HP Server Management Packs for Microsoft® System Center Essentials
User Guide



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Overview

Getting started

The following identifies key steps, terms and documents to consider when using the Management Packs for the first time:

- Custom Data Manager (CDM) is a new tool included in the HP Server Management Packs. You must install the CDM on remote consoles using the custom installation option. For more information, see "Installation (on page 9)".
- Security settings are required to run HP Tasks properly. For more information, see "Security for HP Tasks (on page 73)".
- New object types are defined for HP servers including Others and Log Classes. For definitions of these objects, see "Discovering HP Servers (on page 39)".
- A new HP Server Configuration Guide for System Center Integrations is provided with the HP Management Pack Kits. This guide details the supported versions and configurations.
- A Troubleshooting Assistant is provided within the HP Management Pack Kits to help you diagnose and resolve issues before contacting HP.

About this guide

This guide is designed for system administrators who use the HP Server Management Packs for Microsoft® System Center Essentials, Insight Management Agents, and other HP applications and tools to manage the operations of HP ProLiant within a System Center Essentials environment.

You should be familiar with the configuration and operation of Microsoft® Windows®, Microsoft® System Center Essentials, and the Insight Management Agents. Because of the potential risk of data loss, only individuals who are experienced with using this software should implement the procedures described in this guide.

HP assumes that this level of expertise is available to customers using the *HP Server Management Pack for Microsoft® System Center Essentials User Guide*. HP recommends reviewing your Microsoft® product documentation for assistance in understanding this guide.

Introduction

HP delivers new management packs that complement and extend System Center Essentials, integrate alert processing, state monitoring, and hardware resource lifecycle management for HP ProLiant servers.

Designed specifically for System Center Essentials, the HP Server Management Packs provide predefined discoveries, views, monitors, event processing rules, and tasks. These enable administrators to proactively streamline IT operations and ensure increased systems availability by monitoring Microsoft® Windows® environments and HP server hardware platforms through a common System Center Essentials console.

The HP Server Management Packs for System Center Essentials discover and group HP ProLiant servers by hardware platform type. Default discoveries and monitors highlight the state of HP hardware and management software components and present a consolidated view of system status. Predefined event processing rules build on the functionality of the HP Insight Management Agents to display Windows® Event Log entries for HP server hardware as alerts in the System Center Essentials Console, including real-time and prefailure event definitions.

For advanced hardware lifecycle management and remote administration of HP ProLiant servers, the HP Server Management Packs for System Center Essentials include tasks that launch HP Systems Insight Manager for group systems administration, the HP System Management Homepage for single system health and configuration monitoring, and advanced remote server administration through the HP Integrated Lights-Out Management Processor when installed.

Features

The HP Server Management Packs for System Center Essentials support the following new features:

- Integration with Microsoft® System Center Essentials
- New capability for User Defined Custom Data
- New Icons for System Center Essentials Diagram View
- Streamlined procedure for HP Server Management Packs for System Center Essentials installation
- Improved management of events by eliminating multiple alerts in Rules
- Fully scripted installation that imports management pack data into the System Center Essentials database automatically
- Automatic discovery and grouping of HP ProLiant servers by server family and platform type
- State monitoring for HP hardware subsystems and management software components
- Predefined rules to process and display Windows® Event Log entries for HP server hardware alerts in the System Center Essentials Console
- Policies to present consolidated views of key HP server attributes for rapid system analysis, which include CPU type, total memory, available hard drive storage, firmware revisions, and the version of installed Insight Management Agents
- HP servers represented in the Diagram View
- Console Tasks to launch HP SIM, the HP System Management Homepage and HP Integrated Lights-Out Management Processors from the System Center Essentials Console
- Access to HP BladeSystem and other HP ProLiant Essentials value-added software for hardware performance management, vulnerability assessment, and advanced lifecycle administration of blade servers and virtual systems through HP SIM

Benefits

The HP Server Management Packs for System Center Essentials provide the following benefits:

- Hardware resource management for HP ProLiant servers with augmented System Center Essentials
- Simplified and proactive monitoring of the Microsoft® Windows® and HP hardware resources using a common System Center Essentials console

- Streamlined IT administration and increased systems availability

Product architecture

The HP Server Management Packs for System Center Essentials integration is designed to perform the following major functions:

- Automatically identify, group, and display HP ProLiant servers within the System Center Essentials Console
- Populate System Center Essentials with server attributes and configuration data for HP hardware and software components
- Monitor and display the state of HP server hardware and the associated management services
- Proactively identify, translate, and display HP hardware events written to the Windows® Event Log as System Center Essentials alerts
- Provide browser-based links to HP management tools for hardware resource management and advanced remote administration from within System Center Essentials

All elements of the HP Server Management Packs are copied to the System Center Essentials database. The following elements are included:

- Classes and Attributes
- Discoveries
- Monitors
- Rules
- Tasks
- Views

HP Management Packs are a set of unrelated management packs. After the installation of HP Server Management Packs, System Center Essentials transfers the primary HP management packs to each computer system under the System Center Essentials Agent. HP Management Packs perform an initial discovery to verify that the system is supported by a server with the HP management software. If the discovery succeeds, the appropriate additional management packs are transferred to the HP servers. These management packs then run a detailed discovery process that enables state monitoring and event processing.

After the server is properly discovered, HP server information can be seen on the System Center Essentials console. HP server grouping is performed on the System Center Essentials Server. The discovered inventory data and monitored state are reflected on the state and diagram views.

This process does not take place for agentless servers under System Center Essentials. Agentless servers are monitored by a System Center Essentials Agent run on the System Center Essentials Server. This agent performs management pack operation on the target server remotely, which causes higher network traffic and process power consumption on the System Center Essentials Server. HP recommends keeping the number of agentless servers in your System Center Essentials environment to a minimum.

How HP Server Management Packs operate

Some of the major elements of the HP Server Management Packs for System Center Essentials and the underlying elements collect data and process hardware events and state changes. These elements include:

- The HP server discovery rules and scripts use Insight Management Agents, system BIOS data, and information from WMI to identify HP ProLiant servers and collate individual system configuration attributes.
- HP state monitoring rules use data from Insight Management Agents MIB files to monitor the condition of HP ProLiant server hardware and to populate the State views in the System Center Essentials Console. HP state monitoring rules also monitor the availability of key HP management software and services such as Insight Management Agents.
- The HP event processing rules rely on Insight Management Agents and data written to the Windows® Event Log to identify and process HP hardware events.

  When an HP Insight Management Agent generates an event, a corresponding entry is written to the Windows® Event log, which is the primary event data source used by System Center Essentials. If the HP event in the Windows® Event Log has an associated event processing rule defined by an HP Management Pack, a System Center Essentials alert is generated and written to the appropriate view in the System Center Essentials Console.

  HP alerts in System Center Essentials include clear event details and knowledge base data designed to enable rapid analysis of real-time and prefailure conditions. Certain hardware events reported to the Windows® Event Log can also generate additional events that indicate a change in hardware state.

For information on the components provided with the HP Server Management Packs for System Center Essentials, see "Using the software (on page 20)".

Installation

Installation overview

To install the HP Server Management Packs for System Center Essentials:

1. Download the appropriate management pack from the HP website (http://www.hp.com/servers/integration), and unzip the file.

   The following zip file is available for download:

   HPProLiantMgmtPackForSCE1_0.exe

2. Select the appropriate management pack to install.

   NOTE: The appropriate versions of HP Insight Management Agents are installed and running on all managed servers. For further information, see the *HP Server Management Pack Configuration Guide*.

   The following table shows the kits available for selection.

Kit name	File name	Description
HP ProLiant Server Management Pack 1.0 for System Center Essentials (x86)	HP ProLiant Mgmt Pack for SCE_x86.msi	Used to install HP ProLiant Server management capability where System Center Essentials is operating in an x86 environment. This kit supports both x86 and x64 ProLiant Server managed nodes.
HP ProLiant Server Management Pack 1.0 for System Center Essentials (x64)	HP ProLiant Mgmt Pack for SCE_x64.msi	Used to install HP ProLiant Server management capability where System Center Essentials is operating in an x64 environment. This kit supports both x86 and x64 ProLiant Server managed nodes.

3. Install the HP Server Management Packs for System Center Essentials into the System Center Essentials environment.

   The kits support a custom setup option. Select any or all of the following to be installed:

   - Release Notes and Documents (always installed)
   - Console Task Tools
   - Management Packs

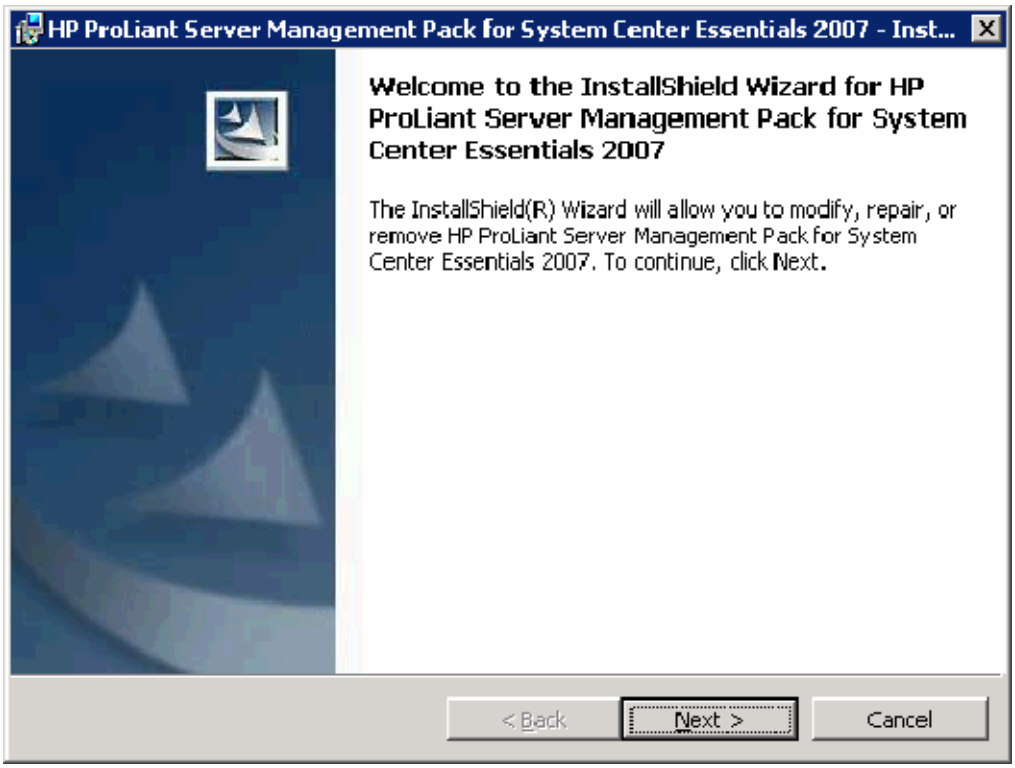
   The custom setup option is used to install HP console task tools to each remote System Center Essentials Console.

   NOTE: There are dependencies between management packs and console task tools, therefore both components must be installed to ensure full functionality. The management packs must always be installed on the System Center Essentials server. The console task tools can be installed on the System Center Essentials server and on a remote operator console system. The custom setup option is used to select components to install.

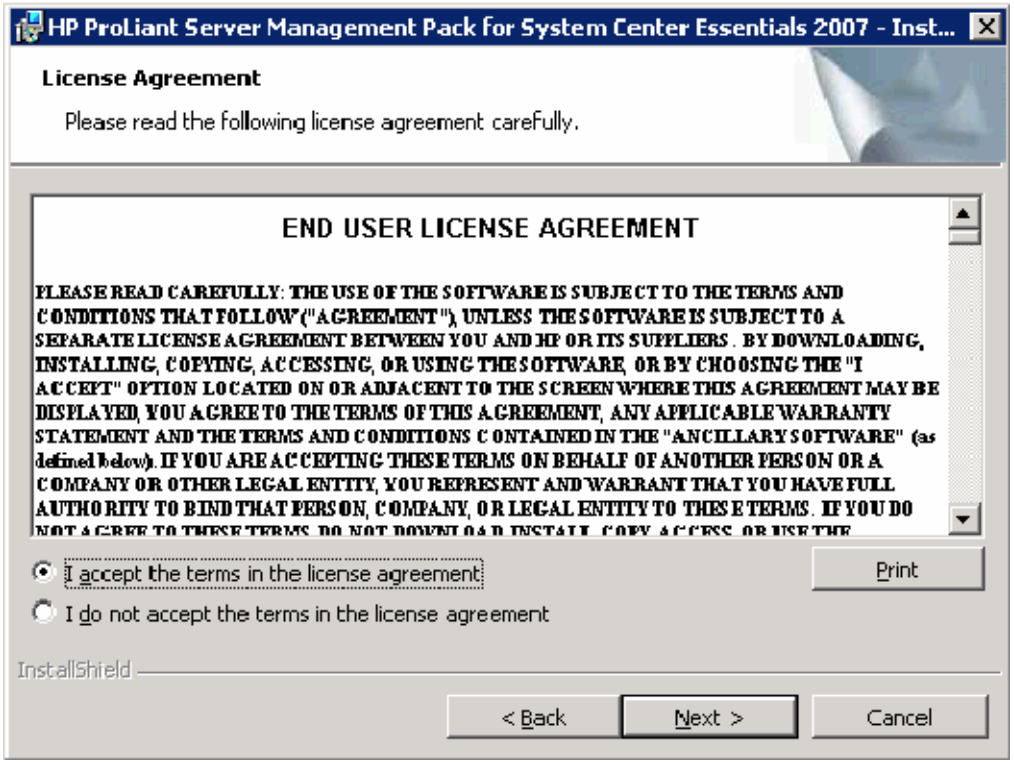
4. The installer automatically imports the management packs to the System Center Essentials.
5. Complete the post-installation procedures to discover and display HP servers in the System Center Essentials console.

Installing the HP ProLiant Management Pack for System Center Essentials (x86 or x64 editions)

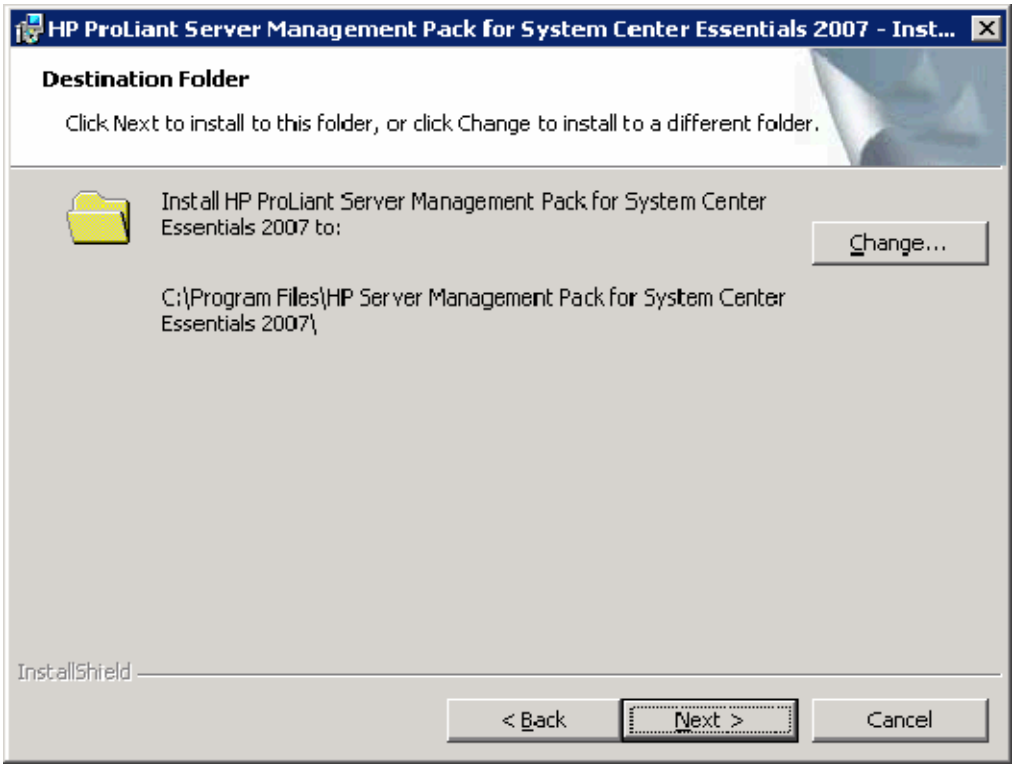
1. Close the **System Center Essentials** console if it is running.
2. Install either the HP ProLiant Mgmt Pack for SCE_x86.msi file or the HP ProLiant Mgmt Pack for SCE_x64.msi file on a system hosting the System Center Essentials Management Server or a system running remote System Center Essentials console.
3. Execute either the HP ProLiant Mgmt Pack for SCE_x86.msi file or the HP ProLiant Mgmt Pack for SCE_x64.msi file to begin the installation process.
4. Click **Next.**



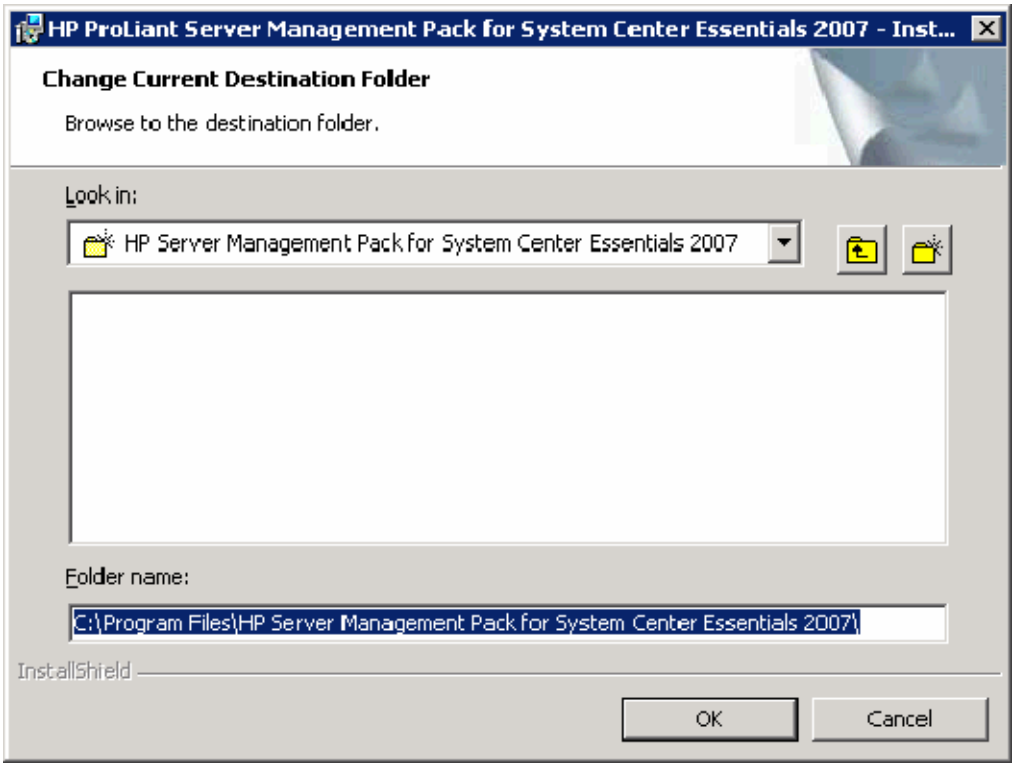
5. Select **I accept the terms in the license agreement**, and click **Next.**



6. To change the destination folder, click **Change.** If no folder change is required, click **Next,** and go to step 8.



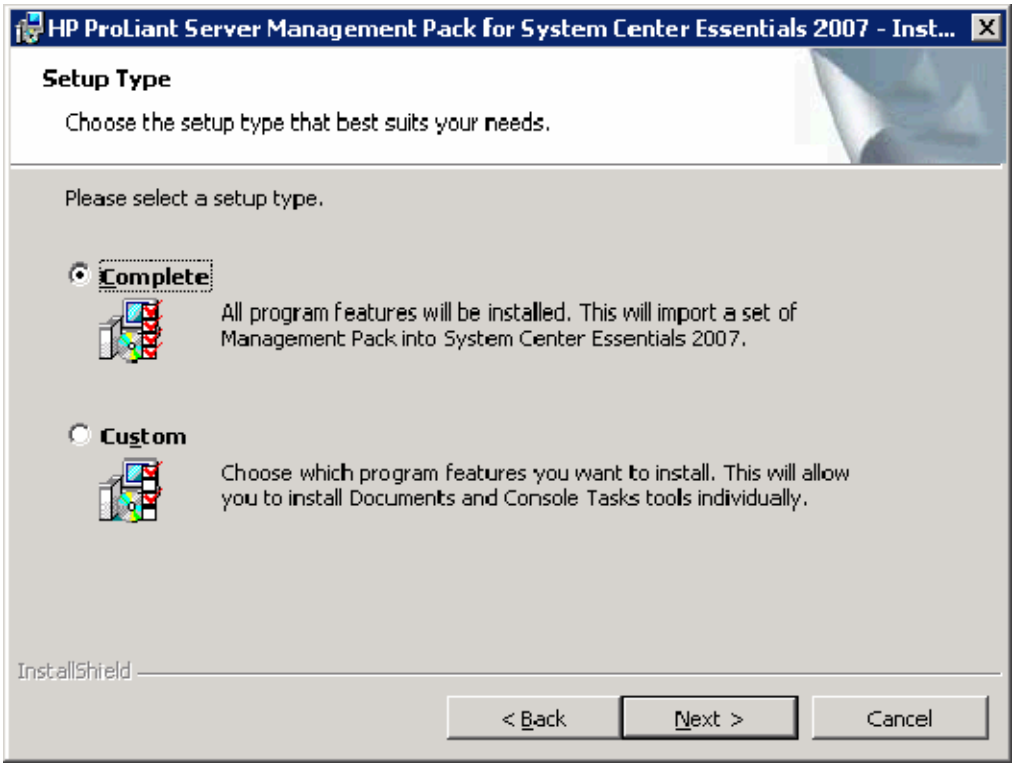
7. Select the destination folder by using the folder navigation button to browse to the folder location or by entering the folder name in the textbox. Click **OK.**



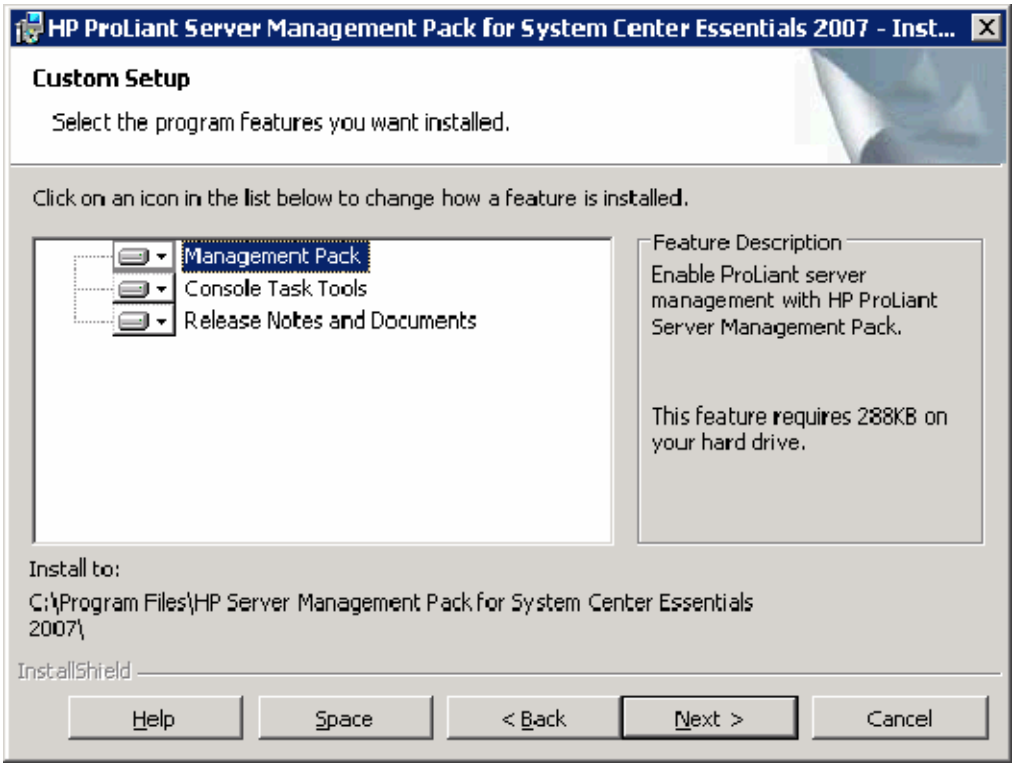
8. Select the setup type from the following options:
   - Complete—Select this setup type to install all necessary features onto the System Center Essentials environment (Continue to step 10.).
   - Custom—Select this setup type to select the features to install the System Center Essentials in a console-only environment (Remote System Center Essentials console).

     The Custom Data Manager must be installed on all remote consoles.

