition (Service Pack 2) • Microsoft Windows Server 2003 R2, Standard Edition (Service Pack 2) • Microsoft Windows Server 2003 R2, Enterprise Edition (Service Pack 2) • Microsoft Windows Server 2008 Standard 32-bit (No Service Pack, Service Pack 2) • Microsoft Windows Server 2008 Enterprise 32-bit (No Service Pack, Service Pack 2) • Microsoft Windows Server 2008 Datacenter 32-bit (No Service Pack, Service Pack 2) • Microsoft Windows Server 2008 R2 Standard • Microsoft Windows Server 2008 R2 Enterprise • Microsoft Windows Server 2008 R2 Datacenter
		After	<p>Windows</p> <ul style="list-style-type: none"> • Microsoft Windows Server 2003 R2, Standard Edition (Service Pack 2) • Microsoft Windows Server 2003 R2, Enterprise Edition (Service Pack 2) • Microsoft Windows Server 2008 Standard 32-bit (No Service Pack, Service Pack 2) • Microsoft Windows Server 2008 Enterprise 32-bit (No Service Pack, Service Pack 2) • Microsoft Windows Server 2008 Datacenter 32-bit (No Service Pack, Service Pack 2) • Microsoft Windows Server 2008 R2 Standard • Microsoft Windows Server 2008 R2 Enterprise • Microsoft Windows Server 2008 R2 Datacenter
7	Product requirements Applicable OSs Agent for Microsoft SQL Server	Before	<ul style="list-style-type: none"> • Microsoft Windows Server 2003, Standard Edition (Service Pack 2) • Microsoft Windows Server 2003, Enterprise Edition (Service Pack 2) • Microsoft Windows Server 2003 R2, Standard Edition (Service Pack 2) • Microsoft Windows Server 2003 R2, Enterprise Edition (Service Pack 2) • Microsoft Windows Server 2003, Standard x64 Edition (Service Pack 2)* • Microsoft Windows Server 2003, Enterprise x64 Edition (Service Pack 2)* • Microsoft Windows Server 2003 R2, Standard x64 Edition (Service Pack 2)* • Microsoft Windows Server 2003 R2, Enterprise x64 Edition (Service Pack 2)*