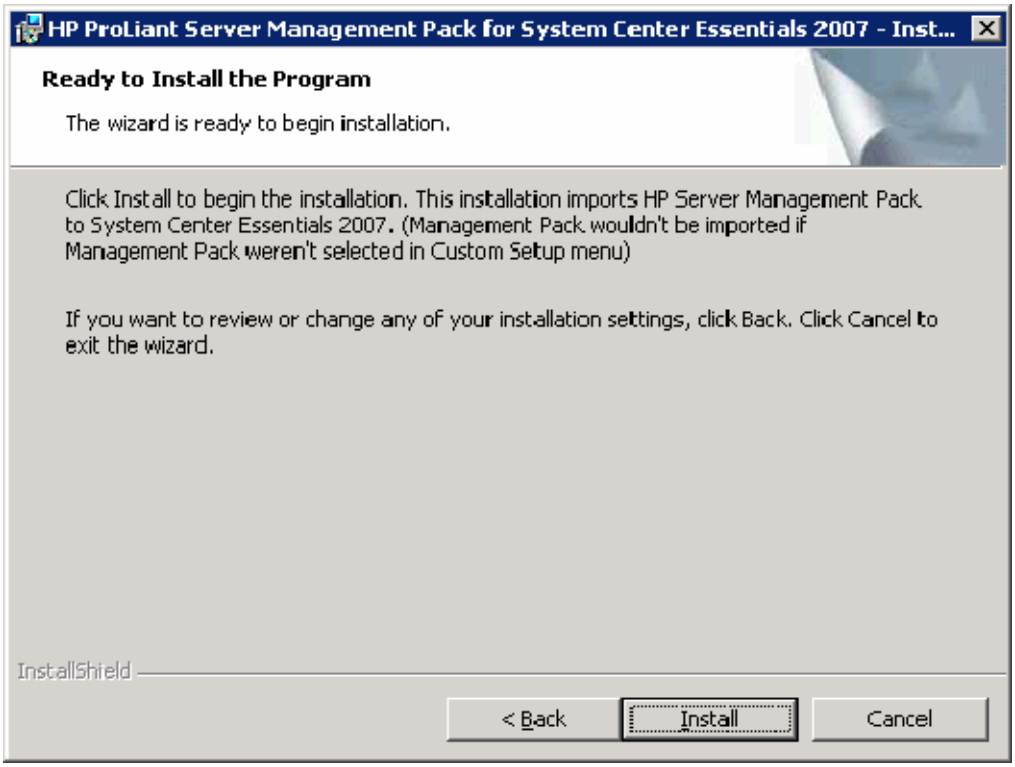
Click **Next.**



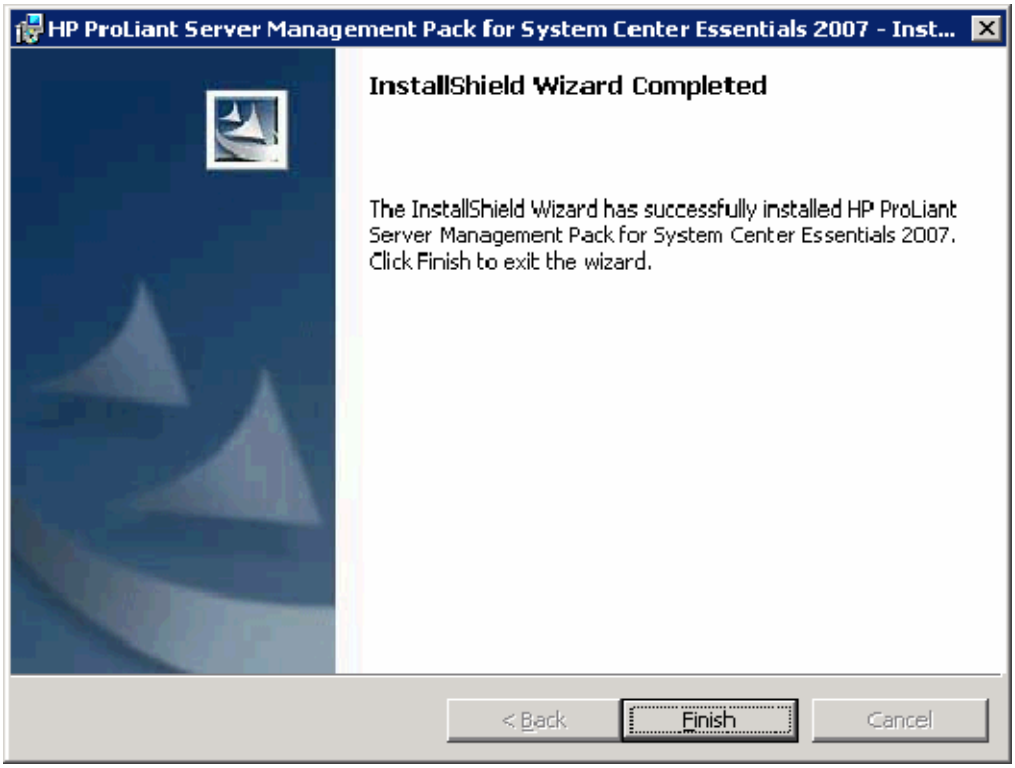
9. Select the required features to install from the menu. Click **Next.**



10. Click **Install.** The installation automatically imports the management packs. The installation progress screen appears.



11. Click **Finish.**

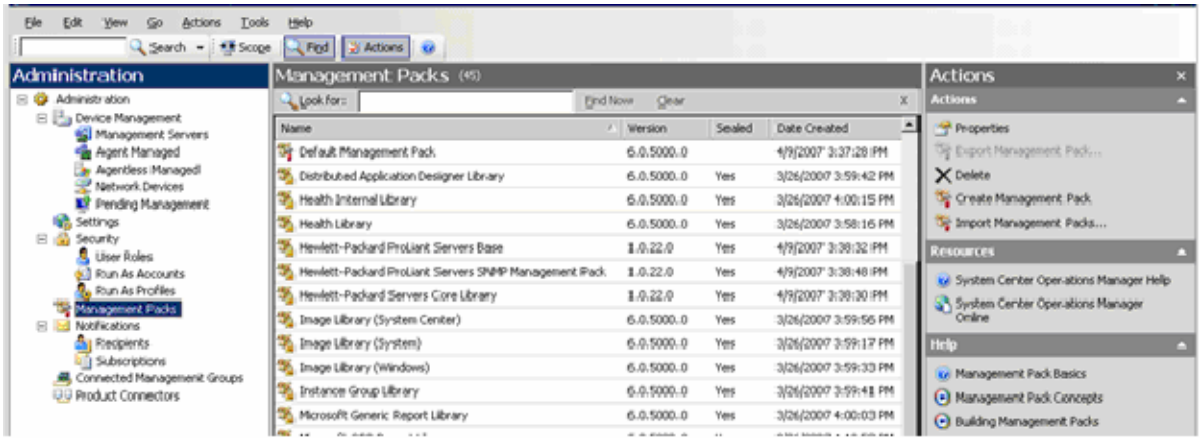


After the installation of the HP ProLiant Management Pack for System Center Essentials

The installation updates the system with components in the following table. By default, all files are installed in the %Program Files%\HP Server Management Packs for System Center Essentials directory. If you selected a different destination folder during the installation, these files are installed in the selected folder.

Name	Type	Component	Description
HPServerManagementPacksForSCEDir	Environment variable	Default	Store the destination folder
Management Packs \HewlettPackard.Servers.Library.mp	Management Pack	Management Packs	HP Servers Core Library
Management Packs\ProLiant HewlettPackard.Servers.ProLiant.mp	Management Pack	Management Packs	HP ProLiant Servers Base
Management Packs\ProLiant \HP.Servers.ProLiant.SNMP.mp	Management Pack	Management Packs	HP ProLiant Servers SNMP Management Pack
Release Notes and Documents \HPManagementPacks 1_0 TroubleshootingAssistant.chm	Document	Release Notes and Documents	Troubleshooting Assistant document
Release Notes and Documents \HP ManagementPacks 1_0 UserGuide.chm	Document	Release Notes and Documents	User Guide
Release Notes and Documents \ProLiant\LicenseForProLiantMPs.rtf	Document	Release Notes and Documents	License document
Release Notes and Documents \ProLiant \ReleaseNotesForProLiantMPs.rtf	Document	Release Notes and Documents	Release Notes
Tools \hpCDM.exe	Tool	Console Task Tools	HP Custom Data Manager
ProLiantImportMPs.log	Log	Management Packs	Logging text data of imported result

The installation results can be viewed using the Management Packs view in the System Center Essentials console. Import logging data is also available in the ProLiantImportMPs.log file.

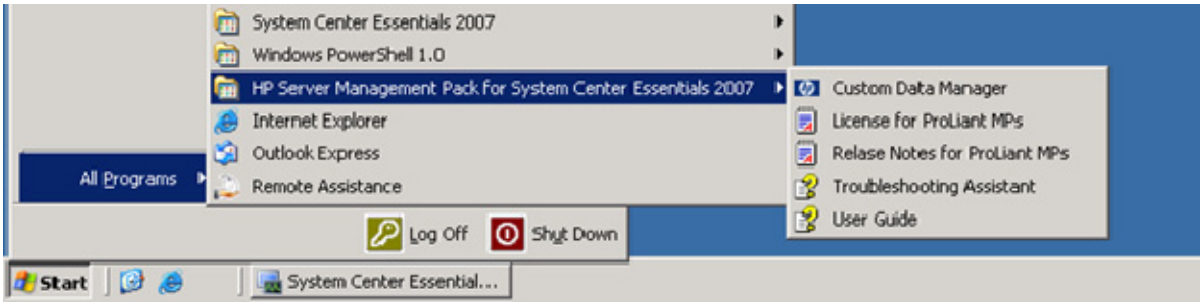


The ProLiant Management Pack kit imports the following three management packs into the System Center Essentials server:

- Hewlett-Packard Servers Core Library—Defines the basic HP Server Class structure to support ProLiant Servers Management
- Hewlett-Packard ProLiant Servers Base—Defines the HP ProLiant Server Class structure to process primary monitoring to ProLiant Servers
- Hewlett-Packard ProLiant Servers SNMP Management Pack—Defines the HP Insight Management Agents-based management for states and events

These management packs are deployed automatically, and you can view state and event information after the installation.

This installation also adds entries in the programs menu on the Windows® Start menu.



Uninstalling the HP ProLiant Management Pack for System Center Essentials

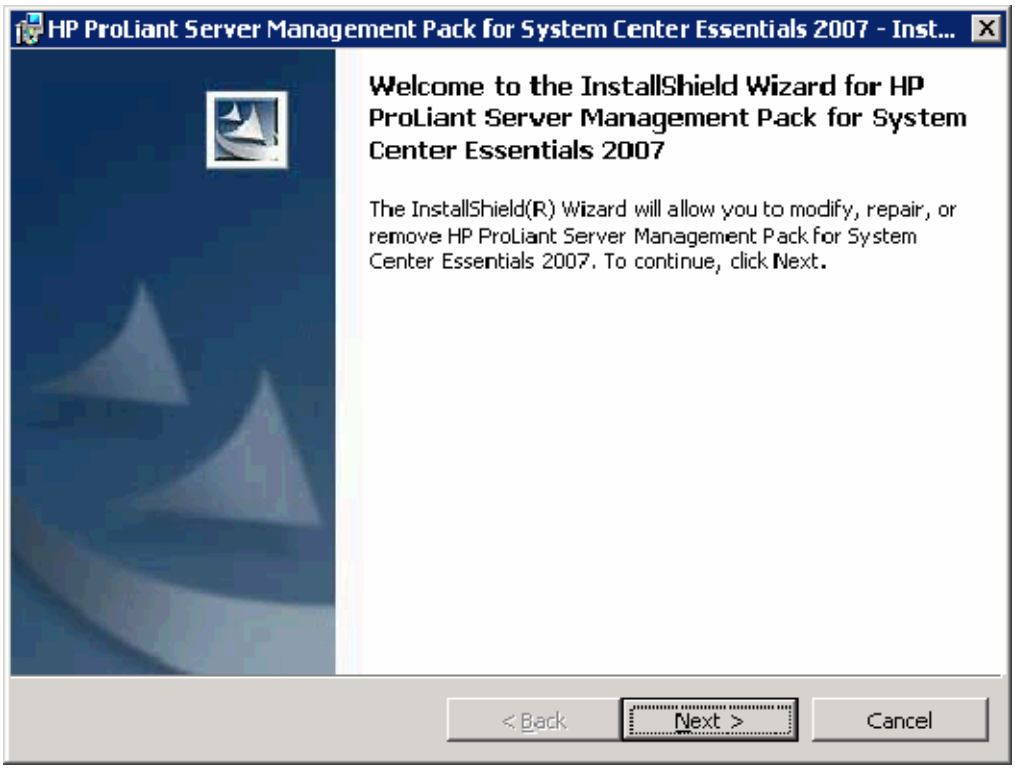
NOTE: Uninstalling the kits will not delete the imported Management Packs from the System Center Essentials servers.

Before attempting to remove the kits from the Add/Remove Programs menu, you must manually delete all dependent management pack data from the System Center Essentials console and the HP ProLiant management packs.

You can check current dependency in the Administration screen. Right-click the HP ProLiant Servers Management Pack you want to check, and select **Properties.** Select the **Dependencies** tab. If the Management Pack that depends on this Management Pack list does not show any dependency, then the selected management pack can be deleted. If there are dependencies present, then you must verify that it is appropriate to delete them.

After the HP ProLiant Management Packs are deleted from the System Center Essentials server, perform the following procedure to uninstall all kit contents.

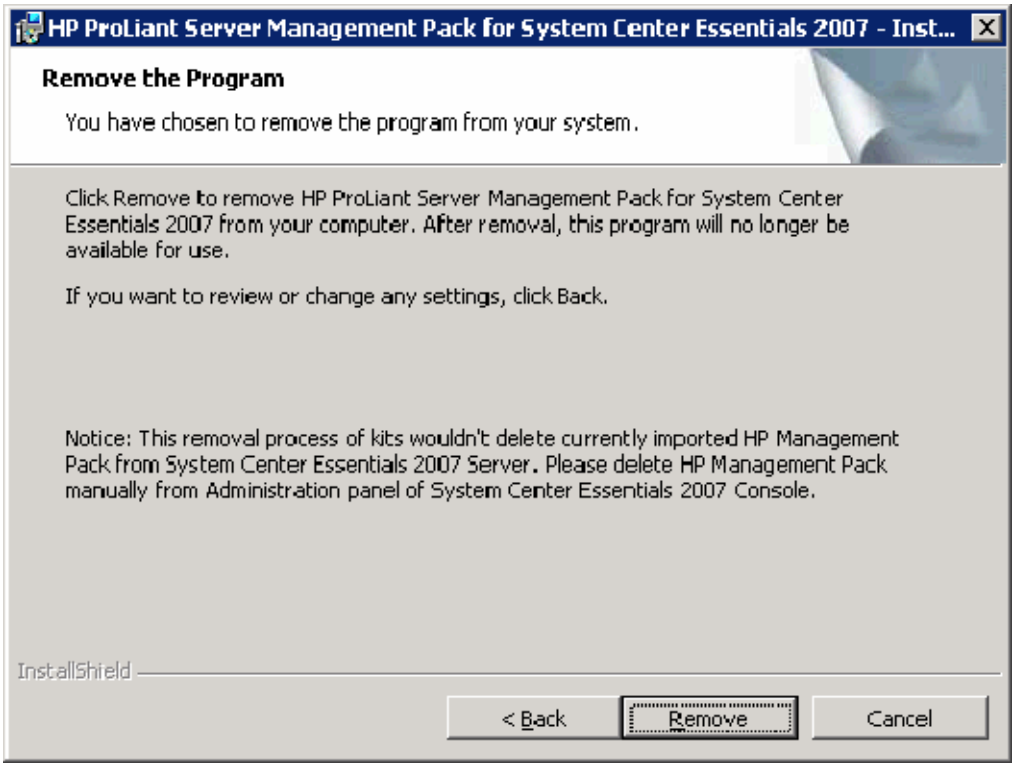
1. Locate the HP ProLiant Management Packs for System Center Essentials in the Windows® Add/Remove programs menu. To begin the removal process, click **Change.**
2. Click **Next.**



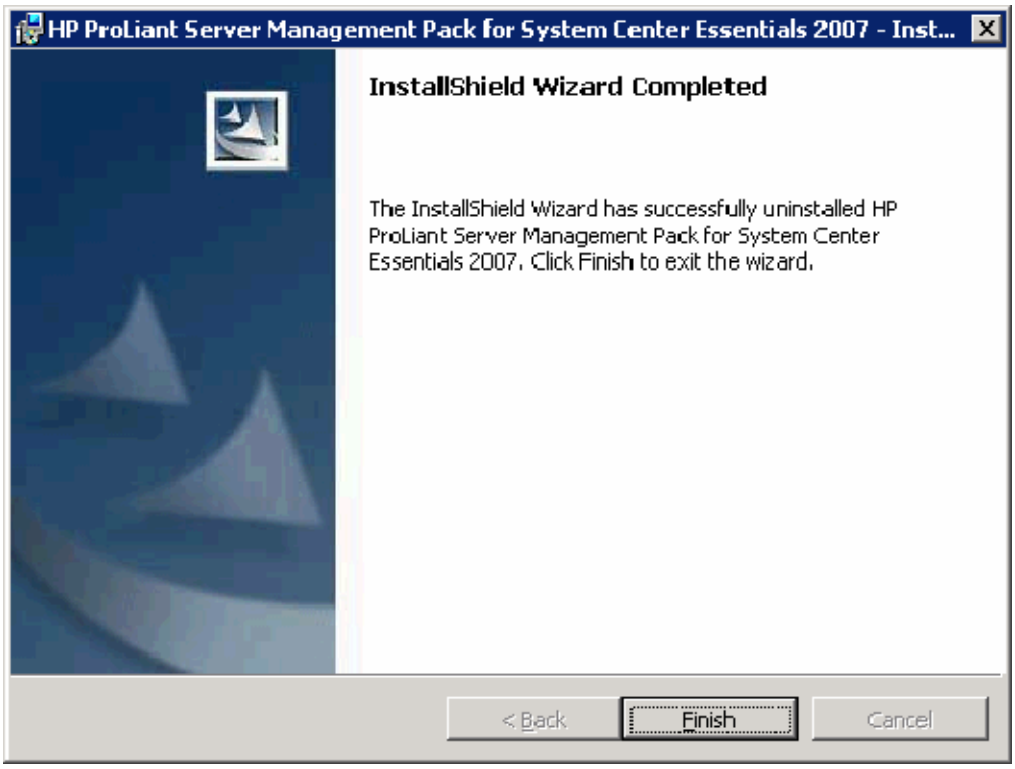
3. Select **Remove,** and click **Next.**



4. Click **Remove.** The uninstallation progress screen appears.



5. Click **Finish.**



Using the software

Using the HP Server Management Packs for System Center Essentials

The HP Server Management Packs for System Center Essentials include the following major elements:

- Classes
- Views
- Discoveries
- Monitors
- Rules
- Tasks

Before using the HP Server Management Packs for System Center Essentials, be sure that the following conditions exist:

- The HP Server Management Packs for System Center Essentials have been installed according to the installation procedures ("Installation" on page 9) defined in this guide.
- SNMP services are installed, properly configured, and running on all managed servers.

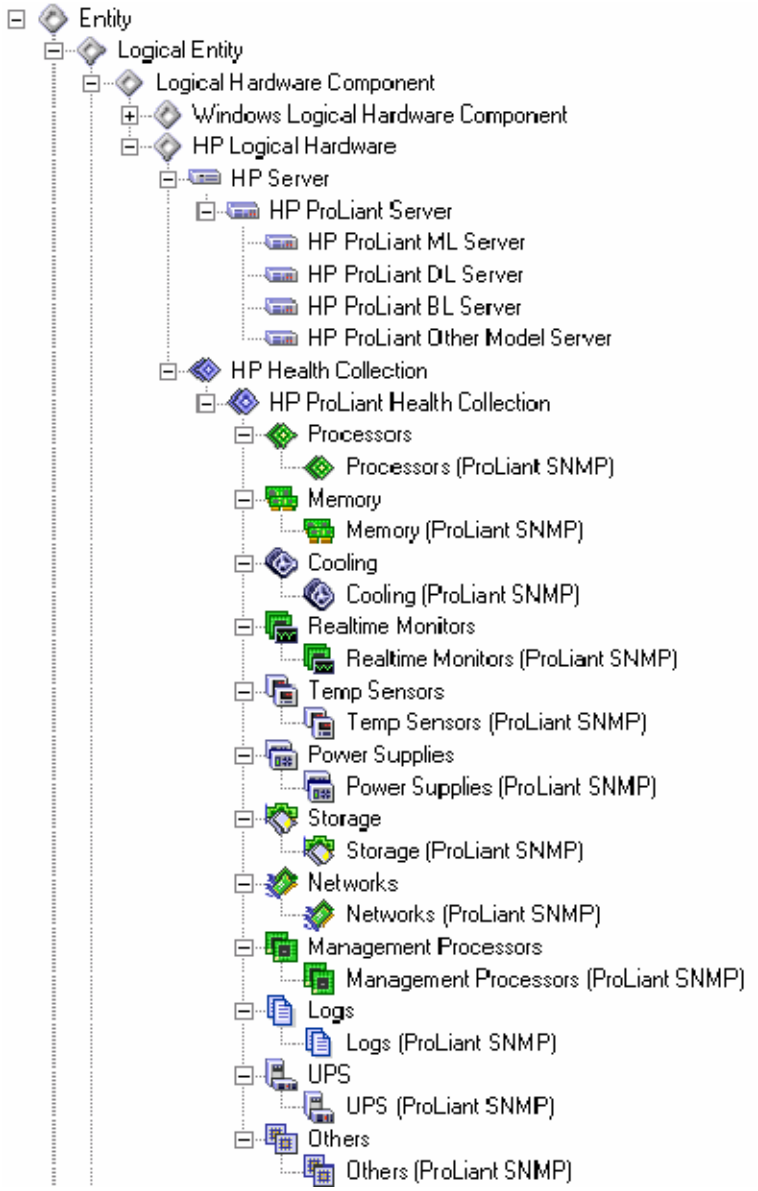
NOTE: The appropriate versions of HP Insight Management Agents are installed and running on all managed servers. For further information, see the *HP Server Management Pack Configuration Guide*.

Classes

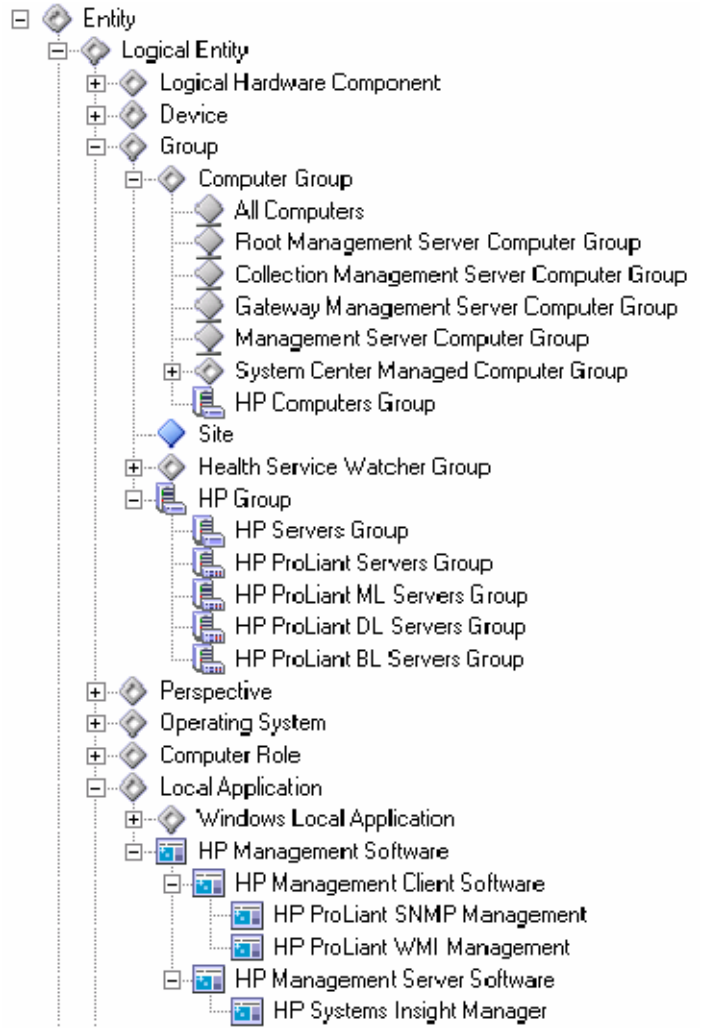
The structure of the HP Server Classes is defined to provide the following features:

- Classes to abstract HP ProLiant servers.
- Classes to abstract SNMP and future WMI based management.
- Classes organized into multiple management packs.

The following figure illustrates the HP Logical Hardware class inheritance hierarchy for HP ProLiant SNMP-based managements.



The following figure illustrates the HP ProLiant Group and Management Software class inheritance hierarchy.



HP Servers Core Library classes

The Core Library defines the primary abstract classes and group classes:

Name	InheritedFrom	Accessibility
HP Logical Hardware	Logical Hardware Component	Public
HP Management Software	Local Application	Public
HP Management Client Software	HP Management Software	Public
HP Management Server Software	HP Management Software	Public
HP Group	Group	Public
HP Server	HP Logical Hardware	Public
HP Servers Group	HP Group	Public
HP Health Collection	HP Logical Hardware	Public
HP Computers Group	Computer Group	Public

- HP Logical Hardware (ID=HewlettPackard.Servers.HPLogicalHardware)

- HP Management Software (ID=HewlettPackard.Servers.HPManagementSoftware)
  - Version—Version information of HP management software
- HP Management Client Software (ID=HewlettPackard.Servers.HPManagementClientSoftware)
- HP Management Server Software (ID=HewlettPackard.Servers.HPManagementServerSoftware)
  - Server Name (key)—Network name of HP server or computer
- HP Group (ID=HewlettPackard.Servers.HPGroup)
- HP Server (ID=HewlettPackard.Servers.HPServer)
  - Network Name (key)—Network name of HP server or computer
  - Manufacturer—Server manufacturer name
  - Model—Model name of server
  - Serial Number—Server serial number
  - System Firmware—System firmware version
  - System Type—Server system type
  - Physical Memory (MB)—Physical memory size in megabytes
  - Total Disk (GB)—Total disk size in gigabytes
  - HP Management Version—HP management agents and provider versions
  - Monitoring Source—Monitoring instrumentation name
  - Custom Data 1—Title: User Custom Data field
  - Custom Data 1—Value: User Custom Data field
  - Custom Data 2—Title: User Custom Data field
  - Custom Data 2—Value: User Custom Data field
  - Custom Data 3—Title: User Custom Data field
  - Custom Data 3—Value: User Custom Data field
  - Custom Data 4—Title: User Custom Data field
  - Custom Data 4—Value: User Custom Data field
  - Custom Data 5—Title: User Custom Data field
  - Custom Data 5—Value: User Custom Data field
- HP Servers Group (ID=HewlettPackard.ServersHPServersGroup)
- HP Health Collection (ID=HewlettPackard.Servers.HPHealthConnection)
  - Server Name—Network name of HP server or computer
- HP Computers Group (ID=HewlettPackard.Servers.HPComputersGroup)
- HP All Instance Group (ID=HewlettPackard.Servers.HPAllInstanceGroup)

HP ProLiant Servers Base classes

The HP Servers Base implements the HP ProLiant Server Class with Model Membership Groups.

Name	InheritedFrom	Accessibility
HP ProLiant Servers Group	HP Group	Public
HP ProLiant ML Servers Group	HP Group	Public
HP ProLiant DL Servers Group	HP Group	Public
HP ProLiant BL Servers Group	HP Group	Public
HP ProLiant Server	HP Server	Public
HP ProLiant ML Server	HP ProLiant Server	Public
HP ProLiant DL Server	HP ProLiant Server	Public
HP ProLiant BL Server	HP ProLiant Server	Public
HP ProLiant Other Model Server	HP ProLiant Server	Public
HP ProLiant Health Collection	HP Health Collection	Public
Processors	HP ProLiant Health Collection	Public
Memory	HP ProLiant Health Collection	Public
Cooling	HP ProLiant Health Collection	Public
Realtime Monitors	HP ProLiant Health Collection	Public
Temp Sensors	HP ProLiant Health Collection	Public
Power Supplies	HP ProLiant Health Collection	Public
Storage	HP ProLiant Health Collection	Public
Networks	HP ProLiant Health Collection	Public
Management Processors	HP ProLiant Health Collection	Public
Logs	HP ProLiant Health Collection	Public
UPS	HP ProLiant Health Collection	Public
Others	HP ProLiant Health Collection	Public
HP ProLiant SNMP Management	HP Management Client Sof...	Public
HP ProLiant WMI Management	HP Management Client Sof...	Public
HP Systems Insight Manager	HP Management Server So...	Public

- HP ProLiant Servers Group (ID=HewlettPackard.Servers.ProLiant.HPProLiantServersGroup)
- HP ProLiant ML Servers Group (ID=HewlettPackard.Servers.ProLiant.HPProLiantMLServersGroup)
- HP ProLiant DL Servers Group (ID=HewlettPackard.Servers.ProLiant.HPProLiantDLServersGroup)
- HP ProLiant BL Servers Group (ID=HewlettPackard.Servers.ProLiant.HPProLiantBLServersGroup)
- HP ProLiant Server (ID=HewlettPackard.Servers.ProLiant.HPProLiantServer)
  - Integrated Lights-Out IP Address—IP Address of Integrated Lights-Out Management Processor
- HP ProLiant ML Server (ID=HewlettPackard.Servers.ProLiant.HPProLiantMLServer)
- HP ProLiant DL Server (ID=HewlettPackard.Servers.ProLiant.HPProLiantDLServer)
- HP ProLiant BL Server (ID=HewlettPackard.Servers.ProLiant.HPProLiantBLServer)
- HP ProLiant Other Model Server (ID=HewlettPackard.Servers.ProLiant.HPProLiantXXServer)

- HP ProLiant Health Collection (ID=HewlettPackard.Servers.ProLiant.HPProLiantHealthCollection)
- Processors (ID=HewlettPackard.Servers.ProLiant.HPProLiantProcessors)
- Memory (ID=HewlettPackard.Servers.ProLiant.HPProLiantMemory)
- Cooling (ID=HewlettPackard.Servers.ProLiant.HPProLiantCooling)
- Realtime Monitors (ID=HewlettPackard.Servers.ProLiant.HPProLiantRealtimeMonitors)
- Temp Sensors (ID=HewlettPackard.Servers.ProLiant.HPProLiantTemperatureSensors)
- Power Supplies (ID=HewlettPackard.Servers.ProLiant.HPProLiantPowerSupplies)
- Storage (ID=HewlettPackard.Servers.ProLiant.HPProLiantServerStorage)
- Networks (ID=HewlettPackard.Servers.ProLiant.HPProLiantServerNetworks)
- Management Processors (ID=HewlettPackard.Servers.ProLiant.HPProLiantManagementProcessors)
- Logs (ID=HewlettPackard.Servers.ProLiant.HPProLiantLogs)
- UPS (ID=HewlettPackard.Servers.ProLiant.HPProLiantUPS)
- Others (ID=HewlettPackard.Servers.ProLiant.HPProLiantServerOthers)
- HP ProLiant SNMP Management (ID=HewlettPackard.Servers.ProLiant.HPProLiantSNMPManagement
- HP ProLiant WMI Management (ID=HewlettPackard.Servers.ProLiant.HPProLiantWMIManagement)
- HP System Insight Manager (ID=HewlettPackard.Servers.ProLiant.HPProLiantSystemsInsightManager)

The HP ProLiant Servers Base also defines the following Relationship classes.

Name	InheritedFrom	Source	Target	Accessibility
HP Servers Group Contains HP ProLiant Ser...	Membership	HP Servers Group	HP ProLiant Servers Group	Public
HP ProLiant Servers Group Contains HP Pro...	Membership	HP ProLiant Servers Group	HP ProLiant ML Servers Group	Public
HP ProLiant Servers Group Contains HP Pro...	Membership	HP ProLiant Servers Group	HP ProLiant DL Servers Group	Public
HP ProLiant Servers Group Contains HP Pro...	Membership	HP ProLiant Servers Group	HP ProLiant BL Servers Group	Public
HP ProLiant Servers Group Contains HP Pro...	Membership	HP ProLiant Servers Group	HP ProLiant Other Model Server	Public
HP ProLiant ML Servers Group Contains HP ...	Membership	HP ProLiant ML Servers Group	HP ProLiant ML Server	Public
HP ProLiant DL Servers Group Contains HP ...	Membership	HP ProLiant DL Servers Group	HP ProLiant DL Server	Public
HP ProLiant BL Servers Group Contains HP P...	Membership	HP ProLiant BL Servers Group	HP ProLiant BL Server	Public
Windows Computer Hosting HP ProLiant Ser...	Hosting	Windows Computer	HP ProLiant Server	Public
HP ProLiant Server Hosting HP ProLiant Proc...	Hosting	HP ProLiant Server	Processors	Public
HP ProLiant Server Hosting HP ProLiant Me...	Hosting	HP ProLiant Server	Memory	Public
HP ProLiant Server Hosting HP ProLiant Cool...	Hosting	HP ProLiant Server	Cooling	Public
HP ProLiant Server Hosting HP ProLiant Real...	Hosting	HP ProLiant Server	Realtime Monitors	Public
HP ProLiant Server Hosting HP ProLiant Tem...	Hosting	HP ProLiant Server	Temp Sensors	Public
HP ProLiant Server Hosting HP ProLiant Pow...	Hosting	HP ProLiant Server	Power Supplies	Public
HP ProLiant Server Hosting HP ProLiant Ser...	Hosting	HP ProLiant Server	Storage	Public
HP ProLiant Server Hosting HP ProLiant Ser...	Hosting	HP ProLiant Server	Networks	Public
HP ProLiant Server Hosting HP ProLiant Man...	Hosting	HP ProLiant Server	Management Processors	Public
HP ProLiant Server Hosting HP ProLiant Log...	Hosting	HP ProLiant Server	Logs	Public
HP ProLiant Server Hosting HP ProLiant UPS...	Hosting	HP ProLiant Server	UPS	Public
HP ProLiant Server Hosting HP ProLiant Ser...	Hosting	HP ProLiant Server	Others	Public
HP ProLiant Server Hosting HP ProLiant SNM...	Hosting	HP ProLiant Server	HP ProLiant SNMP Management	Public
HP ProLiant Server Hosting HP ProLiant WM...	Hosting	HP ProLiant Server	HP ProLiant WMI Management	Public
HP ProLiant Server Hosting HP ProLiant Syst...	Hosting	HP ProLiant Server	HP Systems Insight Manager	Public

- HP Servers Group Contains HP ProLiant Servers Group Relationship (ID=HewlettPackard.Servers.ProLiant.HPServersGroupContainsHPProLiantServersGroup)
- HP ProLiant Servers Group Contains HP ProLiant ML Servers Group Relationship (ID=HewlettPackard.Servers.ProLiant.HPProLiantServersGroupContainsHPProLiantMLServersGroup)
- HP ProLiant Servers Group Contains HP ProLiant DL Servers Group Relationship (ID=HewlettPackard.Servers.ProLiant.HPProLiantServersGroupContainsHPProLiantDLServersGroup)
- HP ProLiant Servers Group Contains HP ProLiant BL Servers Group Relationship (ID=HewlettPackard.Servers.ProLiant.HPProLiantServersGroupContainsHPProLiantBLServersGroup)
- HP ProLiant Servers Group Contains HP ProLiant Other Model Server Group Relationship (ID=HewlettPackard.Servers.ProLiant.HPProLiantServersGroupContainsHPProLiantXXServer)
- HP ProLiant ML Servers Group Contains HP ProLiant ML Server Relationship (ID=HewlettPackard.Servers.ProLiant.HPProLiantMLServersGroupContainsHPProLiantMLServer)
- HP ProLiant ML Servers Group Contains HP ProLiant DL Server Relationship (ID=HewlettPackard.Servers.ProLiant.HPProLiantDLServersGroupContainsHPProLiantDLServer)
- HP ProLiant ML Servers Group Contains HP ProLiant BL Server Relationship (ID=HewlettPackard.Servers.ProLiant.HPProLiantBLServersGroupContainsHPProLiantBLServer)
- Windows® Computer Hosting HP ProLiant Server Relationship (ID=HewlettPackard.Servers.ProLiant.WindowsComputerHostsHPProLiantServer)
- HP ProLiant Server Hosting HP ProLiant Processors Collection Relationship (ID=HewlettPackard.Servers.ProLiant.HPProLiantServerHostsHPProLiantProcessors)
- HP ProLiant Server Hosting HP ProLiant Memory Collection Relationship (ID=HewlettPackard.Servers.ProLiant.HPProLiantServerhostsHPProLiantMemory)
- HP ProLiant Server Hosting HP ProLiant Cooling Collection Relationship (ID=HewlettPackard.Servers.ProLiant.HPProLiantServerHostsHPProLiantCooling)
- HP ProLiant Server Hosting HP ProLiant Realtime Monitors Collection Relationship (ID=HewlettPackard.Servers.ProLiant.HPProLiantServerHostsHPProLiantRealtimeMonitors)
- HP ProLiant Server Hosting HP ProLiant Temperature Sensors Collection Relationship (ID=HewlettPackard.Servers.ProLiant.HPProLiantServerHostsHPProLiantTemperatureSensors)
- HP ProLiant Server Hosting HP ProLiant Power Supplies Collection Relationship (ID=HewlettPackard.Servers.ProLiant.HPProLiantServerHostsHPProLiantPowerSupplies)
- HP ProLiant Server Hosting HP ProLiant Server Storage Collection Relationship (ID=HewlettPackard.Servers.ProLiant.HPProLiantServerHostsHPProLiantServerStorage)
- HP ProLiant Server Hosting HP ProLiant Server Networks Collection Relationship (ID=HewlettPackard.Servers.ProLiant.HPProLiantServerHostsHPProLiantServerNetworks)
- HP ProLiant Server Hosting HP ProLiant Management Processors Collection Relationship (ID=HewlettPackard.Servers.ProLiant.HPProLiantServerHostsHPProLiantManagementProcessors)
- HP ProLiant Server Hosting HP ProLiant Logs Collection Relationship (ID=HewlettPackard.Servers.ProLiant.HPProLiantServerHostsHPProLiantHPProLiantLogs)
- HP ProLiant Server Hosting HP ProLiant UPS Collection Relationship (ID=HewlettPackard.Servers.ProLiant.HPProLiantServerHostsHPProLiantUPS)
- HP ProLiant Server Hosting HP ProLiant Server Others Collection Relationship (ID=HewlettPackard.Servers.ProLiant.HPProLiantServerHostsHPProLiantOthers)

- HP ProLiant Server Hosting HP ProLiant SNMP Management Relationship (ID=HewlettPackard.Servers.ProLiant.HPProLiantServerHostsHPProLiantSNMPManagement)
- HP ProLiant Server Hosting HP ProLiant WMI Management Relationship (ID=HewlettPackard.Servers.ProLiant.HPProLiantServerHostsHPProLiantWMIManagement)
- HP ProLiant Server Hosting HP ProLiant Systems Insight Manager Relationship (ID=HewlettPackard.Servers.ProLiant.HPProLiantServerHostsHPProLiantSystemsInsightManager)

HP ProLiant Servers SNMP classes

The HP ProLiant Servers SNMP Management Pack defines the following classes.

Name	InheritedFrom	Accessibility
Processors (ProLiant SNMP)	Processors	Public
Memory (ProLiant SNMP)	Memory	Public
Cooling (ProLiant SNMP)	Cooling	Public
Realtime Monitors (ProLiant SNMP)	Realtime Monitors	Public
Temp Sensors (ProLiant SNMP)	Temp Sensors	Public
Power Supplies (ProLiant SNMP)	Power Supplies	Public
Storage (ProLiant SNMP)	Storage	Public
Networks (ProLiant SNMP)	Networks	Public
Management Processors (ProLiant SNMP)	Management Processors	Public
Logs (ProLiant SNMP)	Logs	Public
UPS (ProLiant SNMP)	UPS	Public
Others (ProLiant SNMP)	Others	Public

- Processors (ProLiant SNMP) (ID=HewlettPackard.Servers.ProLiant.SNMP.HPProLiantSNMPProcessors)
- Memory (ProLiant SNMP) (ID=HewlettPackard.Servers.ProLiant.SNMP.HPProLiantSNMPMemory)
- Cooling (ProLiant SNMP) (ID=HewlettPackard.Servers.ProLiant.SNMP.HPProLiantSNMPCooling)
- Realtime Monitors (ProLiant SNMP) (ID=HewlettPackard.Servers.ProLiant.SNMP.HPProLiantSNMPRealtimeMonitors)
- Temp Sensors (ProLiant SNMP) (ID=HewlettPackard.Servers.ProLiant.SNMP.HPProLiantSNMPTemperatureSensors)
- Power Supplies (ProLiant SNMP) (ID=HewlettPackard.Servers.ProLiant.SNMP.HPProLiantSNMPPowerSupplies)
- Storage (ProLiant SNMP) (ID=HewlettPackard.Servers.ProLiant.SNMP.HPProLiantSNMPServerStorage)
- Networks (ProLiant SNMP) (ID=HewlettPackard.Servers.ProLiant.SNMP.HPProLiantSNMPServerNetworks)
- Management Processors (ProLiant SNMP) (ID=HewlettPackard.Servers.ProLiant.SNMP.HPProLiantSNMPManagementProcessors)
- Logs (ProLiant SNMP) (ID=HewlettPackard.Servers.ProLiant.SNMP.HPProLiantSNMPLogs)
- UPS (ProLiant SNMP) (ID=HewlettPackard.Servers.ProLiant.SNMP.HPProLiantSNMPUPS)

- Others (ProLiant SNMP) (ID=HewlettPackard.Servers.ProLiant.SNMP.HPProLiantSNMPServerOthers)

Views

The System Center Essentials Console provides a collection of folders and windows for viewing information stored in the System Center Essentials database. The HP Server Management Packs for System Center Essentials include predefined HP server views that present information about each HP server and associated alerts.

The following views are added on the System Center Essentials Console after successful installation of the HP ProLiant Management Pack for System Center Essentials:

- HP Servers—This is the root folder that includes all HP server-related views.
- HP Servers/Active Alerts—This view displays all active alerts generated by Collection classes.
- HP Servers/Computers—This view displays all HP computers.
- HP Servers/Group State—This view displays the state view by Groups.
- HP Servers/Health Collection State—This view displays the state view by Collection classes.
- HP Servers/HP Management Servers—This view displays the state view of HP management server software such as the HP Systems Insight Manager.
- HP Servers/Server Diagram—This view displays the diagram view starting with the HP Servers Group.
- HP Servers/Server State—This view displays the state view for HP servers.
- HP Servers/Task Status—This view displays the task results. Only remote tasks will appear here.

Active Alerts view

The Active Alerts view displays all active alerts associated with HP health collection classes. To display details for an individual alert, select the alert from the Active Alerts pane. The Alert Details pane displays HP Knowledge base text with the originated NT® Event message in the Alert Description.

The predefined event processing rules included with the HP Server Management Packs for System Center Essentials are designed to automatically identify and display HP server events received in the Windows® Event Log as System Center Essentials alerts.

The following information appears in the alert details:

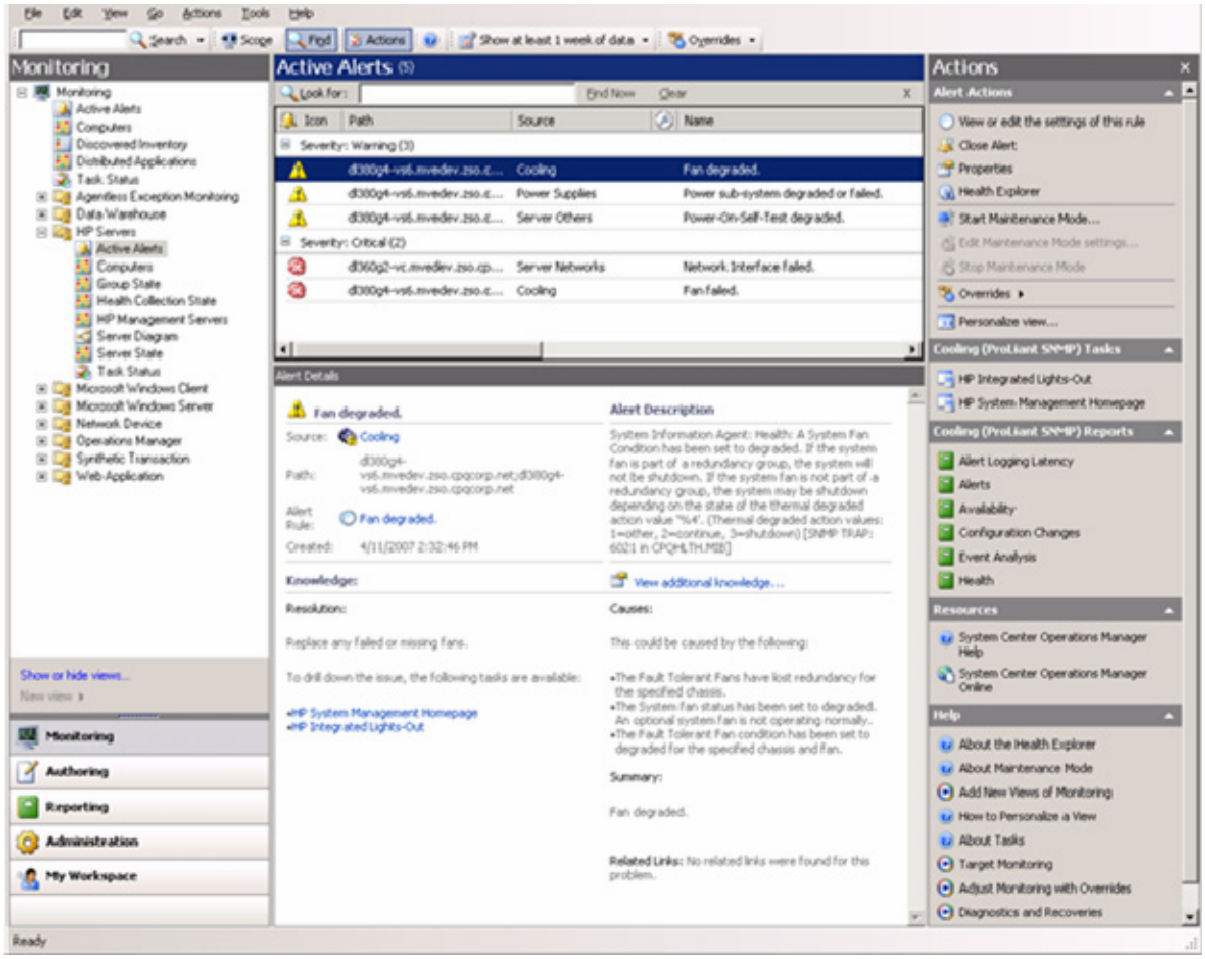
- Alert Name
- Source of Alert
- Path
- Alert Rule Name
- Created Time
- Alert Description
- Knowledge
  - Resolution with embedded Console tasks
  - Causes

- Summary
- Related Links

The Resolution section contains the following tasks to assist in tool access:

For HP ProLiant servers:

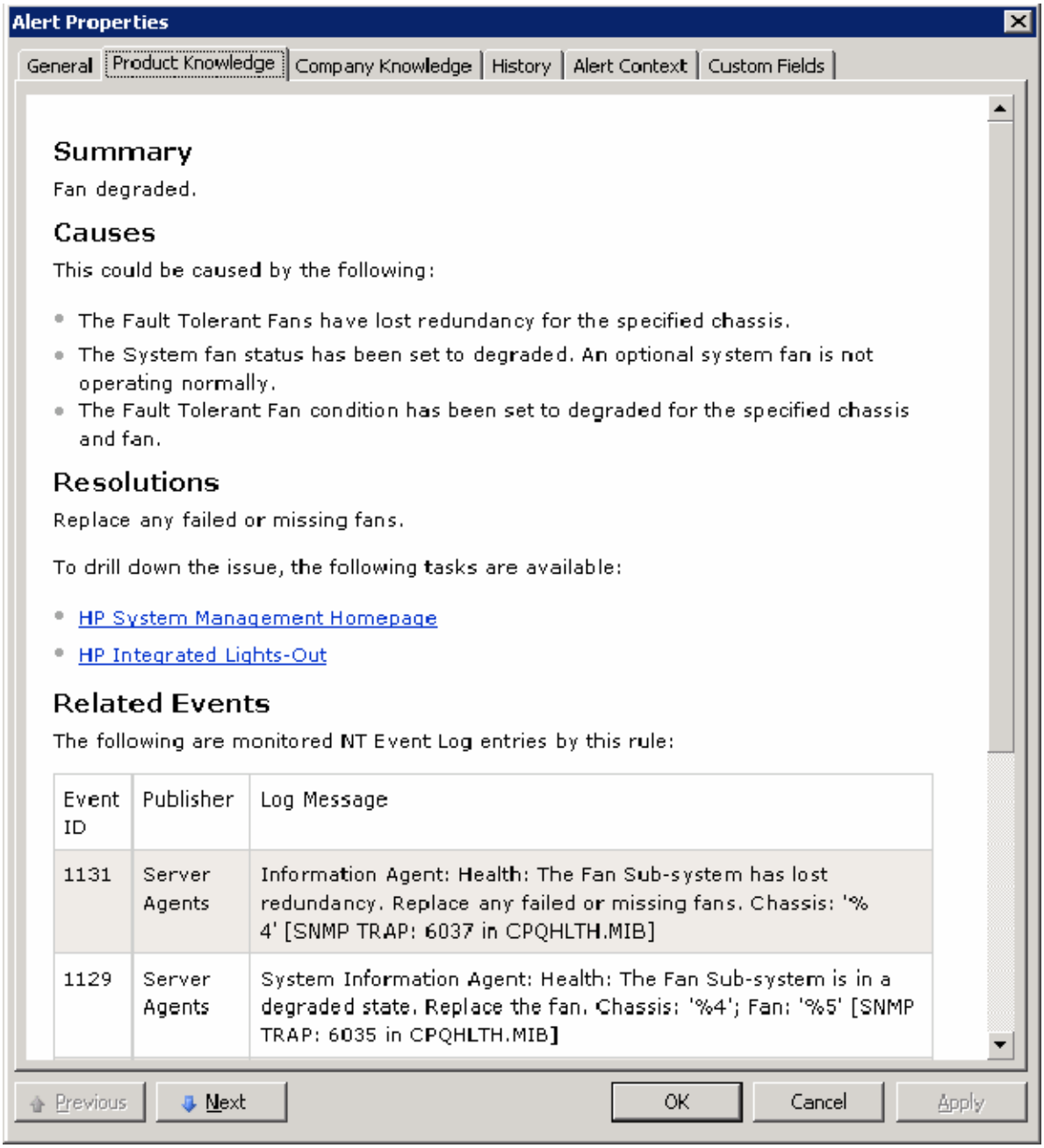
- HP System Management Homepage
- HP Integrated Lights-Out



Analyzing HP alerts

The HP alerts contain server hardware and services information that enable you to identify the cause of an issue and implement a timely and effective response.

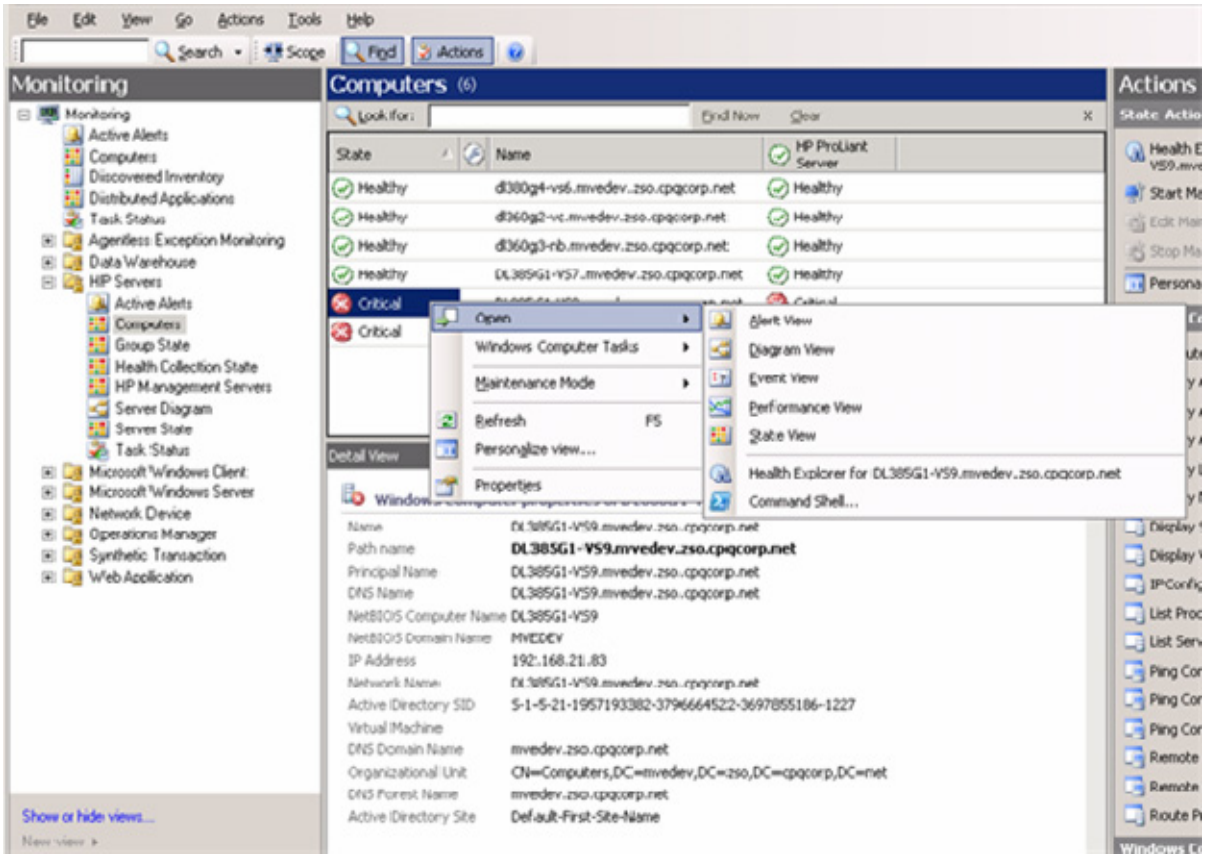
The Product Knowledge tab displays suggested resolutions to the alert. To view full knowledge information, click **View additional knowledge** from the Alert Details pane. If necessary, launch the Console Tasks listed in the Product Knowledge.



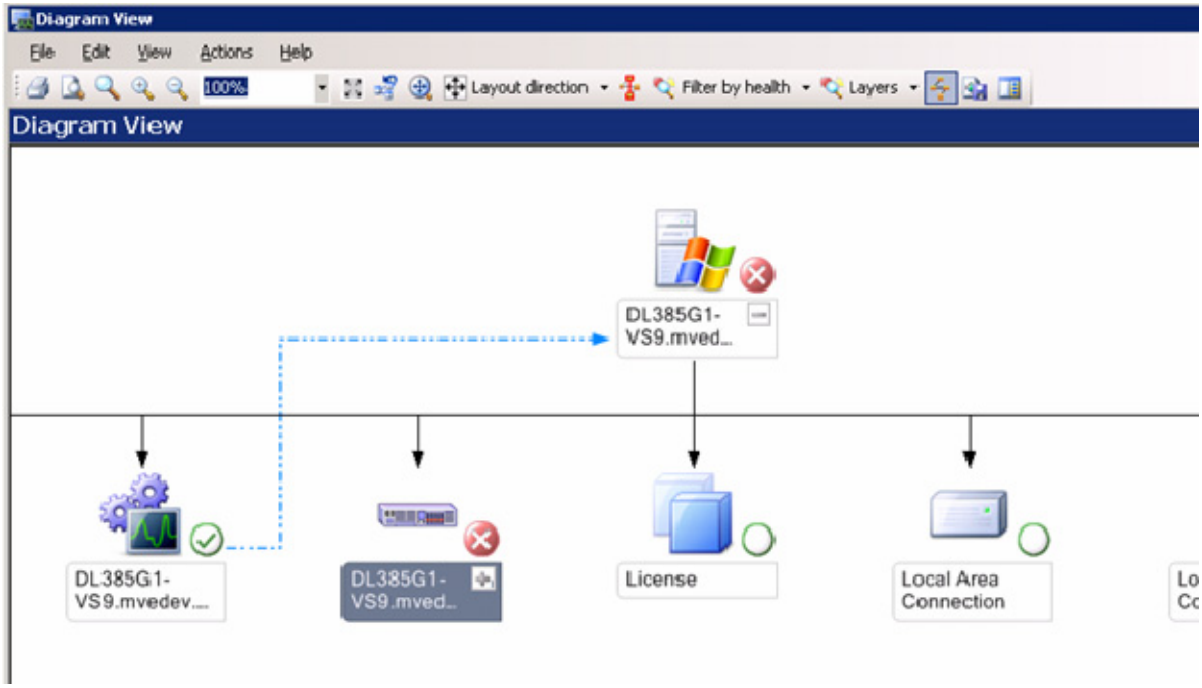
Use the information in the alert to implement a rapid response and maintain system availability. For additional system data, view the HP System Management Homepage on the individual server or use HP SIM to manage multiple systems. Use the tasks provided with the Product Knowledge.