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		<ul style="list-style-type: none"> • Microsoft Windows Server 2008 Standard (No Service Pack, Service Pack 2)* • Microsoft Windows Server 2008 Enterprise (No Service Pack, Service Pack 2)* • Microsoft Windows Server 2008 Datacenter (No Service Pack, Service Pack 2)* • Microsoft Windows Server 2008 Standard 32-bit (No Service Pack, Service Pack 2) • Microsoft Windows Server 2008 Enterprise 32-bit (No Service Pack, Service Pack 2) • Microsoft Windows Server 2008 Datacenter 32-bit (No Service Pack, Service Pack 2) • Microsoft Windows Server 2008 R2 Standard (No Service Pack)* • Microsoft Windows Server 2008 R2 Enterprise (No Service Pack)* • Microsoft Windows Server 2008 R2 Datacenter (No Service Pack)* <p>After</p> <ul style="list-style-type: none"> • Microsoft Windows Server 2003 R2, Standard Edition (Service Pack 2) • Microsoft Windows Server 2003 R2, Enterprise Edition (Service Pack 2) • Microsoft Windows Server 2003 R2, Standard x64 Edition (Service Pack 2)* • Microsoft Windows Server 2003 R2, Enterprise x64 Edition (Service Pack 2)* • Microsoft Windows Server 2008 Standard (No Service Pack, Service Pack 2)* • Microsoft Windows Server 2008 Enterprise (No Service Pack, Service Pack 2)* • Microsoft Windows Server 2008 Datacenter (No Service Pack, Service Pack 2)* • Microsoft Windows Server 2008 Standard 32-bit (No Service Pack, Service Pack 2) • Microsoft Windows Server 2008 Enterprise 32-bit (No Service Pack, Service Pack 2) • Microsoft Windows Server 2008 Datacenter 32-bit (No Service Pack, Service Pack 2) • Microsoft Windows Server 2008 R2 Standard (No Service Pack)* • Microsoft Windows Server 2008 R2 Enterprise (No Service Pack)* • Microsoft Windows Server 2008 R2 Datacenter (No Service Pack)* 																																								
8	<p>Product requirements</p> <p>Supported browsers</p> <p>Table A-1: Supported browsers</p>	<p>Before</p> <p>Table A-1: Supported browsers</p> <table border="1" data-bbox="571 1209 1383 1862"> <thead> <tr> <th>OS</th> <th>OS version</th> <th>Architecture</th> <th>Service pack</th> <th>Tuning Manager v6.4.x and later</th> <th>Tuning Manager v7.0 and later</th> </tr> </thead> <tbody> <tr> <td rowspan="7">Windows</td> <td>Windows Server 2008 R2</td> <td>x64</td> <td>No SP</td> <td>IE7, IE8</td> <td>IE8</td> </tr> <tr> <td rowspan="2">Windows Server 2003 R2</td> <td>x86</td> <td>No SP, SP1</td> <td>IE6, IE7, IE8</td> <td>--</td> </tr> <tr> <td rowspan="2">Windows 2003</td> <td>x86</td> <td>No SP, SP1</td> <td>IE6, IE7, IE8</td> <td>--</td> </tr> <tr> <td>IPF</td> <td>No SP, SP1</td> <td>IE6, IE7, IE8</td> <td>--</td> </tr> <tr> <td rowspan="2">Windows Vista</td> <td>x86</td> <td>SP2, SP1</td> <td>--</td> <td>IE7, IE8</td> </tr> <tr> <td>X64</td> <td>SP2, SP1</td> <td>--</td> <td>IE7, IE8</td> </tr> <tr> <td>Windows XP</td> <td>--</td> <td>SP3</td> <td>--</td> <td>IE6, IE7, IE8</td> </tr> </tbody> </table>	OS	OS version	Architecture	Service pack	Tuning Manager v6.4.x and later	Tuning Manager v7.0 and later	Windows	Windows Server 2008 R2	x64	No SP	IE7, IE8	IE8	Windows Server 2003 R2	x86	No SP, SP1	IE6, IE7, IE8	--	Windows 2003	x86	No SP, SP1	IE6, IE7, IE8	--	IPF	No SP, SP1	IE6, IE7, IE8	--	Windows Vista	x86	SP2, SP1	--	IE7, IE8	X64	SP2, SP1	--	IE7, IE8	Windows XP	--	SP3	--	IE6, IE7, IE8
OS	OS version	Architecture	Service pack	Tuning Manager v6.4.x and later	Tuning Manager v7.0 and later																																					
Windows	Windows Server 2008 R2	x64	No SP	IE7, IE8	IE8																																					
	Windows Server 2003 R2	x86	No SP, SP1	IE6, IE7, IE8	--																																					
		Windows 2003	x86	No SP, SP1	IE6, IE7, IE8	--																																				
	IPF		No SP, SP1	IE6, IE7, IE8	--																																					
	Windows Vista	x86	SP2, SP1	--	IE7, IE8																																					
		X64	SP2, SP1	--	IE7, IE8																																					
	Windows XP	--	SP3	--	IE6, IE7, IE8																																					

			Solaris	Solaris 10	SPARC	--	Mozilla 1.7, Firefox 2.0	Firefox3	
					AMD64	--	Firefox 2.0	Firefox3	
				Solaris 9	SPARC	--	Mozilla 1.7	--	
				Solaris 8	SPARC	--	Mozilla 1.4	--	
			Linux	RHEL 5.3	x86	--	Firefox 3.0	Firefox3	
			HP-UX	HP-UX 11i v3	IPF	--	Firefox 2.0	--	
	After	Table A-1: Supported browsers							
			OS	OS version	Architecture	Service pack	Tuning Manager v7.0 and later		
			Windows	Windows Server 2008 R2	x64	No SP	IE8		
				Windows Server 2003 R2	x86	No SP, SP1	--		
				Windows Server 2008	x86	No SP, SP2	IE7, IE8		
				Windows Vista		x86	No SP, SP2, SP1	IE7, IE8	
						X64	No SP, SP2, SP1	IE7, IE8	
			Windows XP		--	SP2, SP3	IE6, IE7, IE8		
			Solaris	Solaris 10	SPARC	--	Firefox3		
					AMD64	--	Firefox3		
			Linux	RHEL 5.3	x86	--	Firefox3		

9	Product requirements Monitoring targets Agent for Microsoft Exchange Server Table A-13: Exchange server system requirements	Before	Table A-13: Exchange server system requirements				
			OS		Exchange Server2003	Exchange Server2007	Exchange Server2010
			Windows Server 2003	x86	Yes	No	No
				x64	No	Yes	No
			Windows Server 2003 R2	x86	Yes	No	No
				x64	No	Yes	No
			Windows Server 2008	x86	No	No	No
				x64	No	Yes ¹	Yes ²
		Windows Server 2008 R2	x64	No	No	Yes	
		After	Table A-13: Exchange server system requirements				
			OS		Exchange Server2003	Exchange Server2007	Exchange Server2010
			Windows Server 2003 R2	x86	Yes	No	No
				x64	No	Yes	No
			Windows Server 2008	x86	No	No	No
x64	No			Yes ¹	Yes ²		
Windows Server 2008 R2	x64		No	No	Yes		

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