Computers view

The Computers view displays all HP computers managed by HP Insight Management Agents and the hosted Microsoft® applications. This view displays the health state of each computer and you can use Microsoft® tasks as defined in the Microsoft® Computer class.



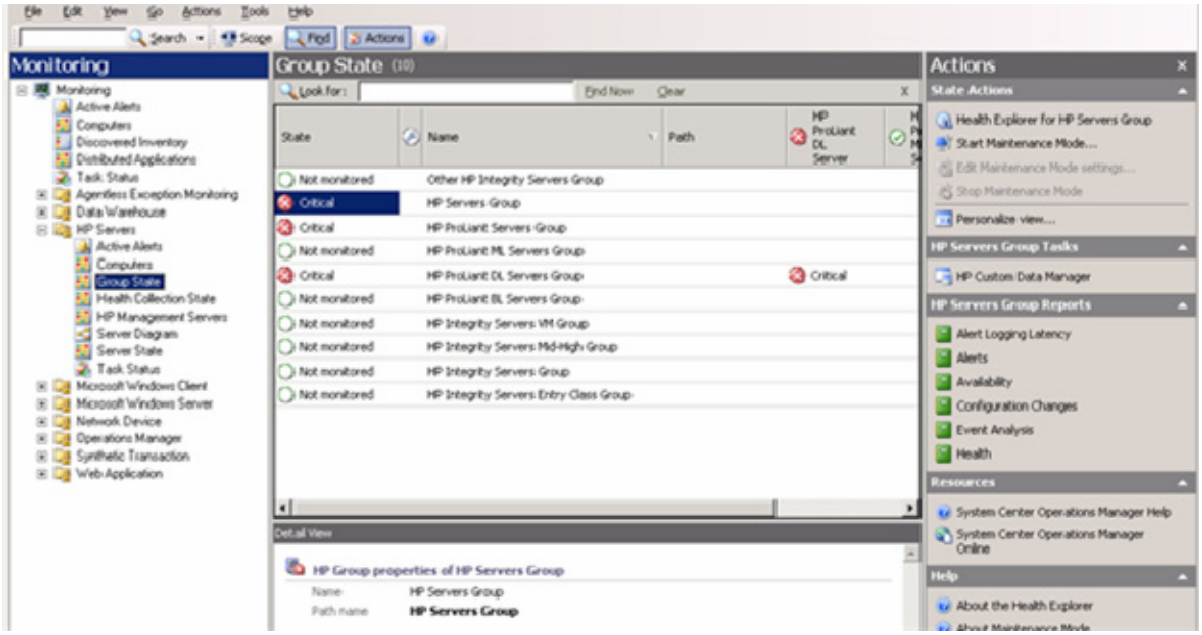
To view associated HP information, right-click the server entry, and then select **Open>Diagram View**. This view displays the relationship between HP Server and Windows® Computer classes along with other managed classes under the Windows® Computer class instance.



The state of the HP Server class instance is propagated to the Windows® Computer class instance.

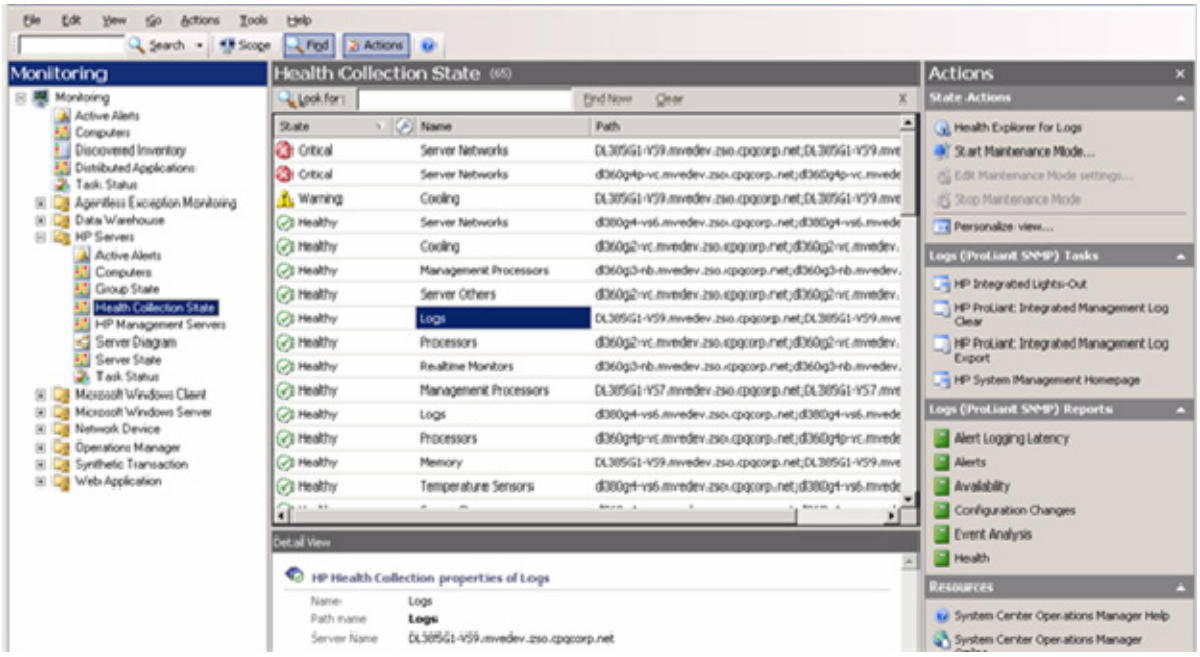
Group State view

The Group State view displays each Server Model Group State propagating from underlying Server Models. To view members of HP Server Group, right-click the group entry, and then select **Open>Diagram View**.



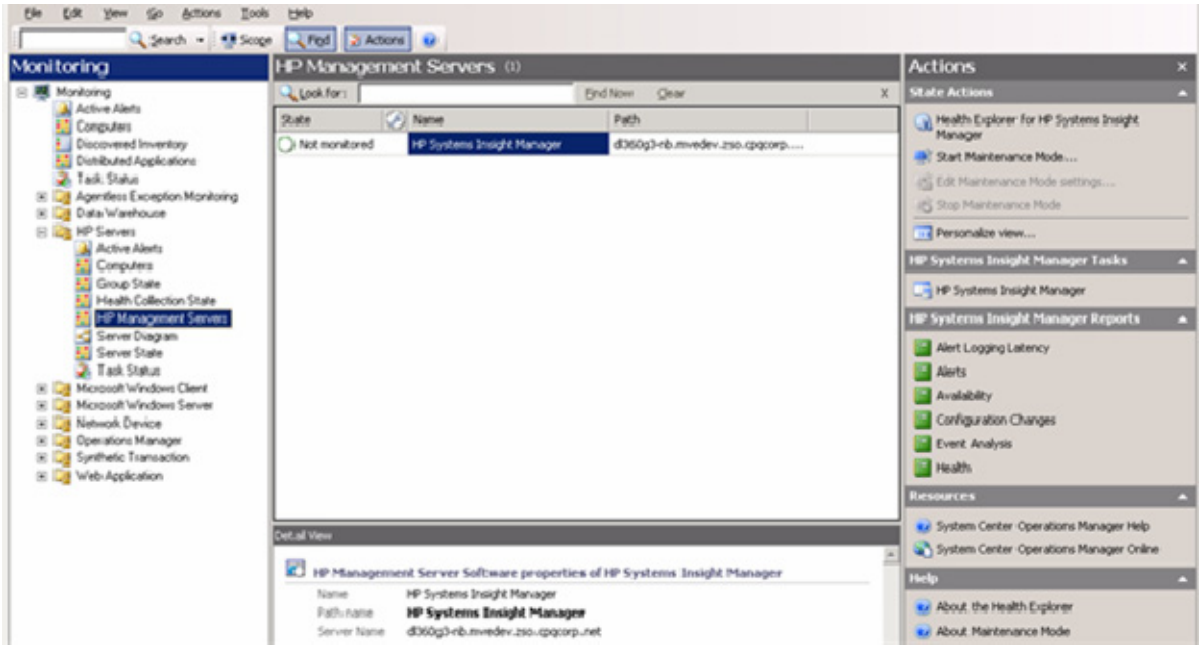
Health Collection State view

The Health Collection State view displays the state of all collections of HP servers. You can view all failed collections simultaneously by sorting the State column.



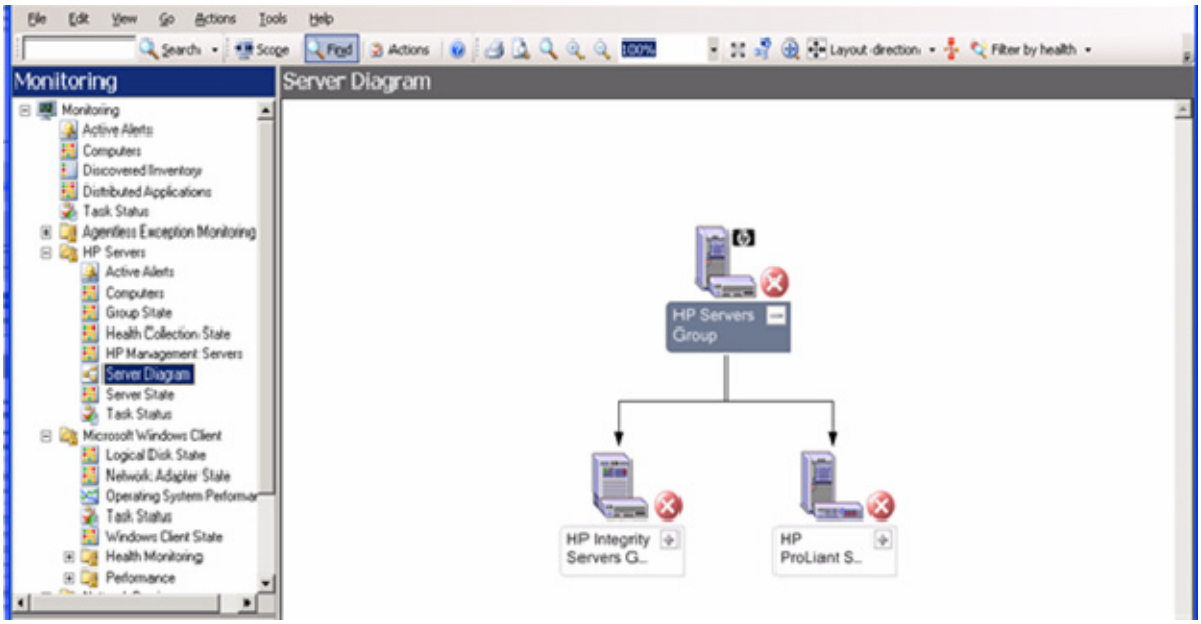
HP Management Servers view

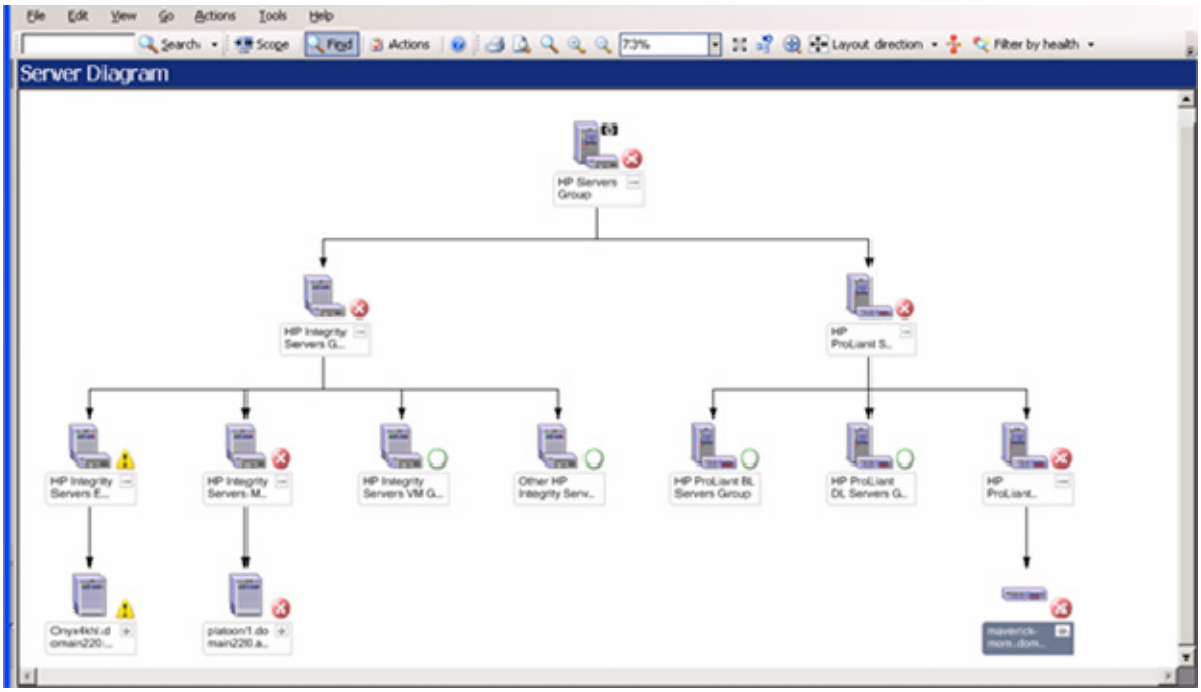
The HP Management Servers view lists all computers that host the HP SIM application for cross-platform hardware resource lifecycle management. The HP Server Management Packs for System Center Essentials include a task that enables HP SIM to be launched within System Center Essentials.

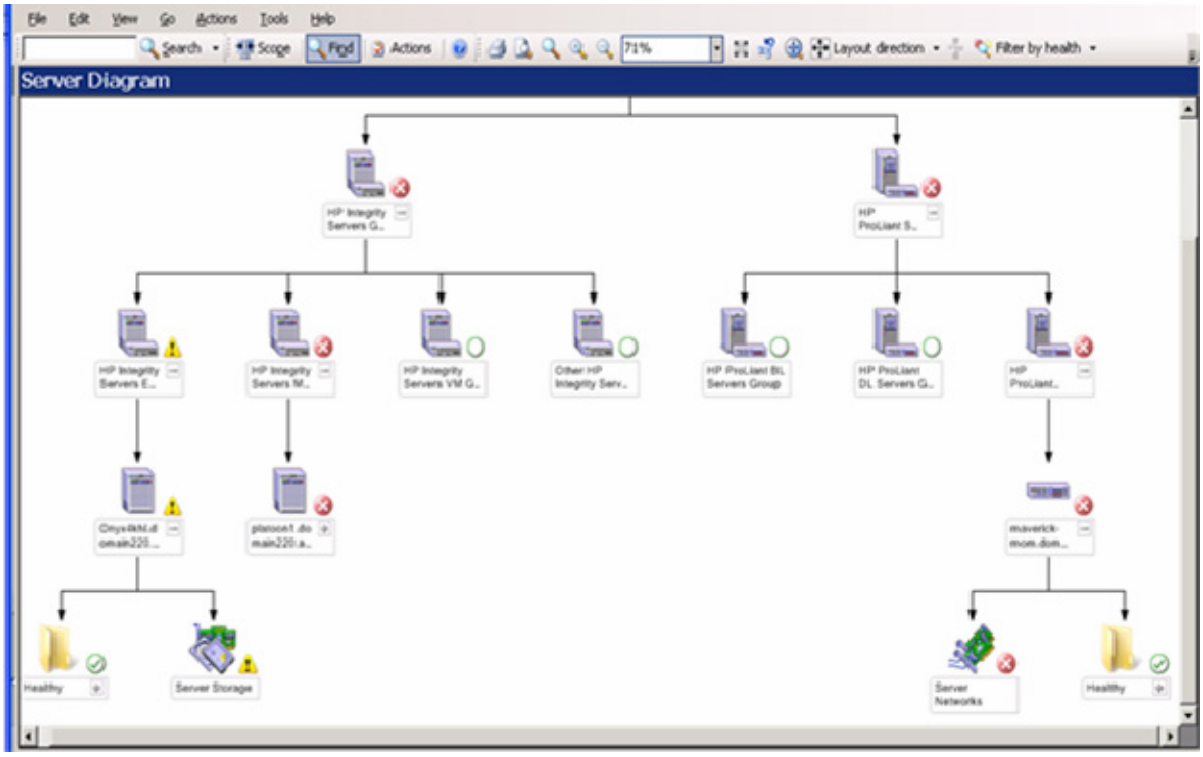


Server Diagram view

The Server Diagram view provides a graphical display of groups and associated HP servers and subsystems (collections). HP ProLiant servers appear in the Server Diagram display. Expand each icon node to drill down to the next level of information.

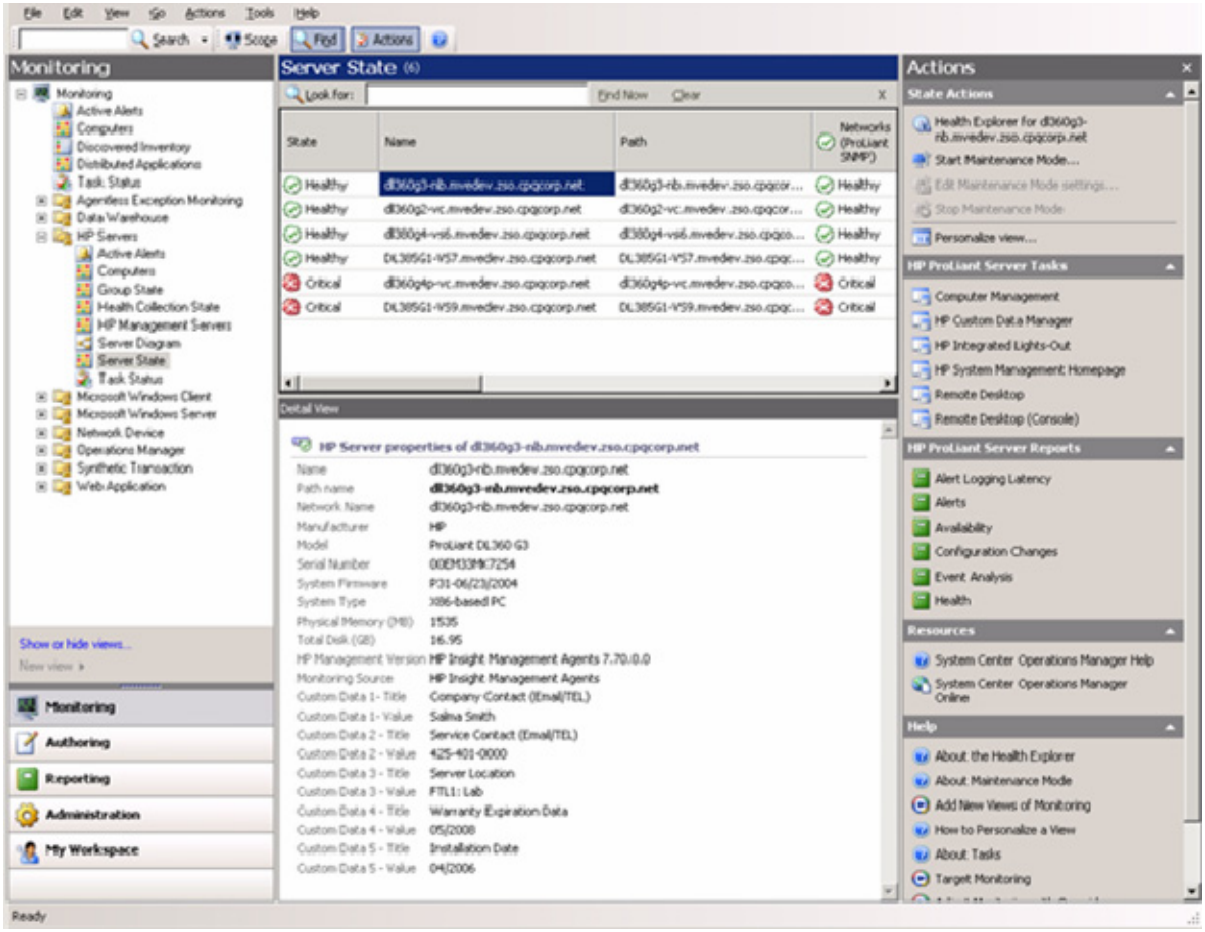





File
Edit
View
Go
Actions
Tools
Help
Search
Scope
Find
Actions
71%
Layout direction
Filter by health
Server Diagram
HP Integrity Servers G..
HP ProLiant S..
HP Integrity Servers E..
HP Integrity Servers IM..
HP Integrity Servers VM G..
Other HP Integrity Serv..
HP ProLiant BL Servers Group
HP ProLiant DL Servers G..
HP ProLiant..
Onyx4kf.domain220...
platoon1.domain220.a..
maverick-mom.dom...
Healthy
Server Storage
Server Networks
Healthy

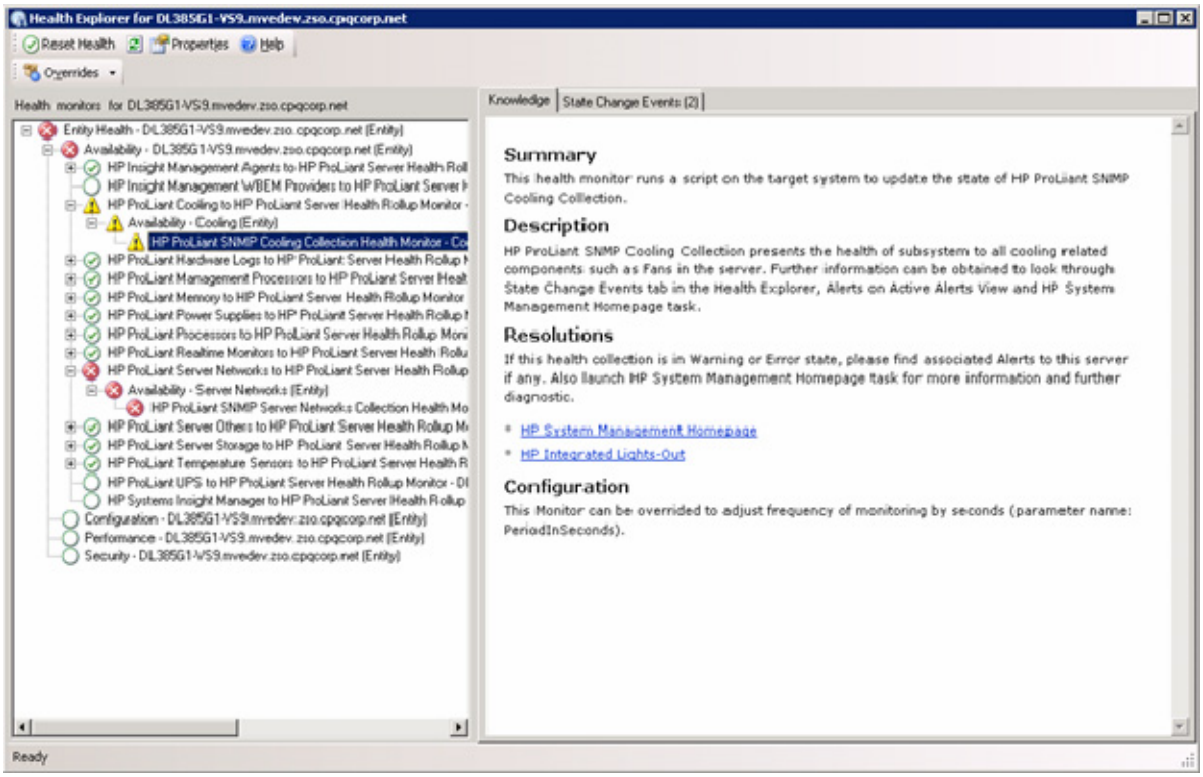
Server State view

The Server State view displays the overall status of HP hardware associated with the listed computers. To view detailed state information for HP health collections for a computer, select the computer, and then launch Health Explorer from the Context menu or from the link in the Actions panel.

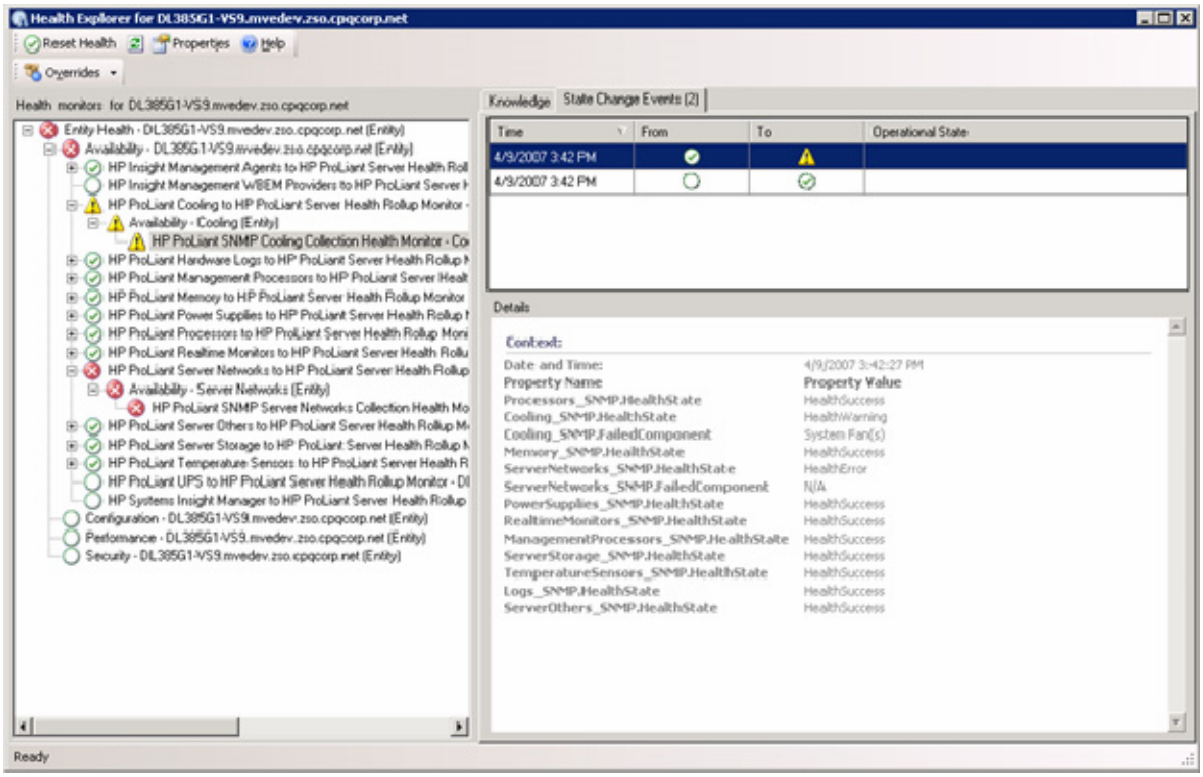


Health Explorer

The Health Explorer can be launched from the State view and the Diagram view. It displays the result of state propagation in folder style. The Health Explorer automatically expands those folders in which red or yellow states are observed. Select the last node in the folder to get knowledge information, and then select the **State Change Event** tab to view state change history.



The following figure is an example of Health State Change history and state property bag data. The property bag data contains a list of properties with Health State Update and Failed Component information.



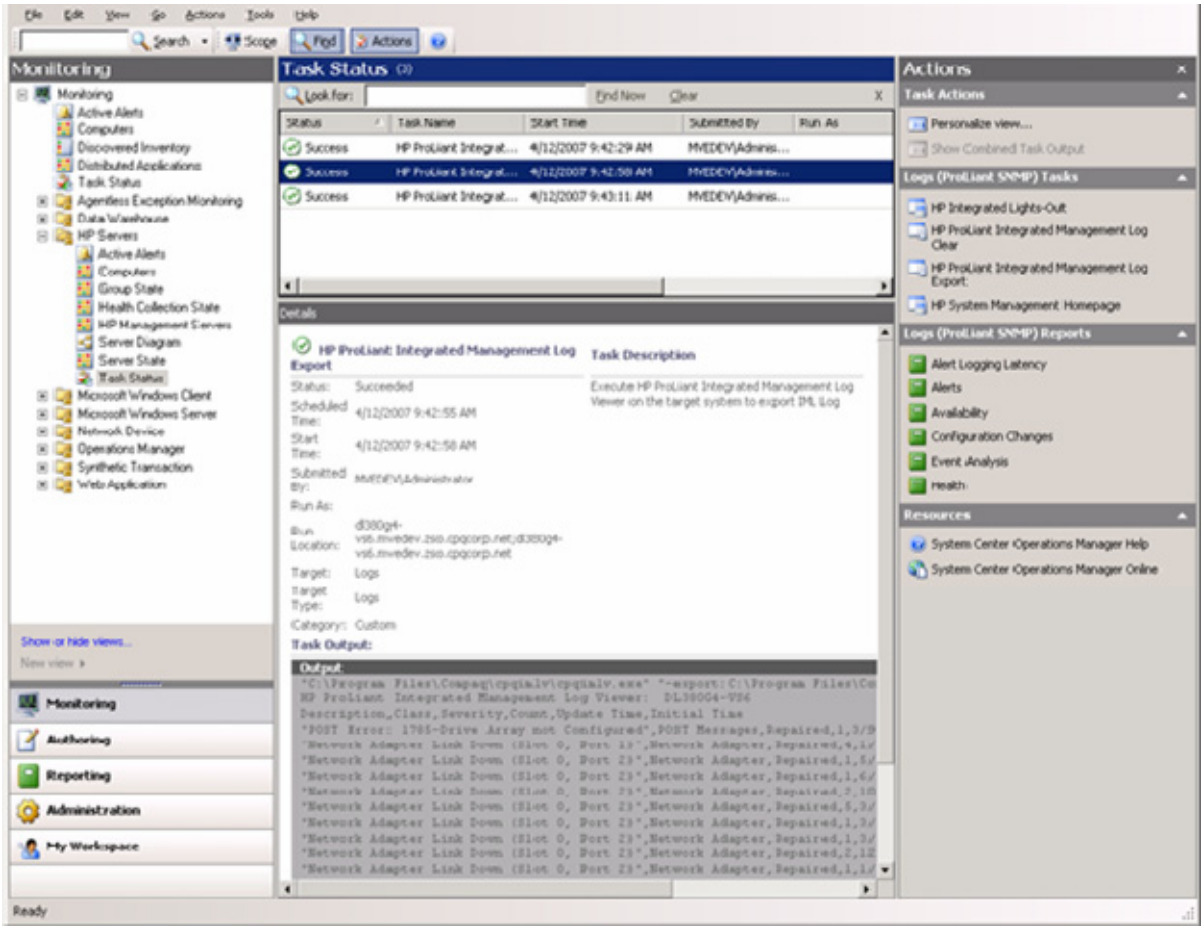
The Failed Component information is available by collection monitors:

- Processor Health Collection: Processor Name
- Memory Health Collection: Memory Module or Memory Board Name
- Cooling Health Collection: Fan Type
- Power Supplies Health Collection: Power Supply Name
- Realtime Monitoring Collection: Auto Server Recovery
- Server Others Health Collection: Component Name such as Base System, Threshold Management, Operating System, Non HP Devices, Windows, Appliance, Enclosure, and Other System Health (UID and POST)

Other Health Collections that were not described previously, display N/A to indicate there is no further information available for the failed component. For detailed diagnostic information, launch the HP System Management Homepage.

Task Status view

The Task Status view displays task results. HP ProLiant Server Management Packs have HP ProLiant Integrated Management Log tasks that display the task results on this view.



Discovering HP servers

The HP Server Management Packs for System Center Essentials include many discovery rules in different management packs.

HP core management pack discovery rule

The HP Servers core library management pack (ID=HewlettPackard.Servers.Library) in HP ProLiant Management Pack for System Center Essentials contains the following discovery rule:

- HP Computer Discovery (ID=HewlettPackard.Servers.HPComputerGroupDiscovery)—This rule discovers HP servers and classifies them under the HP servers group.

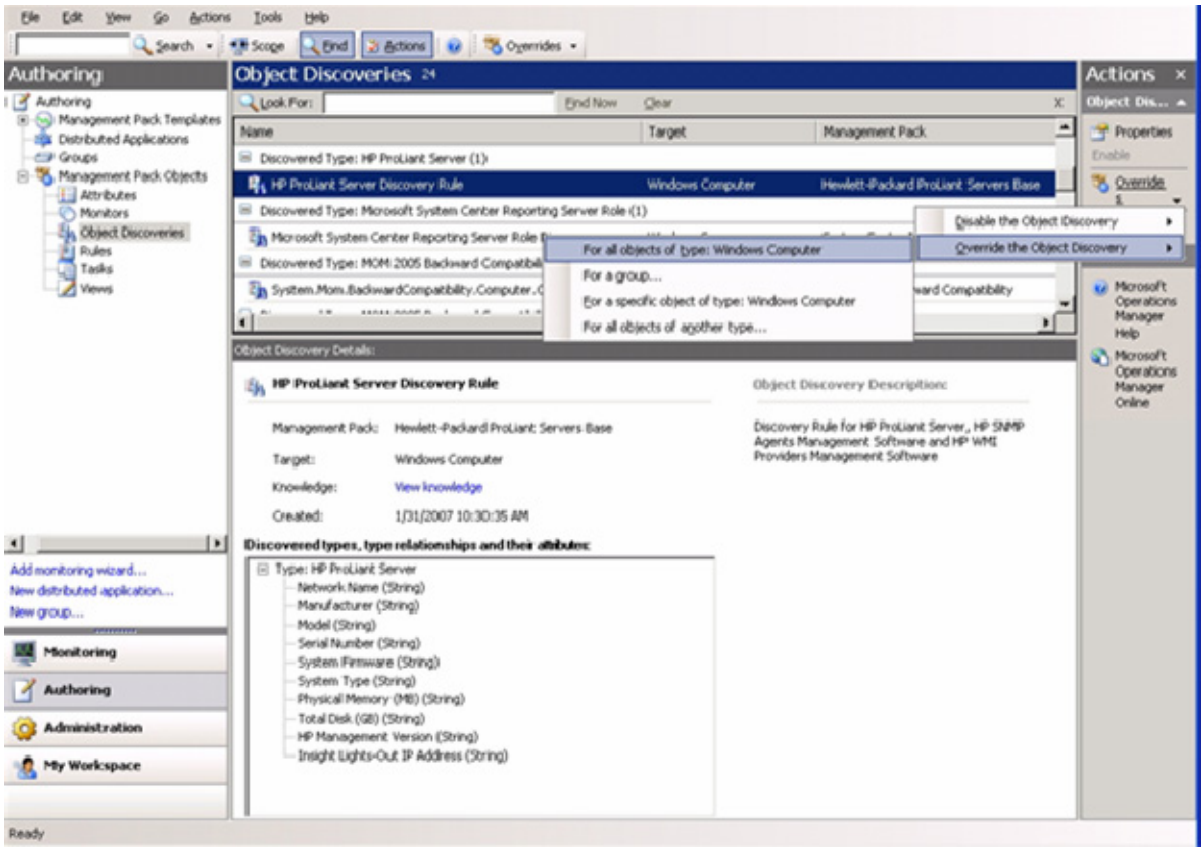
HP ProLiant base management pack discovery rules

The HP ProLiant Servers base management pack (ID=HewlettPackard.Servers.ProLiant) in the HP ProLiant Management Pack for System Center Essentials contains the following discovery rules:

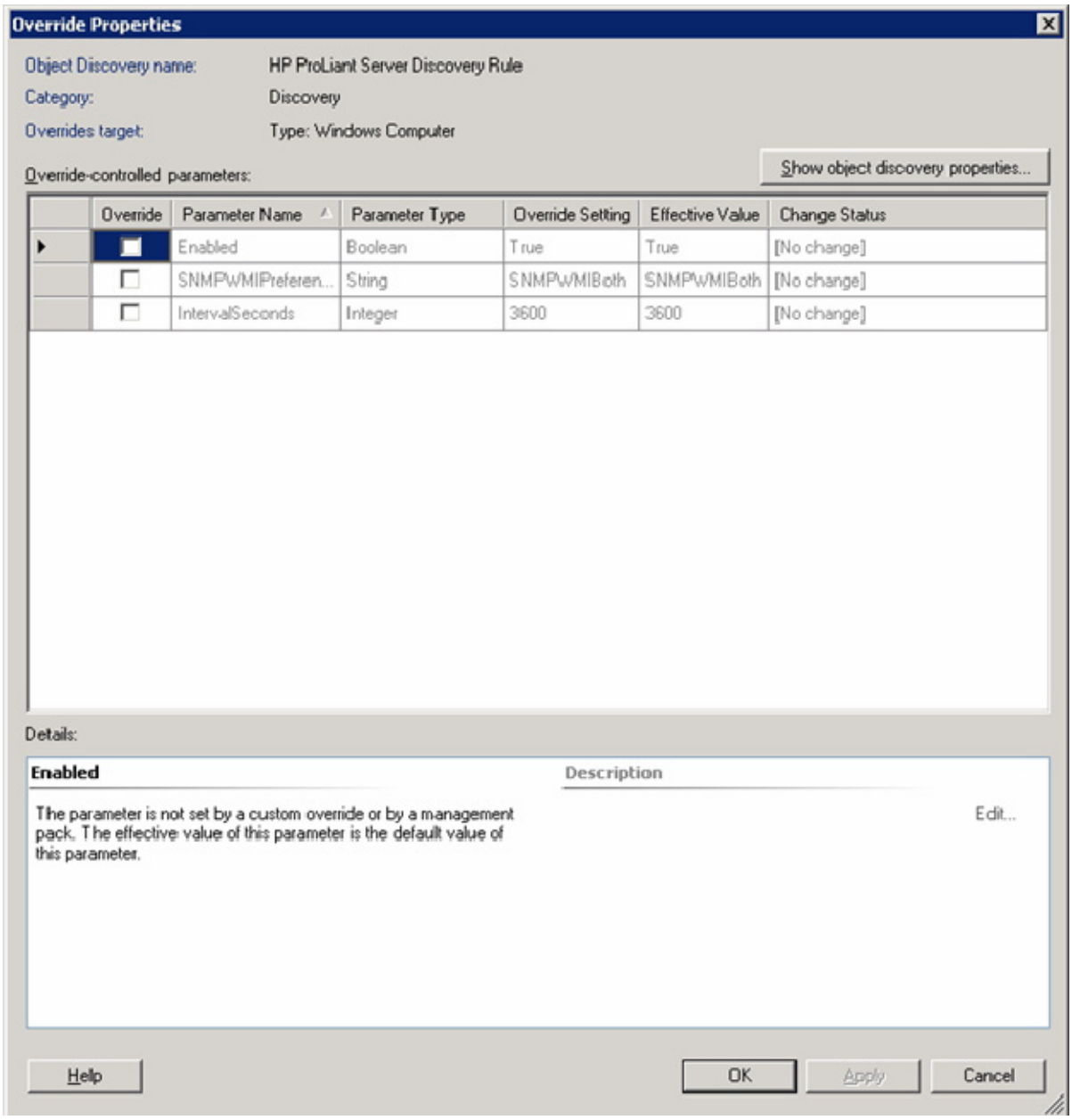
- HP ProLiant Server Discovery Rule (ID=HewlettPackard.Servers.ProLiant.HPProLiantServerDiscoveryRule)—Discovers an HP ProLiant server with these properties:
  - Network Name
  - Manufacturer
  - Model
  - Serial Number
  - System Firmware
  - System Type
  - Physical Memory
  - Total Disk
  - HP Management Version
  - Monitoring Source
  - Insight Lights-Out IP address (The IP address is not visible in the Server Detail View. It appears in the Diagram View and after the task is launched.)
- HP ProLiant Systems Insight Manager Discovery Rule (ID=HewlettPackard.Servers.ProLiant.HPProLiantSystemsInsightManagerDiscoveryRule)—Discovers HP Systems Insight Manager on an HP ProLiant server
- HP Servers Group to ProLiant Servers Group Membership Rule (ID=HewlettPackard.Servers.ProLiant.HPServersGroupProLiantServersGroupMembershipRule)—Instantiates HP ProLiant Servers group under HP Servers group
- HP ProLiant Server Group to ML Servers Group Membership Rule (ID=HewlettPackard.Servers.ProLiant.HPProLiantServersGroupMLServersGroupMembershipRule)—Instantiates HP ProLiant ML Servers group under HP ProLiant Servers group
- HP ProLiant Servers Group to DL Servers Group Membership Rule (ID=HewlettPackard.Servers.ProLiant.HPProLiantServersGroupDLServersGroupMembershipRule)—Instantiates HP ProLiant DL Servers group under HP ProLiant Servers group
- HP ProLiant Servers Group to BL Servers Group Membership Rule (ID=HewlettPackard.Servers.ProLiant.HPProLiantServersGroupBLServersGroupMembershipRule)—Instantiates HP ProLiant BL Servers group under HP ProLiant Servers group
- HP ProLiant Servers Group to HP ProLiant Other Model Servers Group Membership Rule (ID=HewlettPackard.Servers.ProLiant.HPProLiantServersGroupHPProLiantXXMembershipRule)—Discovers and classifies an HP ProLiant server (except BL, ML, and DL models) under HP ProLiant Servers group
- HP ProLiant ML Servers Group to HP ProLiant ML Membership Rule (ID=HewlettPackard.Servers.ProLiant.HPProLiantMLServersGroupHPProLiantMLMembershipRule)—Discovers and classifies an HP ProLiant ML server under HP ProLiant ML Servers group
- HP ProLiant DL Servers Group to HP ProLiant DL Membership Rule (ID=HewlettPackard.Servers.ProLiant.HPProLiantDLServersGroupHPProLiantDLMembershipRule)—Discovers and classifies an HP ProLiant DL server under HP ProLiant DL Servers group
- HP ProLiant BL Servers Group to HP ProLiant BL Membership Rule (ID=HewlettPackard.Servers.ProLiant.HPProLiantBLServersGroupHPProLiantBLMembershipRule)—Discovers and classifies an HP ProLiant BL server under HP ProLiant BL Servers group

The HP ProLiant Server Discovery Rule and the HP ProLiant Systems Insight Manager Discovery Rule run every 60 minutes by default. To change the discovery frequency, perform the following procedure:

1. Open the **Authoring** panel.
2. Select **Management Pack Objects>Object Discoveries**. A list of Object Discoveries appears.
3. Select **HP Proliant Server Discovery Rule**.
4. In the Actions panel, select **Overrides>Override the Object Discovery>For all objects of type: Windows Computer**. The override properties window appears.



5. Modify the IntervalSeconds parameter to adjust the discovery frequency (in seconds).



To disable discovery, perform the same steps. However, at the object discovery, select **Disable Object Discovery**.

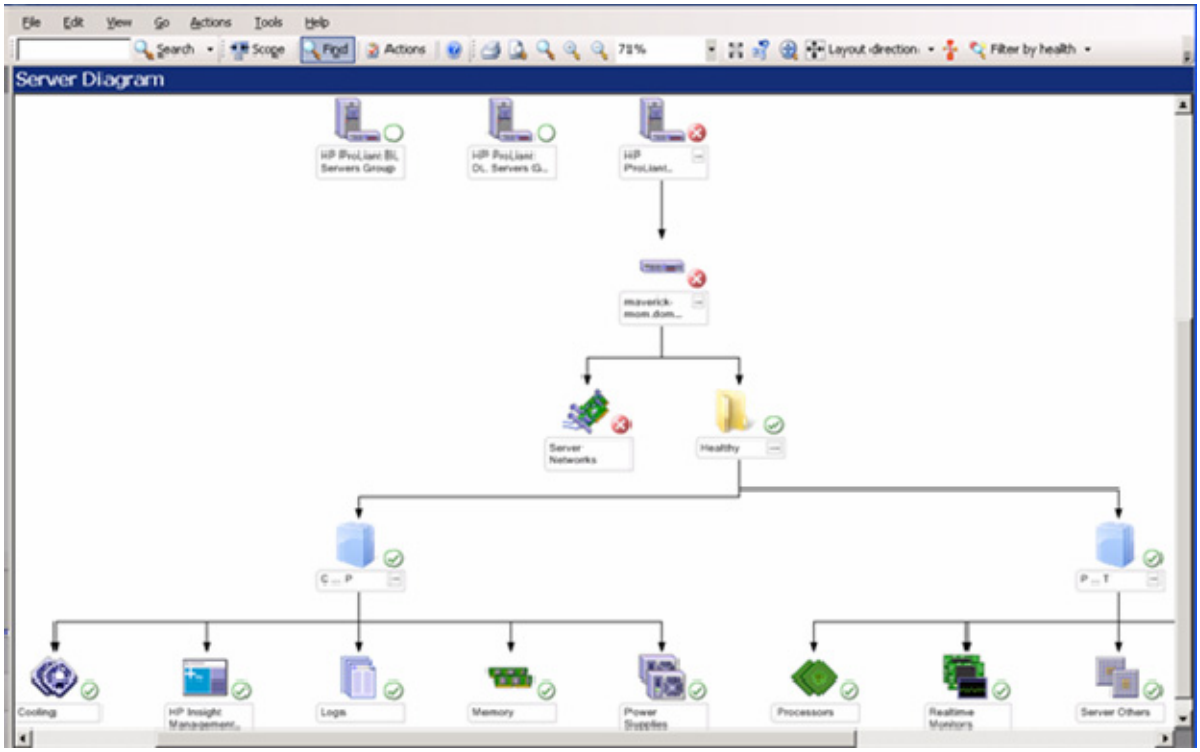
HP ProLiant SNMP management pack discovery rules

The HP ProLiant Servers SNMP management pack (ID=HewlettPackard.Servers.Proliant.SNMP) in the HP ProLiant Management Pack for System Center Essentials contain the following discovery rule:

- HP ProLiant SNMP Collection Health Condition Discovery Rule (ID=HewlettPackard.Servers.ProLiant.SNMP.ProLiantSNMPHealthDiscoveryRule)—Instantiates Health Collection classes associated with HP ProLiant servers (This discovery rule runs every 60 minutes by default).

HP ProLiant servers discoveries

The discovery rules in the HP ProLiant Management Pack for System Center Essentials help to discover and automatically classify HP ProLiant servers into their appropriate groups and Health Collection classes.



Event processing rules

The HP Server Management Packs for System Center Essentials creates event processing rules for targeting Health Collection classes. These rules identify HP events written to the Windows® Event Log by HP Insight Management Agents and display them as System Center Essentials alerts. The HP Server Management Packs for System Center Essentials provides knowledge base data within the event processing rules. This data can be used to identify the cause of an event and assist in reducing the time to resolution. Knowledge base data can be annotated to include environment or customer specific information.

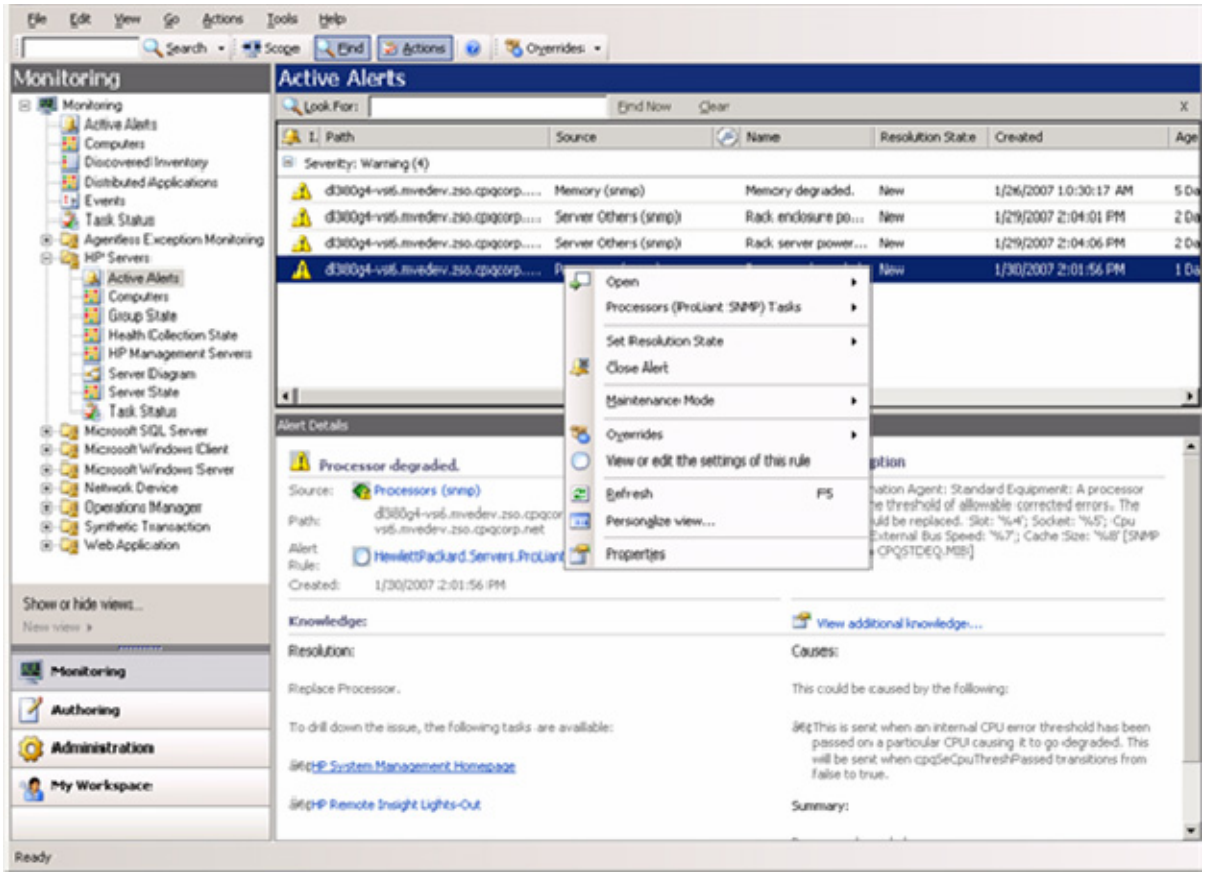
HP Server ProLiant SNMP Management Pack defines processing rules for these Health Collections:

- Processors—Processor error monitoring
- Memory—Memory error monitoring
- Temp Sensors—Temperature sensor error monitoring
- Cooling—Fan error monitoring
- Power Supplies—Power supply error monitoring
- Management Processors—Integrated Lights-Out error monitoring
- Networks—NIC and teaming network error monitoring
- Storage—Storage system error monitoring
- Others—Rack, Blade Enclosures, additional error monitoring

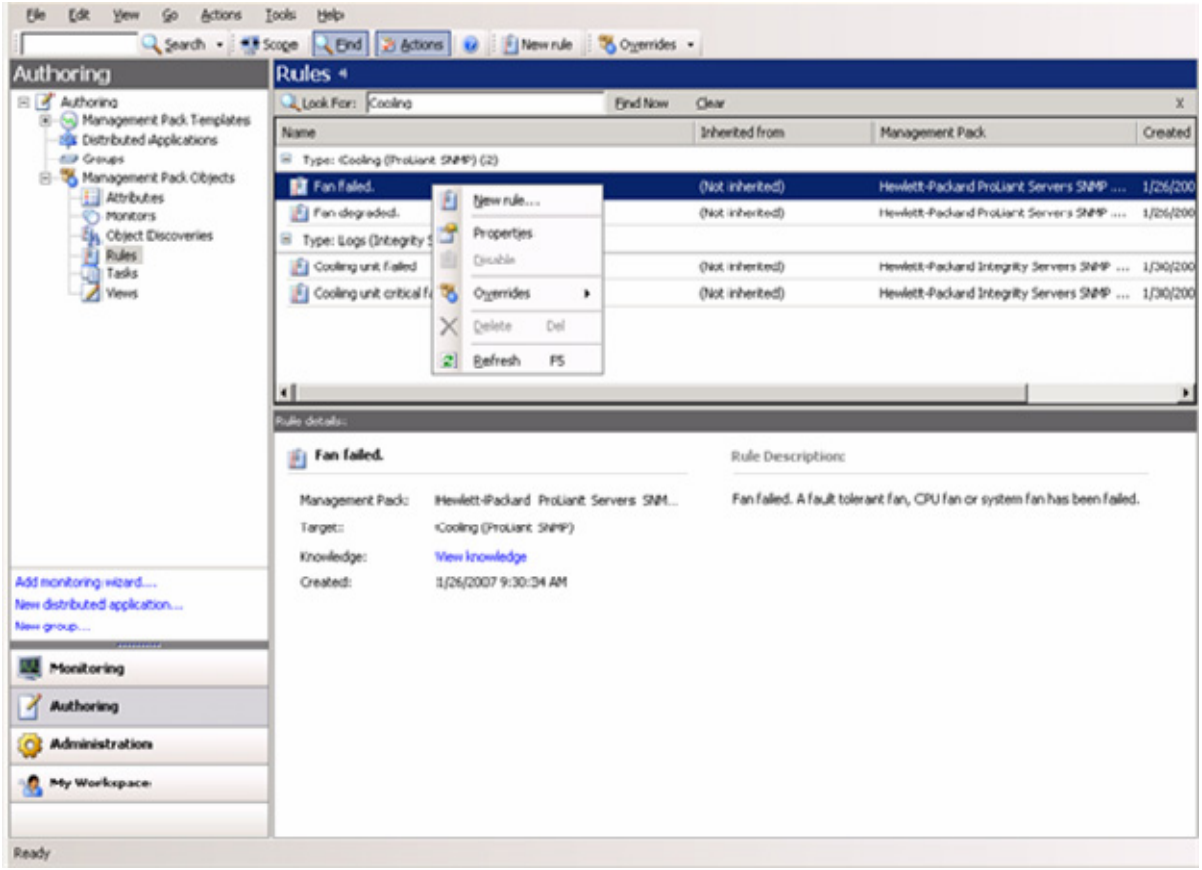
- Realtime Monitors—Auto Server Recovery monitoring

The Event rules for HP ProLiant servers section contains all error processing rules. These rules can be edited from the Active Alerts or the Rule Authoring panes.

The Active Alerts pane displays current Active Alerts. To access the Properties or Overrides menu, right-click an Active Alert, and then select **Properties** or **Overrides.**



The Authoring Rules pane displays all rules. To search for a rule, enter the search text in the Look For text box, and then click **Find Now.** To access the Properties or Overrides menu, right-click an **Active Alert,** and then select **Properties** or **Overrides.**



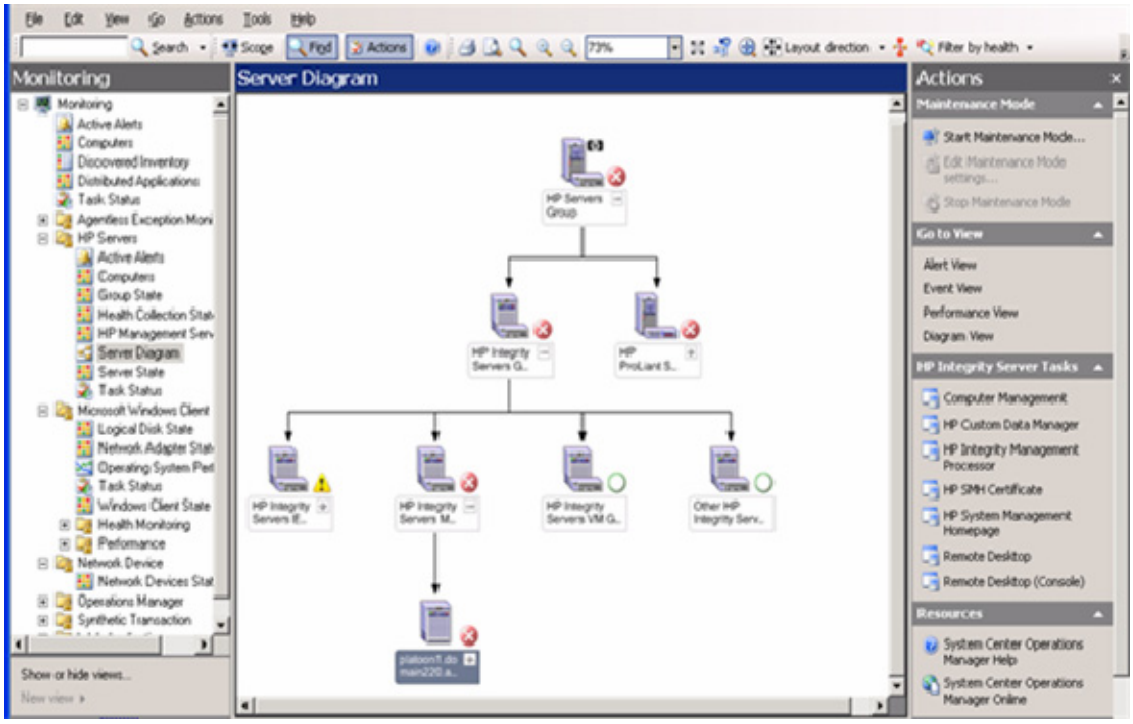
Tasks for HP servers

The HP Server Management Packs for System Center Essentials include predefined tasks that can be used to access in-depth server information, carry out advanced remote server administration, and perform lifecycle management on multiple servers, clients, printers, and other networked devices. HP tasks appear in the Actions window. Not all tasks appear in every view because tasks are associated with specific classes.

The HP ProLiant Management Pack for System Center Essentials includes the following tasks:

- HP Custom Data Manager
- HP Integrated Lights-Out
- HP System Management Homepage
- HP Systems Insight Manager
- HP ProLiant Integrated Management Log Export
- HP ProLiant Integrated Management Log Clear

- Remote Desktop and Computer Management



HP Custom Data Manager

The HP Custom Data Manager (CDM) maintains user-specified text information on a per server basis. It can store text information such as warranty expiration, server memo, and server location description. The text information format is open to users, and the HP CDM enables users to view and input the information.

CDM is a console task on System Center Essentials, and launches from HP Servers Groups and sub-groups.

> **NOTE:** CDM must be installed on each remote System Center Essentials Console. For further information, see Installing the HP ProLiant Management Pack for System Center Essentials (x86 or x64 editions) (on page 10).

CDM automatically locates the System Center Essentials host name from the System Center Essentials registry with user credentials. Users must have the proper access credentials to use this tool. CDM communicates with the SDK interface of System Center Essentials and enumerates all HP Server systems in the System Center Essentials domain. CDM does not enumerate non-HP servers.

The following command buttons are included with the Custom Data Manager:

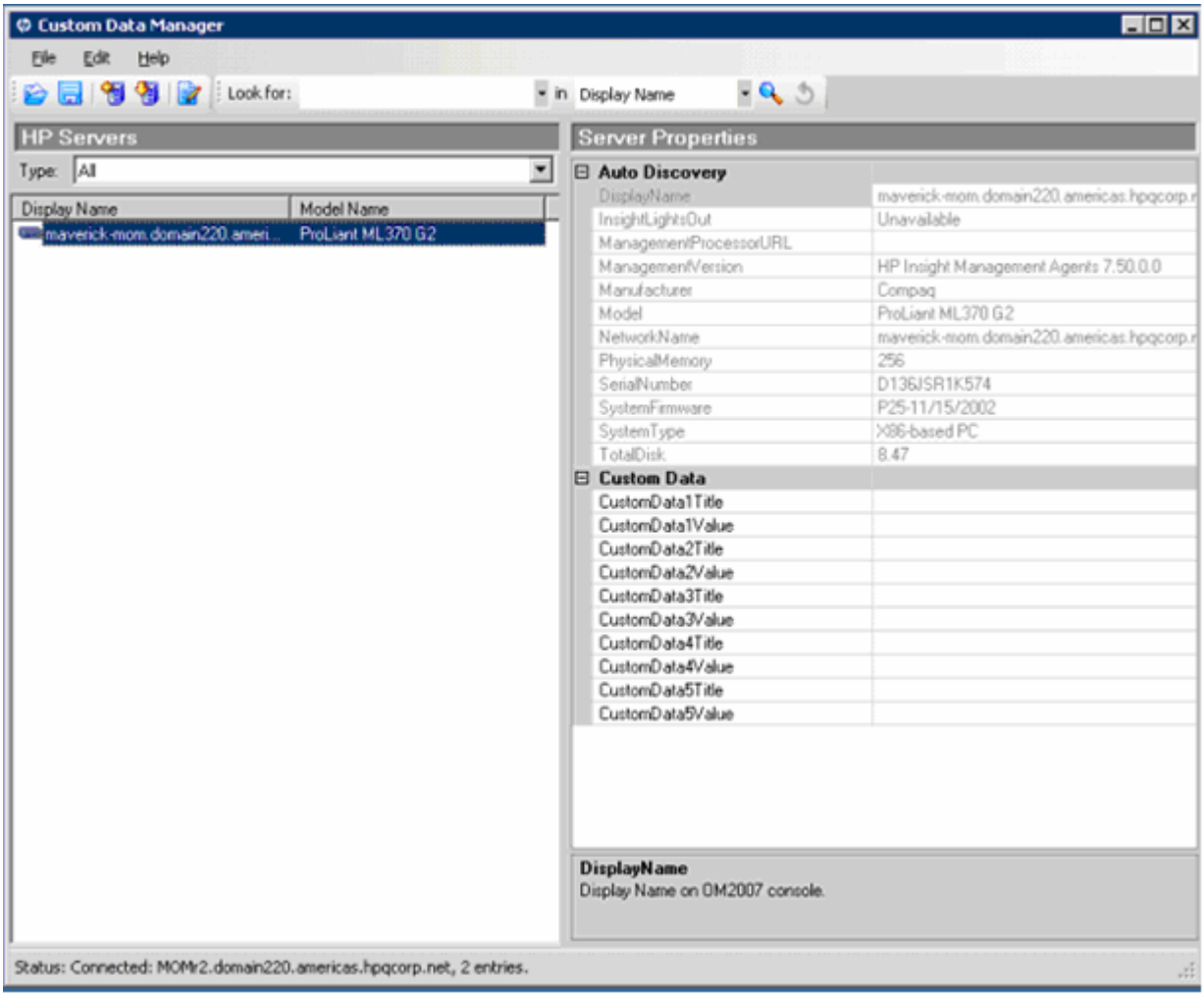
- Open File enables users to load a previously-saved XML file to update the Custom Data section.
- Save File enables users to save enumerated HP Server data to an XML file. Microsoft® Excel can be used to edit the saved XML file to be loaded back to the CDM tool to update the Custom Data section.

> **NOTE:** The saved file must be saved as XML data, not an XML spreadsheet.

- ReConnect enables users to reconnect to a System Center Essentials server with current user credentials to retrieve current HP Server information.
- Update enables users to sync with a System Center Essentials server for Custom Data update.
- Exit and Remove Connecter enables users to close CDM and remove the Connector interface specifically for CDM from System Center Essentials.
- Edit Names Properties enables users to set the CustomDataTitle properties to the desired string. There are five CustomDataTitle properties, which users can set for all HP Servers. The checkbox in the HP Recommended Set provides the HP recommended default set of names.

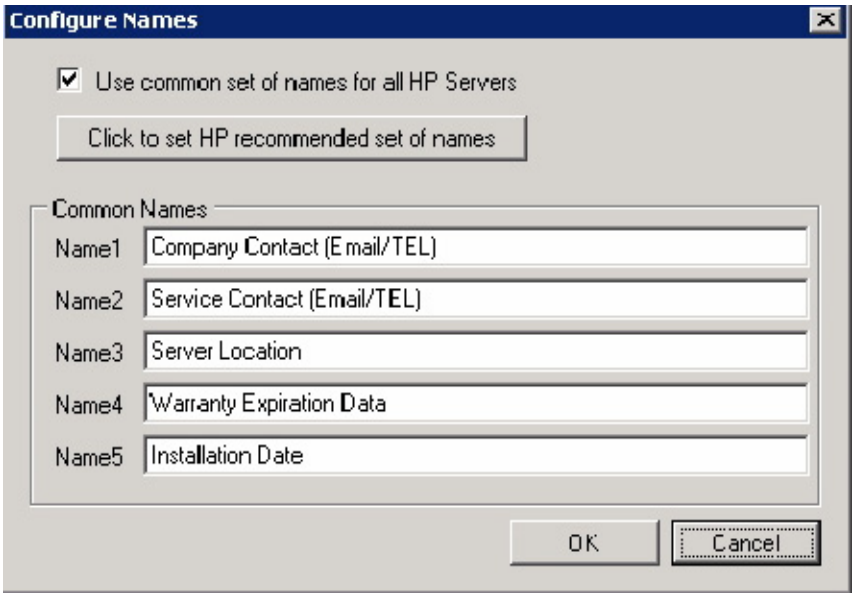
To launch the HP CDM:

1. Select an HP Server group or an HP Server subgroup.
2. Click **HP Custom Data Manager.** The Custom Data Manager screen appears. This screen displays the Server Properties and the default Custom Data fields.

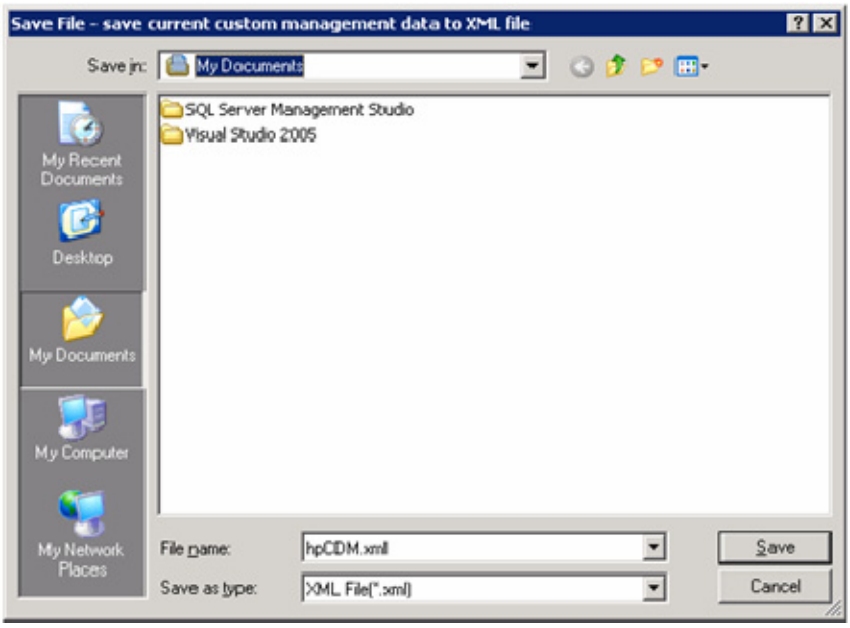


3. Select one of the command buttons described previously to perform the desired operation. For example, to change or set the strings in the Custom Data section, click **Edit,** and select **Name Properties.**

4. Enter the strings for the five common names, or click **Click to set HP recommended set of names.**

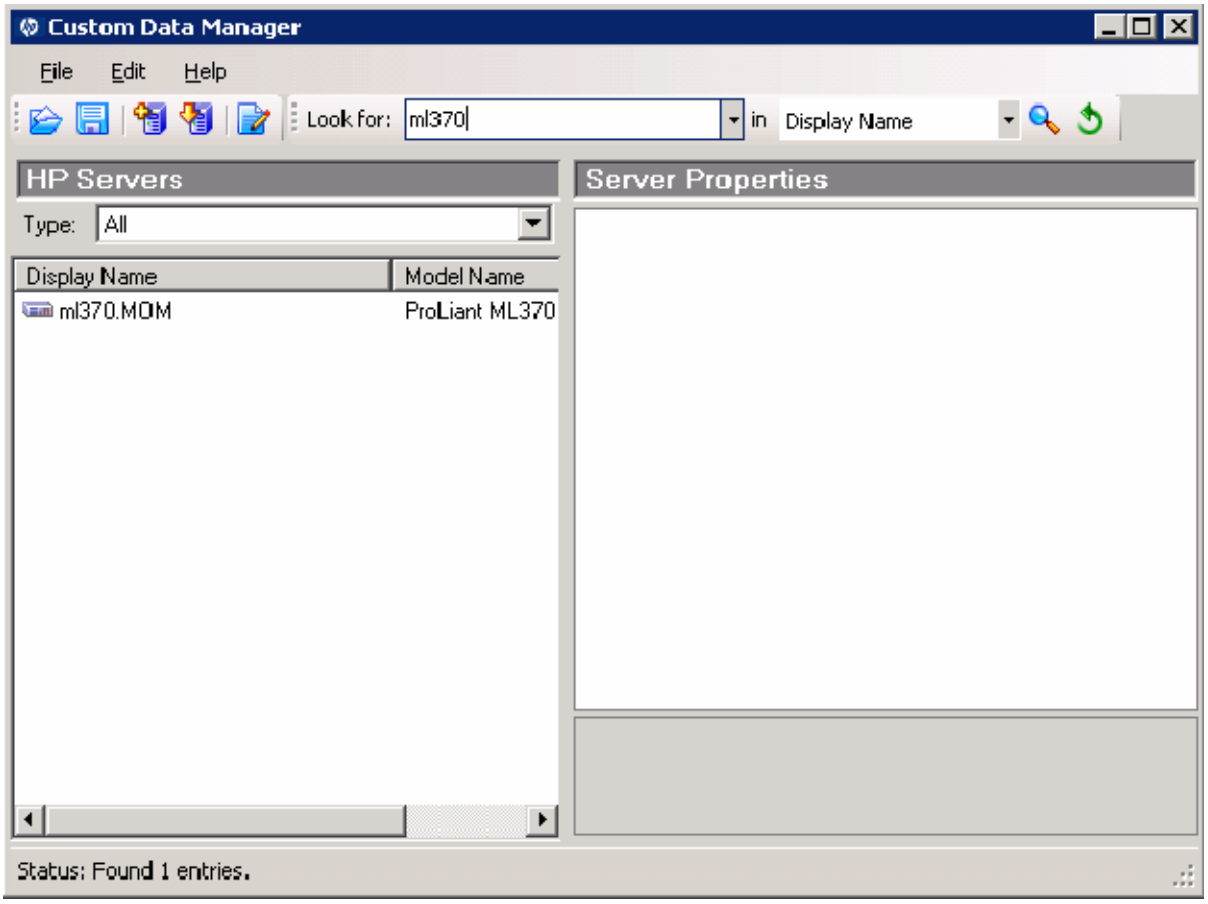


5. Enter the strings for the CustomDataValue fields, click **File,** and then click **Save** to save the custom data to an XML file.

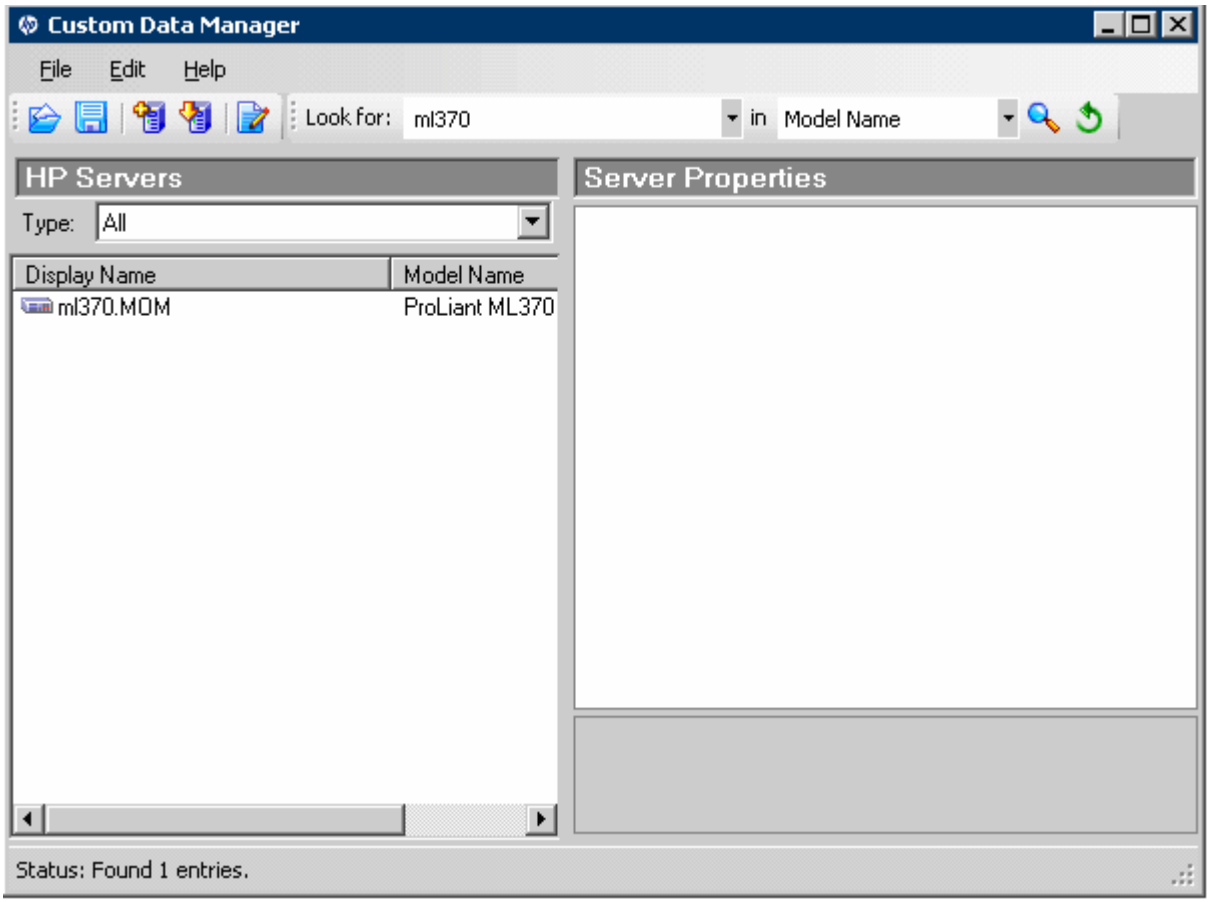


6. To save the custom data to the System Center Essentials database, click **Update.**
7. To load a previously-saved XML file, click **File>Open.**

8. To list a specific server, select the **Display Name** option, and then enter the server name in the Look For textbox.



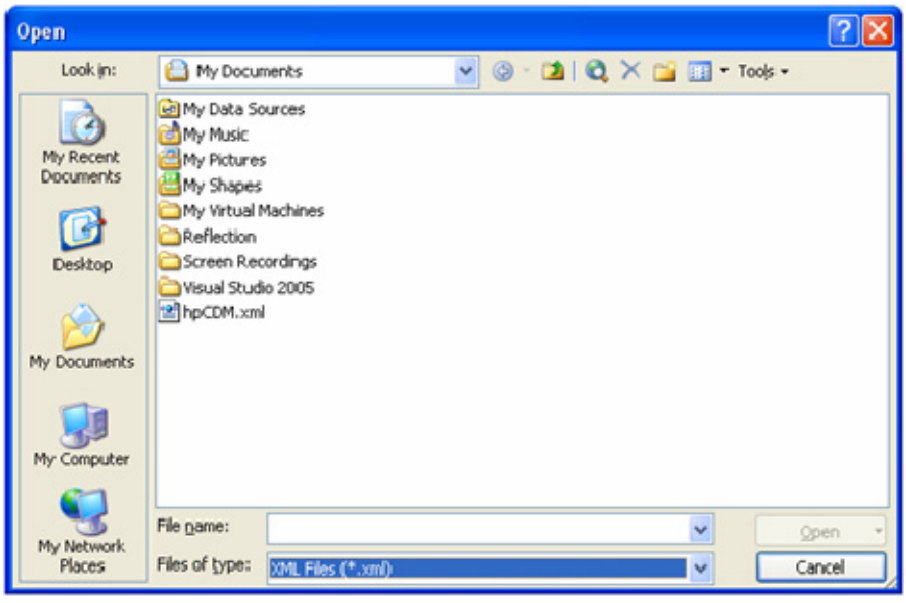
9. To list all servers of the same model, select the **Model Name** option, and then enter the server model name in the Look For textbox.



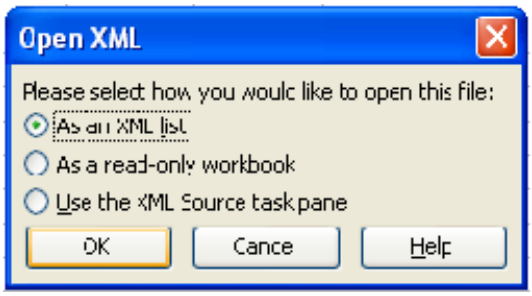
10. To exit the CDM, close the **Custom Data Manager** window.

To edit the saved XML file in Microsoft® Excel:

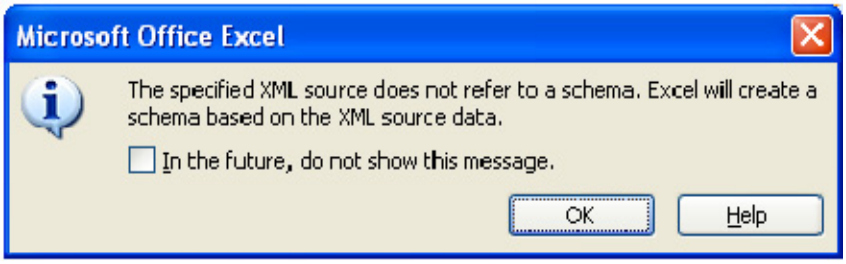
1. To load a previously saved XML file, click **File,** and then select **Open.** Select **XML Files (*.xml)** in the Files of type list, and then select the previously saved file. Click **Open.**



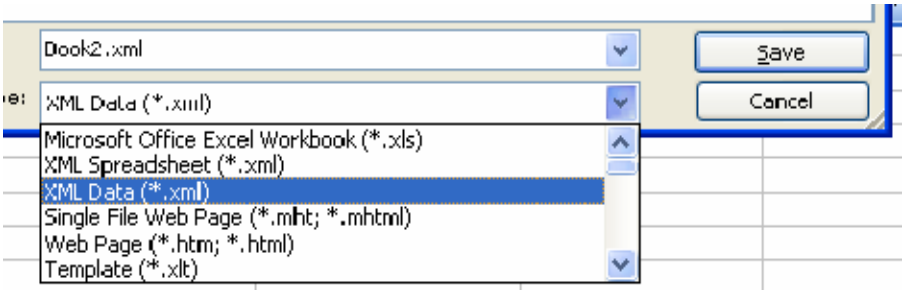
2. Select how you would like to open the XML file.



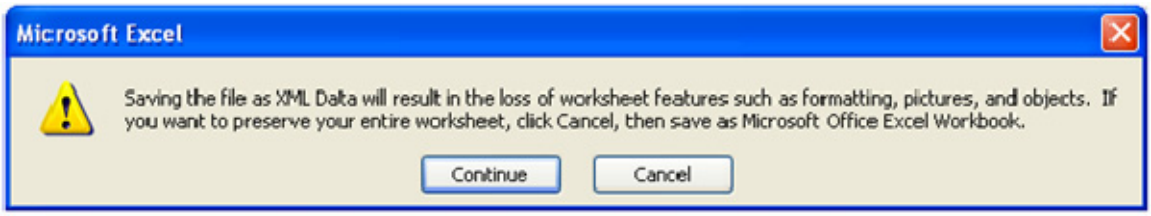
3. Select **As an XML list.**



4. To view a standard Microsoft® Excel spreadsheet, click **OK.** Only columns CustomData1Title to CustomData5Title, and CustomData1Value to CustomData5Value are customizable. You cannot edit other properties.
5. After editing, click **File,** and then select **Save** menu. Select **XML Data** from the File Type menu.

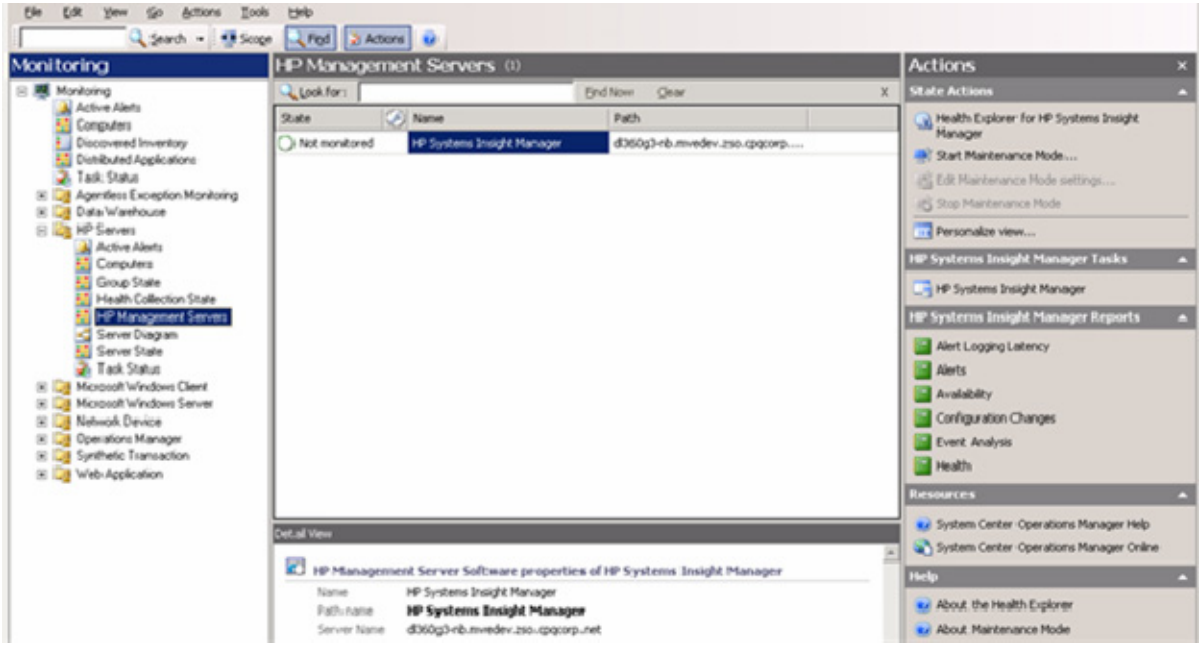


6. To ignore the warning, click **Continue.** Microsoft® Excel saves the result to a XML file that can be loaded to CDM.



HP Systems Insight Manager task

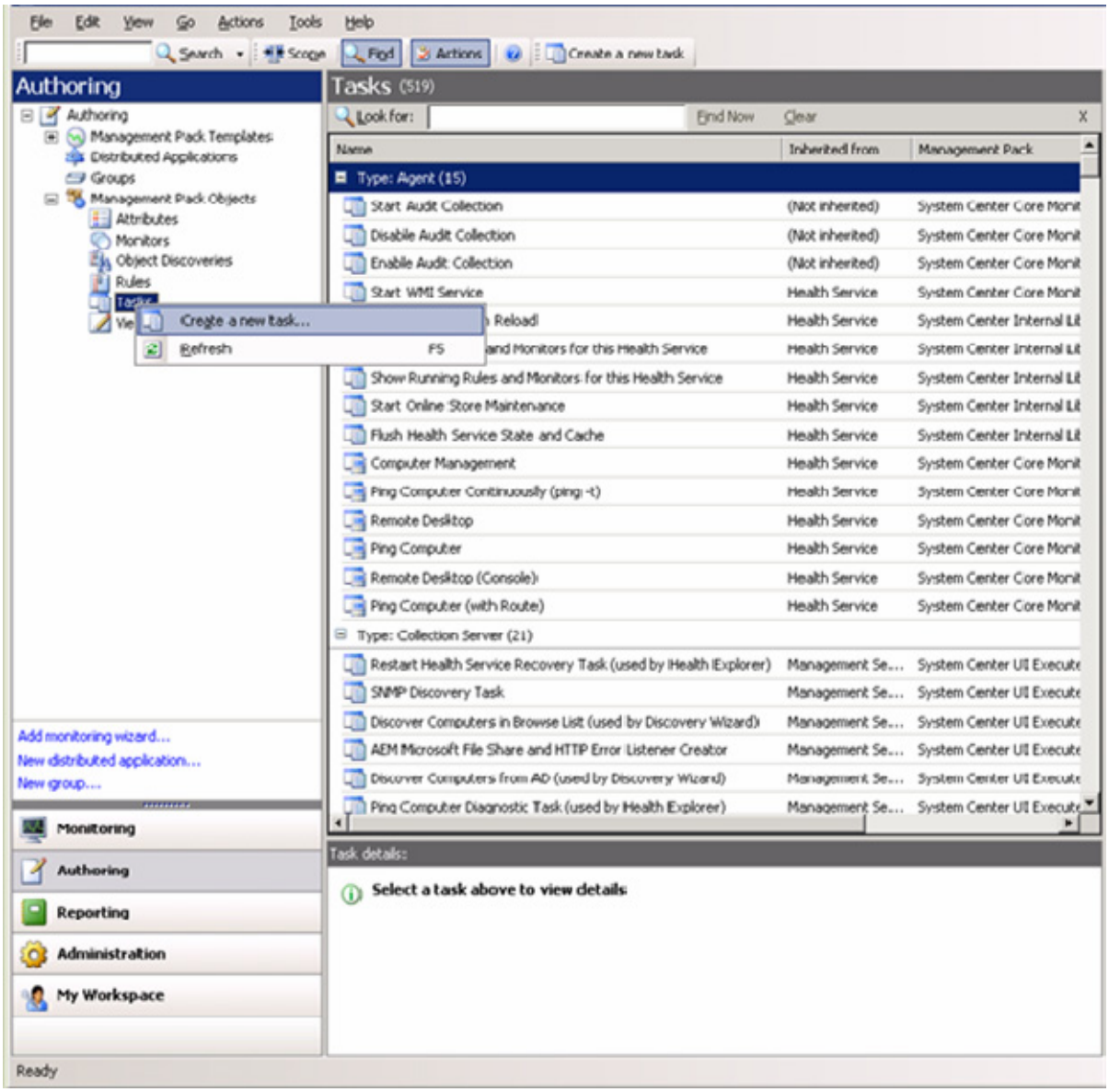
HP Systems Insight Manager (HP SIM) is discovered by HP ProLiant Management Packs. The discovered HP SIM is displayed in the HP Management Servers view. Select **HP SIM** in the main pane, and the HP SIM task is available in the Actions pane.



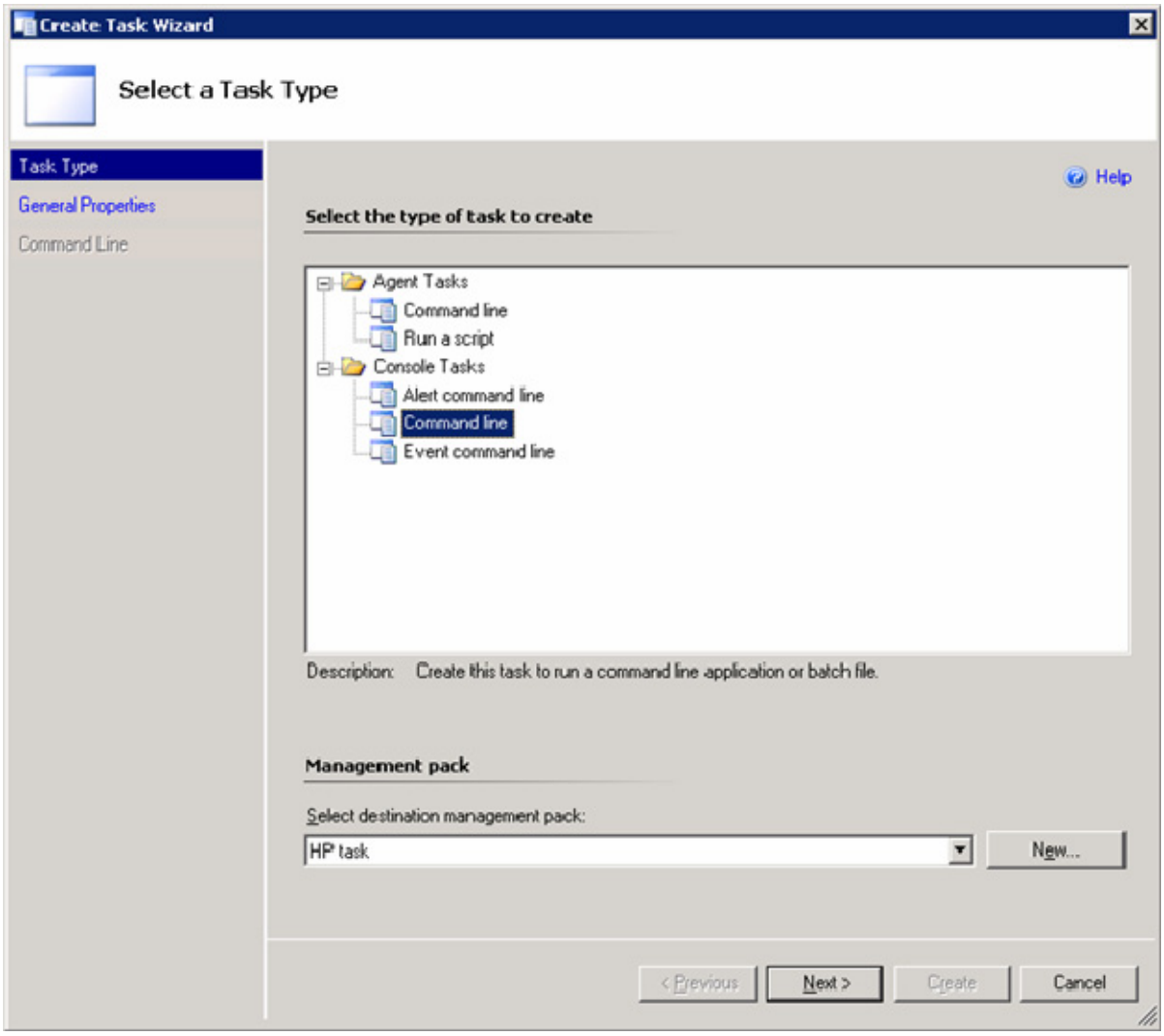
Custom HP Systems Insight Manager task

Universal HP Systems Insight Manager task is a custom console task from the Authoring tab view. Custom HP SIM console tasks can enable the easy launch of HP SIM from any view. To create custom HP SIM console task, perform the following procedure.

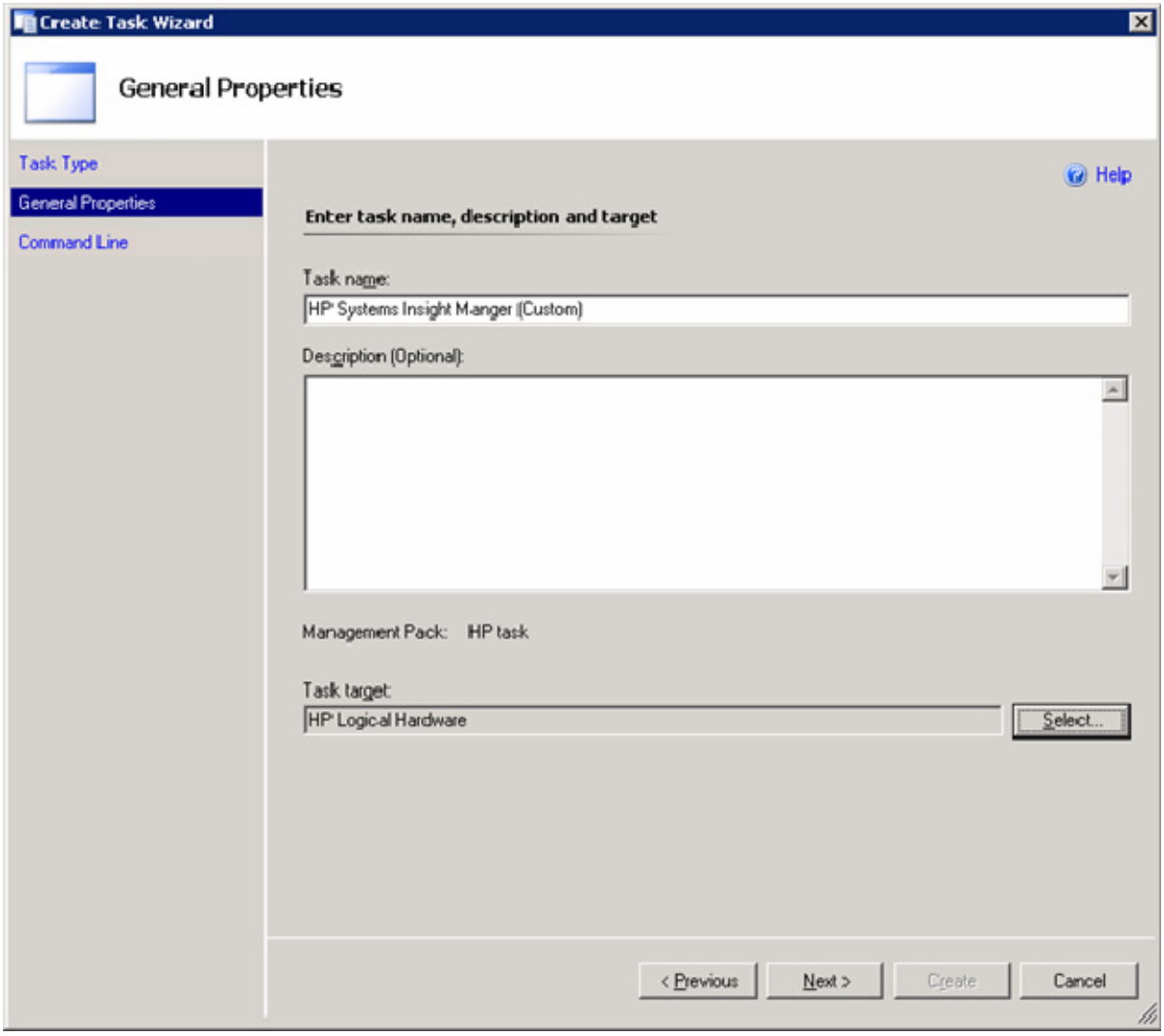
1. Select Authoring view tab, expand the Management Pack Objects folder, and then right-click the **Tasks** folder. Select **Create a new task.**



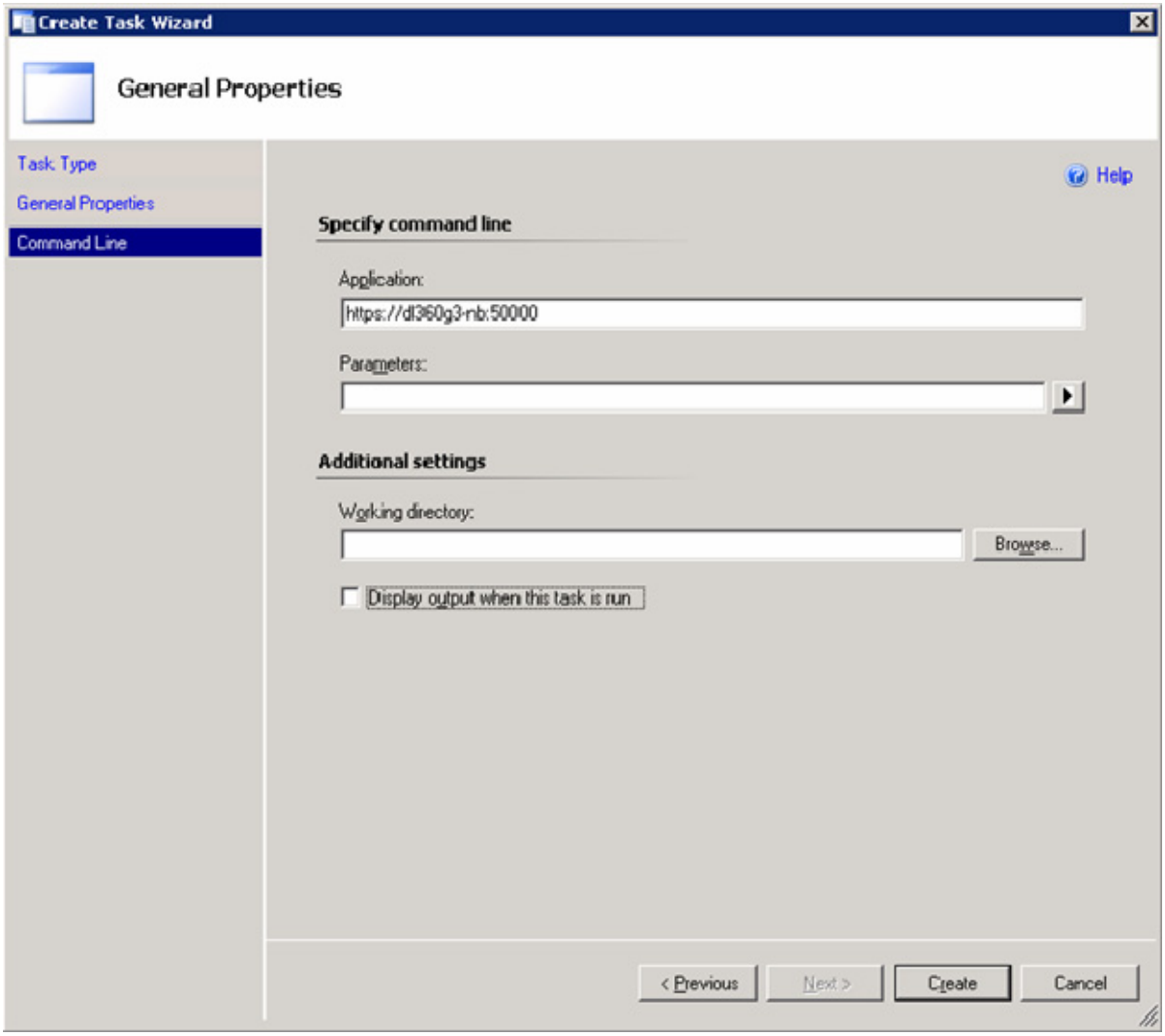
2. In the Console Tasks folder, select **Command line,** and then select a Management Pack to store the custom task information. Click **Next.**



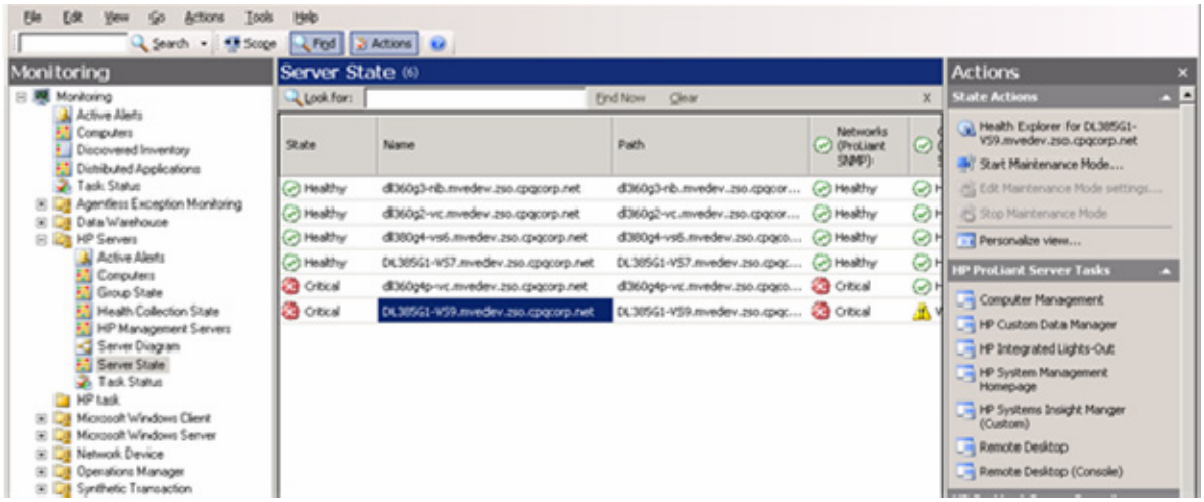
3. Enter `HP Systems Insight Manager (Custom)` in the Task name textbox. Select Task target to HP Logical Hardware. Click **Next.**



4. Enter `https://<HPSIMServerName>:50000`. Clear the **Display output when this task is run** checkbox. Click **Create.**



5. HP Systems Insight Manager (Custom) console task is now available in the Server State and Active Alerts views.



Remote Desktop and Computer Management tasks

Three Microsoft® Windows® tools are available from the Server State view and the Diagram view when an HP Server is focused on the view. These console tools launch Windows® native tools on the local system to remotely connect to the selected HP Server.

- Computer Management—Launches Windows® Computer Management MMC tool
- Remote Desktop (Console)—Launches Remote Desktop with console mode
- Remote Desktop—Launches Remote Desktop

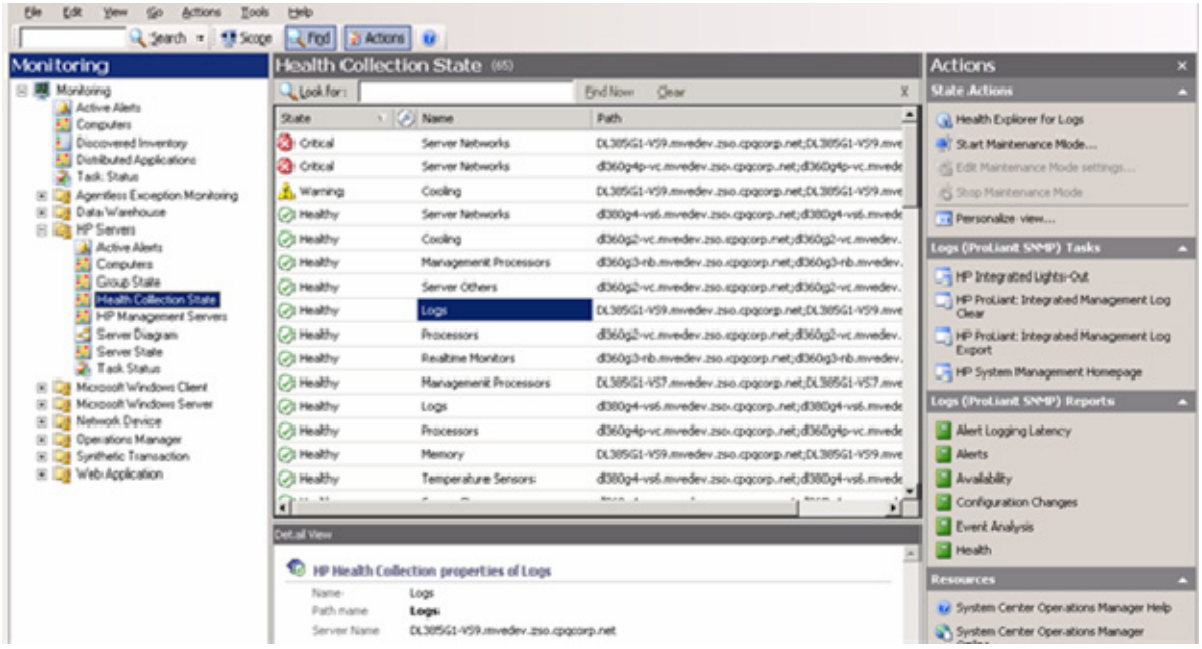
HP ProLiant Integrated Management Log task

HP ProLiant Servers can have an Integrated Management Log to keep a record of historical hardware events. Some historical hardware events cannot be reflected to other health collection. Health Collection logs present the state of Integrated Management Log that might have error or warning states. These states only appear when any other health collections cannot report the specific hardware issue situation. Two tasks are provided to eliminate visiting each machine to view and clear records of Integrated Management Log. These tasks are the following:

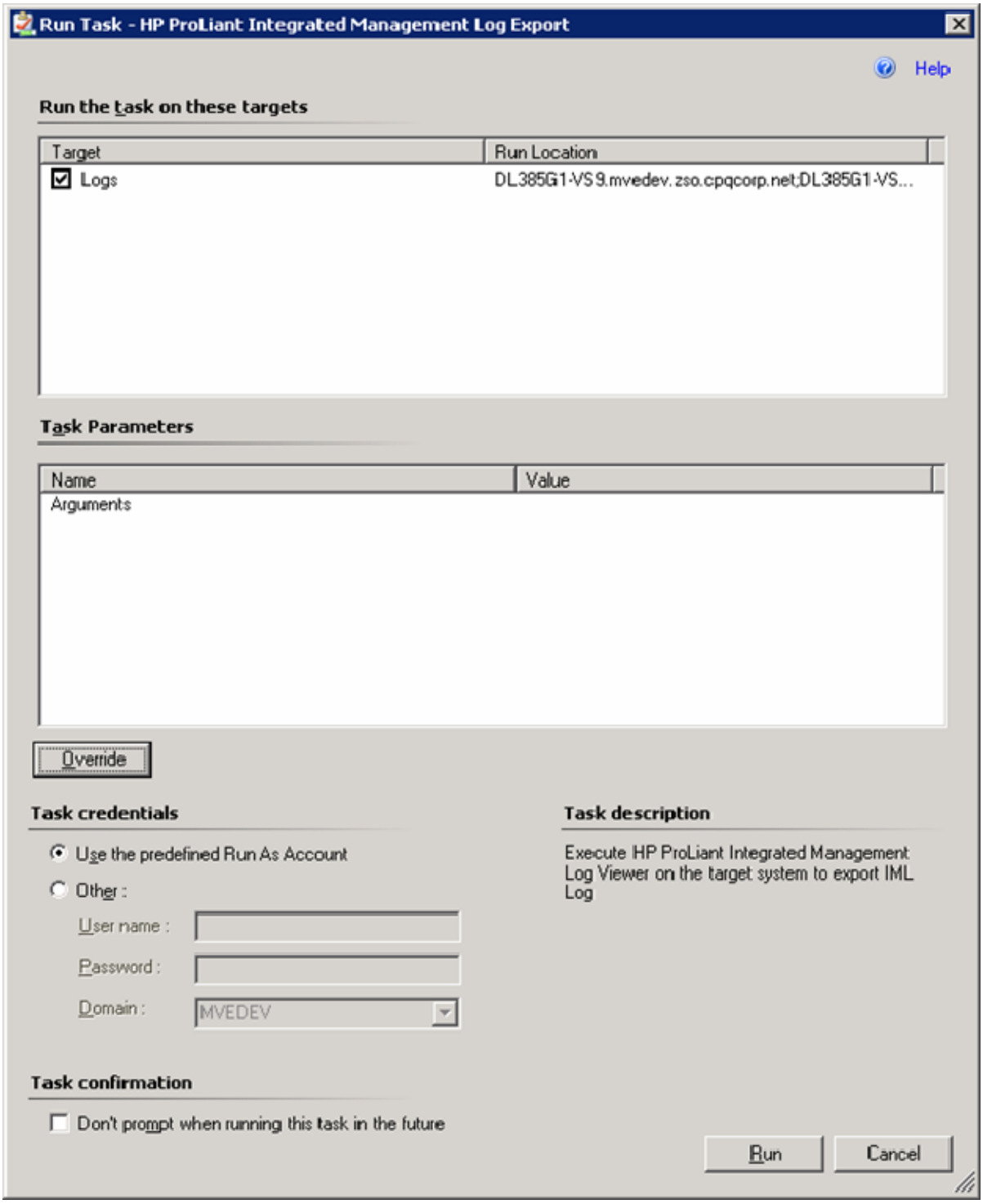
- HP ProLiant Integrated Management Log Export—Exports log records
- HP ProLiant Integrated Management Log Clear—Exports, and then clears log records

Both tasks run remotely on the target system with the results seen on task screen on the System Center Essentials Console. Both tasks are associated with Logs Collection so these can be accessed from Health Collection State view or Server Diagram view. The task results include a record table with Excel CSV format, so it can import to Excel after manual editing for easy viewing.

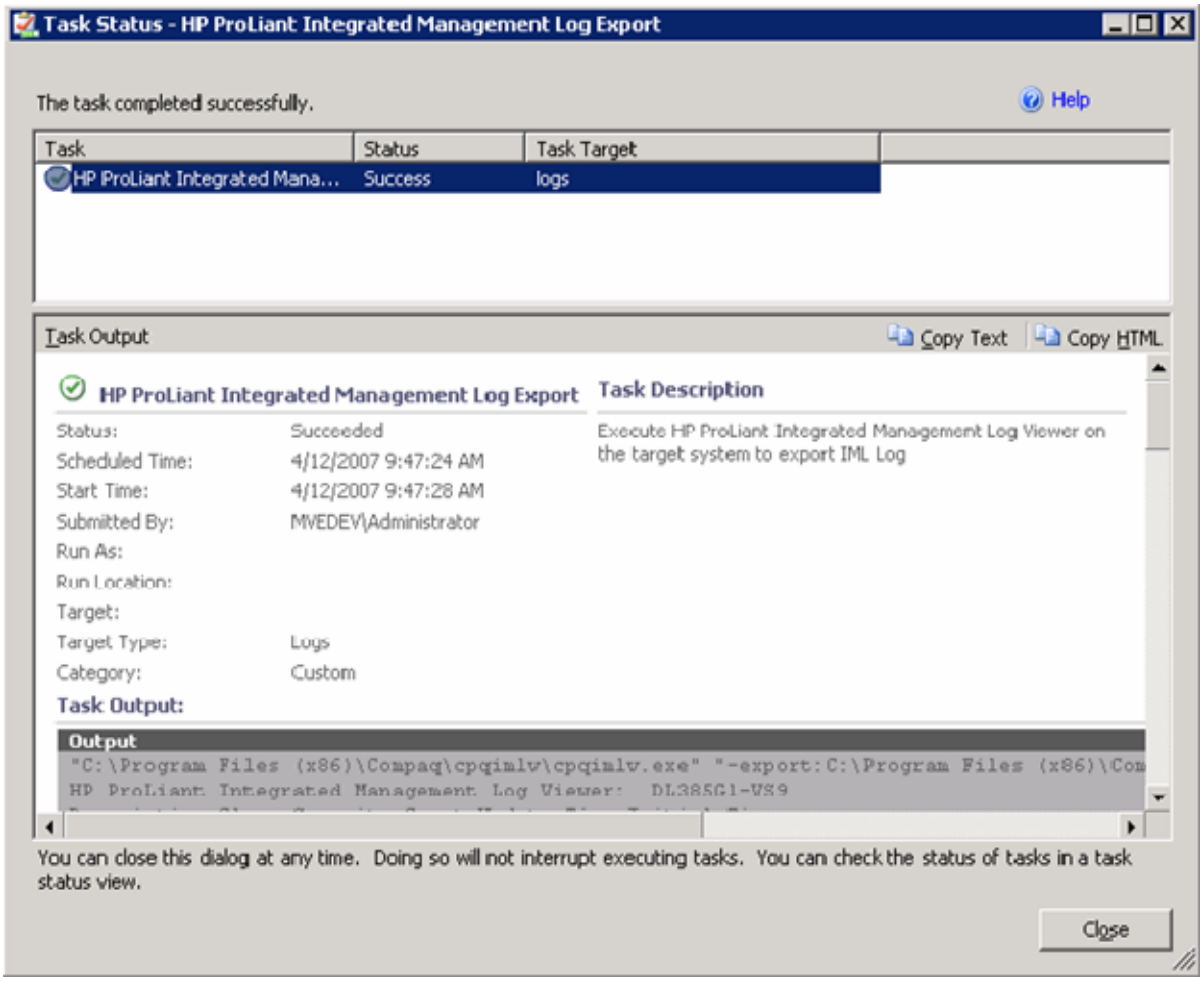
1. Select **Health Collection State View.** Locate the target Logs collection from the list on the main pane.



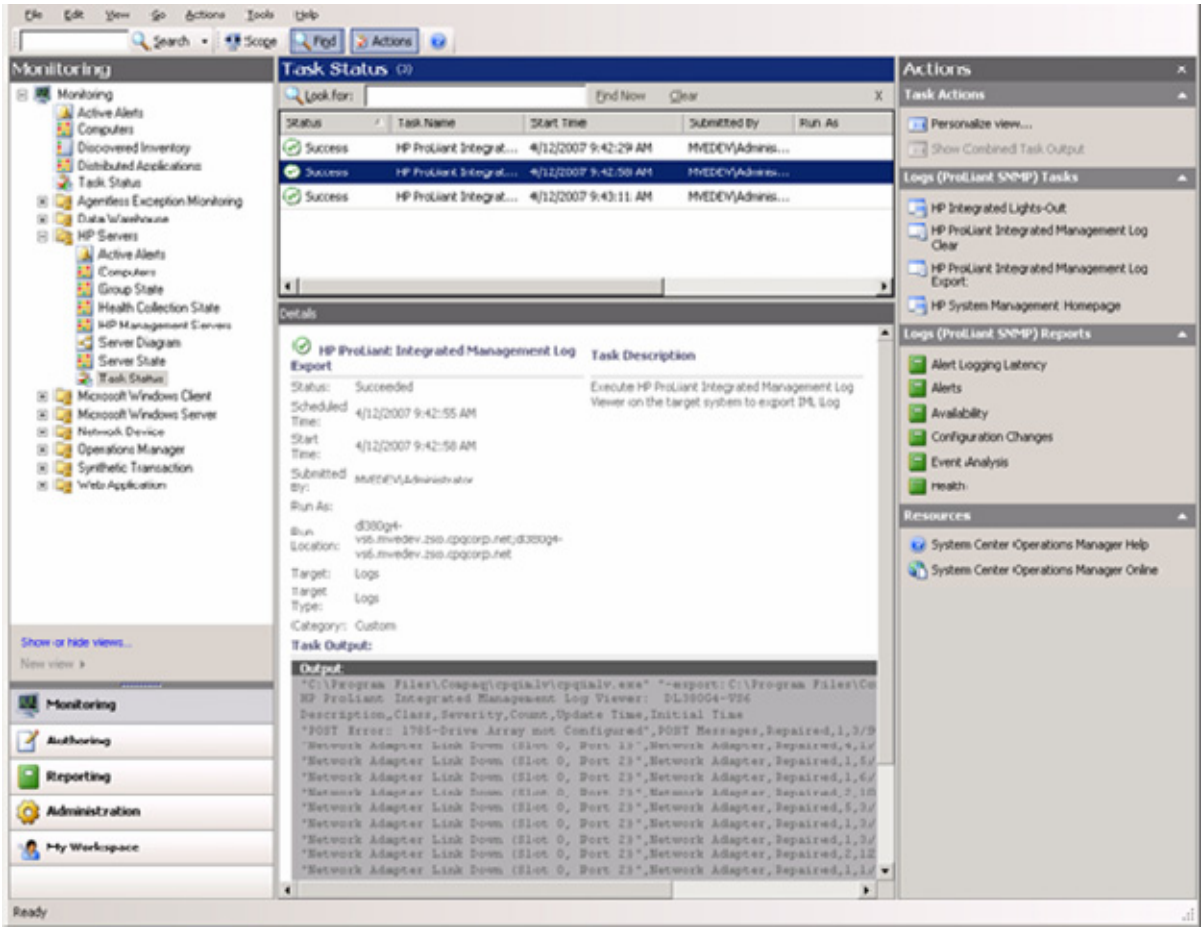
2. Click one of the tasks such as **HP ProLiant Integrated Management Log Export,** or click **Clear** from action pane.



3. The confirmation screen appears. Click **Run.**



4. To retrieve latest results of tasks at anytime, click **Task State View**.



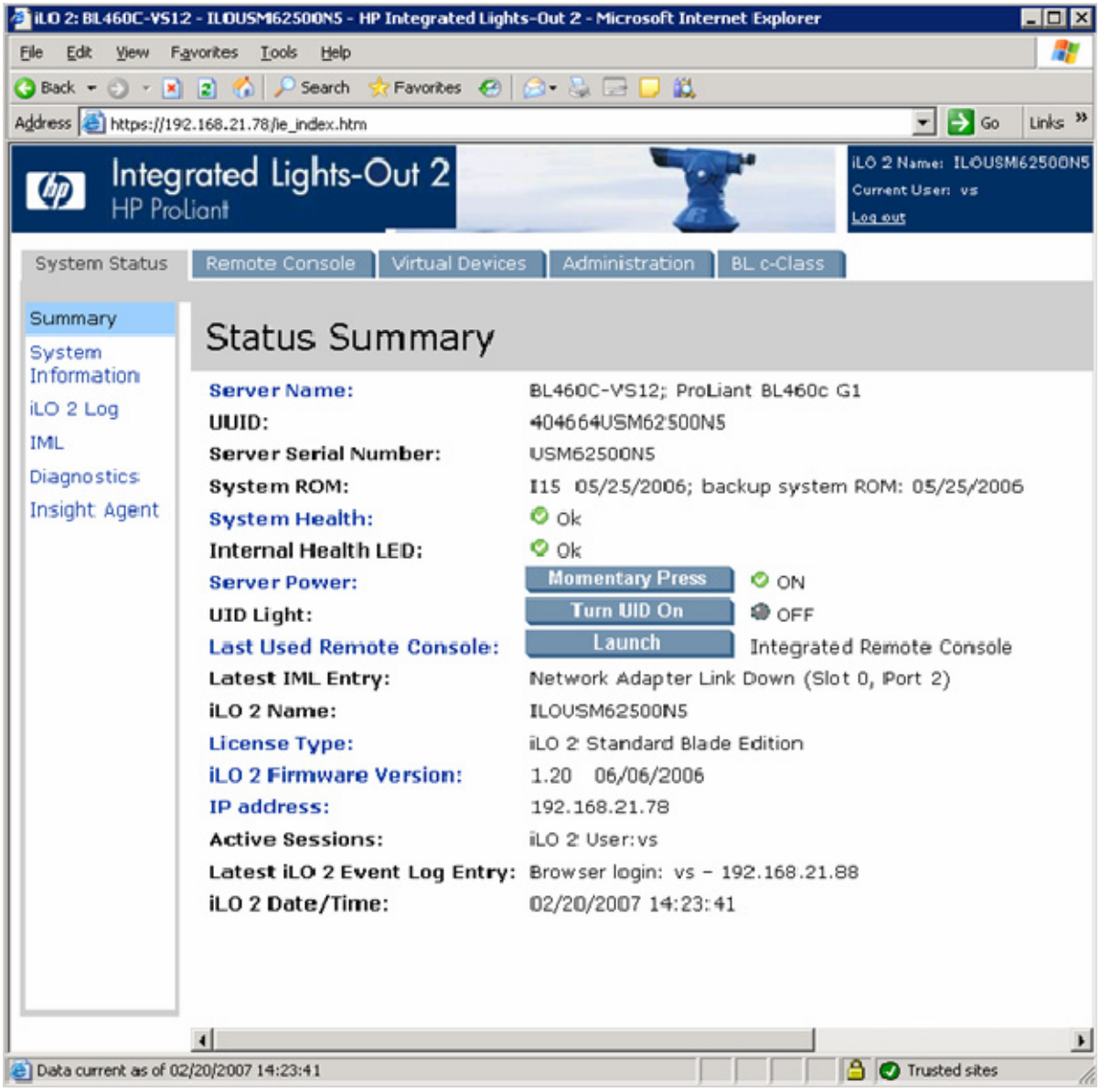
HP Integrated Lights-Out task

HP ProLiant servers can include an Integrated Lights-Out management processor, which enables you to perform advanced, secure, and operating system-independent remote server management using a standard browser interface. The HP ProLiant Management Pack for System Center Essentials include a task that collects HP Integrated Lights-Out management processor data and creates an associated browser link to remotely access the selected HP ProLiant server.

To launch the HP Integrated Lights-Out task to display information:

1. Select an HP ProLiant server.
2. Click **HP Integrated Lights-Out.**

3. Log in to HP Integrated Lights-Out.



Monitors

HP Server Management Packs include a set of monitors to update the health states from HP management software. Monitors are presented in the following categories:

- Health Collection State monitoring—These monitors update the health states to each Health Collection class instance.
- State Propagation monitoring—These monitors update the health states to propagate from a lower associated class instance to a higher class instance

Management Software monitoring—These monitors update the health states of HP Insight Management Agents.

The following table displays each set of monitors defined in the HP Server Management Packs.

The following are monitors for HP ProLiant Base Management Packs.

ID: Name	Type	Target class	Description
HewlettPackard.Servers.ProLiant.HPProLiantSNMPManagementHealthMonitor: HP ProLiant Insight Management Agents Health Monitor	Unit Monitor	HP ProLiant SNMP Management	Monitors the health of HP Server Agents
HewlettPackard.Servers.ProLiant.HPProLiantSystemsInsightManagerHealthMonitor : HP ProLiant Systems Insight Manager Health Monitor	Unit Monitor	HP Systems Insight Manager	Monitors the health of HP Systems Insight Manager
HewlettPackard.Servers.ProLiant.HPServersGroupProLiantServersGroupHealthRollupMonitor : HP ProLiant Servers Group to HP Servers Group Health Rollup Monitor	Dependency Monitor	HP Servers Group	This Health Rollup Monitor rolls up from the ProLiant Servers Group to the HP Servers Group
HewlettPackard.Servers.ProLiant.HPProLiantServersGroupMLServersGroupHealthRollupMonitor : HP ProLiant ML Servers Group to HP ProLiant Servers Group Health Rollup Monitor	Dependency Monitor	HP ProLiant Servers Group	This Health Rollup Monitor rolls up from the HP ProLiant ML Servers Group to the HP ProLiant Servers Group
HewlettPackard.Servers.ProLiant.HPProLiantServersGroupDLServersGroupHealthRollupMonitor : HP ProLiant DL Servers Group to HP ProLiant Servers Group Health Rollup Monitor	Dependency Monitor	HP ProLiant Servers Group	This Health Rollup Monitor rolls up from the HP ProLiant DL Servers Group to the HP ProLiant Servers Group
HewlettPackard.Servers.ProLiant.HPProLiantServersGroupBLServersGroupHealthRollupMonitor : HP ProLiant BL Servers Group to HP ProLiant Servers Group Health Rollup Monitor	Dependency Monitor	HP ProLiant Servers Group	This Health Rollup Monitor rolls up from the HP ProLiant BL Servers Group to the HP ProLiant Servers Group
HewlettPackard.Servers.ProLiant.HPProLiantServersGroupProLiantXXServerHealthRollupMonitor : HP ProLiant Other Model Server to HP ProLiant Servers Group Health Rollup Monitor	Dependency Monitor	HP ProLiant Servers Group	This Health Rollup Monitor rolls up from the HP ProLiant Other Model Server to the HP ProLiant Servers Group

ID: Name	Type	Target class	Description
HewlettPackard.Servers.ProLiant.HPProLiantMLServersGroupProLiantMLServerHealthRollupMonitor : HP ProLiant ML Server to HP ProLiant ML Servers Group Health Rollup Monitor	Dependency Monitor	HP ProLiant ML Servers Group	This Health Rollup Monitor rolls up from the HP ProLiant ML Server to the HP ProLiant ML Servers Group
HewlettPackard.Servers.ProLiant.HPProLiantDLServersGroupProLiantDLServerHealthRollupMonitor : HP ProLiant DL Server to HP ProLiant DL Servers Group Health Rollup Monitor	Dependency Monitor	HP ProLiant DL Servers Group	This Health Rollup Monitor rolls up from the HP ProLiant DL Server to the HP ProLiant DL Servers Group
HewlettPackard.Servers.ProLiant.HPProLiantBLServersGroupProLiantBLServerHealthRollupMonitor : HP ProLiant BL Server to HP ProLiant BL Servers Group Health Rollup Monitor	Dependency Monitor	HP ProLiant BL Servers Group	This Health Rollup Monitor rolls up from the HP ProLiant BL Server to the HP ProLiant BL Servers Group
HewlettPackard.Servers.ProLiant.WindowsComputerHPProLiantServerHealthRollupMonitor : HP ProLiant Server to Windows Computer Health Rollup Monitor	Dependency Monitor	Windows® Computer	This Health Rollup Monitor rolls up from the HP ProLiant Server to the Windows® Computer
HewlettPackard.Servers.ProLiant.HPProLiantProcessorsHealthRollupMonitor : HP ProLiant Processors to HP ProLiant Server Health Rollup Monitor	Dependency Monitor	HP ProLiant Server	This Health Rollup Monitor rolls up from HP ProLiant Processors to HP ProLiant Server
HewlettPackard.Servers.ProLiant.HPProLiantMemoryHealthRollupMonitor : HP ProLiant Memory to HP ProLiant Server Health Rollup Monitor	Dependency Monitor	HP ProLiant Server	This Health Rollup Monitor rolls up from HP ProLiant Memory to HP ProLiant Server
HewlettPackard.Servers.ProLiant.HPProLiantCoolingHealthRollupMonitor : HP ProLiant Cooling to HP ProLiant Server Health Rollup Monitor	Dependency Monitor	HP ProLiant Server	This Health Rollup Monitor rolls up from HP ProLiant Cooling to HP ProLiant Server

ID: Name	Type	Target class	Description
HewlettPackard.Servers.ProLiant.HPProLiantRealtimeMonitorsHealthRollupMonitor : HP ProLiant Realtime Monitors to HP ProLiant Server Health Rollup Monitor	Dependency Monitor	HP ProLiant Server	This Health Rollup Monitor rolls up from HP ProLiant Realtime Monitors to HP ProLiant Server
HewlettPackard.Servers.ProLiant.HPProLiantTemperatureSensorsHealthRollupMonitor : HP ProLiant Temperature Sensors to HP ProLiant Server Health Rollup Monitor	Dependency Monitor	HP ProLiant Server	This Health Rollup Monitor rolls up from Temperature Sensors to HP ProLiant Server
HewlettPackard.Servers.ProLiant.HPProLiantPowerSuppliesHealthRollupMonitor : HP ProLiant Power Supplies to HP ProLiant Server Health Rollup Monitor	Dependency Monitor	HP ProLiant Server	This Health Rollup Monitor rolls up from Power Supplies to HP ProLiant Server
HewlettPackard.Servers.ProLiant.HPProLiantServerStorageHealthRollupMonitor : HP ProLiant Server Storage to HP ProLiant Server Health Rollup Monitor	Dependency Monitor	HP ProLiant Server	This Health Rollup Monitor rolls up from Server Storage to HP ProLiant Server
HewlettPackard.Servers.ProLiant.HPProLiantServerNetworksHealthRollupMonitor : HP ProLiant Server Networks to HP ProLiant Server Health Rollup Monitor	Dependency Monitor	HP ProLiant Server	This Health Rollup Monitor rolls up from Server Networks to HP ProLiant Server
HewlettPackard.Servers.ProLiant.HPProLiantManagementProcessorsHealthRollupMonitor : HP ProLiant Management Processors to HP ProLiant Server Health Rollup Monitor	Dependency Monitor	HP ProLiant Server	This Health Rollup Monitor rolls up from Management Processors to HP ProLiant Server
HewlettPackard.Servers.ProLiant.HPProLiantLogsHealthRollupMonitor : HP ProLiant Hardware Logs to HP ProLiant Server Health Rollup Monitor	Dependency Monitor	HP ProLiant Server	This Health Rollup Monitor rolls up from Hardware Logs to HP ProLiant Server
HewlettPackard.Servers.ProLiant.HPProLiantUPSHealthRollupMonitor : HP ProLiant UPS to HP ProLiant Server Health Rollup Monitor	Dependency Monitor	HP ProLiant Server	This Health Rollup Monitor rolls up from UPS to HP ProLiant Server

ID: Name	Type	Target class	Description
HewlettPackard.Servers.ProLiant.HPProLiantServerOthersHealthRollupMonitor : HP ProLiant Server Others to HP ProLiant Server Health Rollup Monitor	Dependency Monitor	HP ProLiant Server	This Health Rollup Monitor rolls up from Server Others to HP ProLiant Server

The following are monitors for HP ProLiant SNMP Management Packs.

ID: Name	Type	Target Class	Description
HewlettPackard.Servers.ProLiant.SNMP.HPProLiantSNMPProcessorsHealthMonitor : HP ProLiant SNMP Processors Collection Health Monitor	Unit Monitor	HP ProLiant SNMP Processors	An Unit Monitor runs a script to get HP ProLiant SNMP Processors Collection Health
HewlettPackard.Servers.ProLiant.SNMP.HPProLiantSNMPMemoryHealthMonitor : HP ProLiant SNMP Memory Collection Health Monitor	Unit Monitor	HP ProLiant SNMP Memory Collection	Runs a script to get HP ProLiant SNMP Memory Collection Health
HewlettPackard.Servers.ProLiant.SNMP.HPProLiantSNMPCoolingHealthMonitor : HP ProLiant SNMP Cooling Collection Health Monitor	Unit Monitor	HP ProLiant SNMP Cooling Collection	Runs a script to get HP ProLiant SNMP Cooling Collection Health
HewlettPackard.Servers.ProLiant.SNMP.HPProLiantSNMPRealtimeMonitorsHealthMonitor : HP ProLiant SNMP Realtime Monitors Collection Health Monitor	Unit Monitor	HP ProLiant SNMP Realtime Monitors	Runs a script to get HP ProLiant SNMP Realtime Monitors Collection Health
HewlettPackard.Servers.ProLiant.SNMP.HPProLiantSNMPTemperatureSensorsHealthMonitor : HP ProLiant SNMP Temperature Sensors Collection Health Monitor	Unit Monitor	HP ProLiant SNMP Temperature Sensors Collection	Runs a script to get HP ProLiant SNMP Temperature Sensors Collection Health
HewlettPackard.Servers.ProLiant.SNMP.HPProLiantSNMPPowerSuppliesHealthMonitor : HP ProLiant SNMP Power Supplies Collection Health Monitor	Unit Monitor	HP ProLiant SNMP Power Supplies Collection	Runs a script to get HP ProLiant SNMP Power Supplies Collection Health

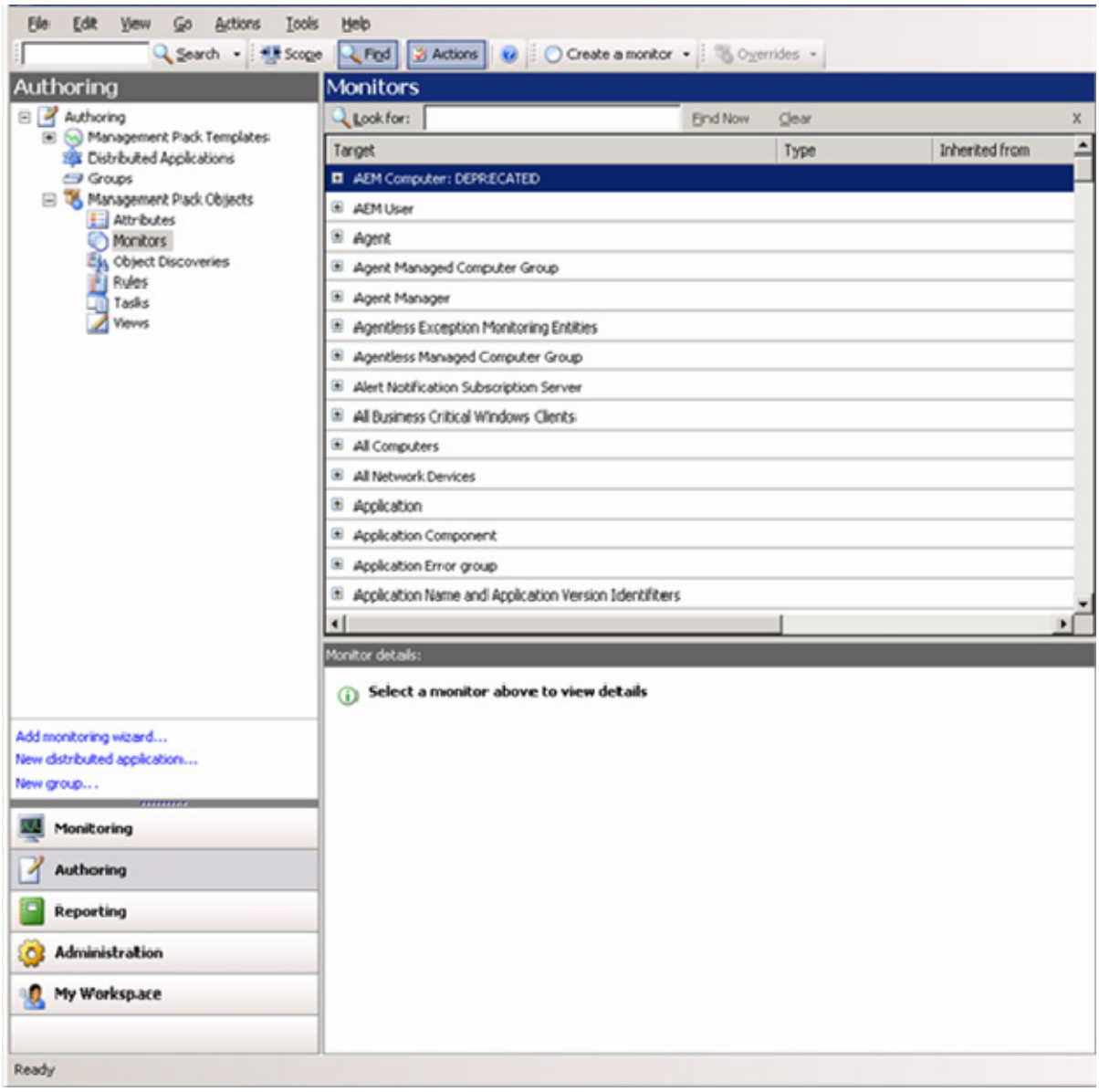
ID: Name	Type	Target Class	Description
HewlettPackard.Servers.ProLiant.SNMP.HPProLiantSNMPServerStorageHealthMonitor : HP ProLiant SNMP Server Storage Collection Health Monitor	Unit Monitor	HP ProLiant SNMP Server Storage Collection	Runs a script to get HP ProLiant SNMP Server Storage Collection Health
HewlettPackard.Servers.ProLiant.SNMP.HPProLiantSNMPServerNetworksHealthMonitor : HP ProLiant SNMP Server Networks Collection Health Monitor	Unit Monitor	HP ProLiant SNMP Server Networks Collection	Runs a script to get HP ProLiant SNMP Server Networks Collection Health
HewlettPackard.Servers.ProLiant.SNMP.HPProLiantSNMPManagementProcessorsHealthMonitor : HP ProLiant SNMP Management Processors Collection Health Monitor	Unit Monitor	HP ProLiant SNMP Management Processors Collection	Runs a script to get HP ProLiant SNMP Management Processors Collection Health
HewlettPackard.Servers.ProLiant.SNMP.HPProLiantSNMPLogsHealthMonitor : HP ProLiant SNMP Hardware Logs Collection Health Monitor	Unit Monitor	HP ProLiant SNMP Logs Collection	Runs a script to get HP ProLiant SNMP Hardware Logs Collection Health
HewlettPackard.Servers.ProLiant.SNMP.HPProLiantSNMPUPSHealthMonitor : HP ProLiant SNMP UPS Collection Health Monitor	Unit Monitor	HP ProLiant SNMP UPS Collection	Runs a script to get HP ProLiant SNMP UPS Collection Health
HewlettPackard.Servers.ProLiant.SNMP.HPProLiantSNMPServerOthersHealthMonitor : HP ProLiant SNMP Server Others Collection Health Monitor	Unit Monitor	HP ProLiant SNMP Server Others Collection	Runs a script to get HP ProLiant SNMP Server Others Collection Health
HewlettPackard.Servers.ProLiant.HPProLiantSNMPManagement.SysMgmtHp.HealthMonitor: HP ProLiant Insight Management Agents Health Monitor	Unit Monitor	HP ProLiant SNMP Management	Monitors the health of HP System Management Homepage
HewlettPackard.Servers.ProLiant.HPProLiantSNMPManagement.CqMgHost.HealthMonitor: HP ProLiant Insight Management Agents Health Monitor	Unit Monitor	HP ProLiant SNMP Management	Monitors the health of HP Insight Foundation Agents
HewlettPackard.Servers.ProLiant.HPProLiantSNMPManagement.CqMgServ.HealthMonitor: HP ProLiant Insight Management Agents Health Monitor	Unit Monitor	HP ProLiant SNMP Management	Monitors the health of HP Insight Server Agents

ID: Name	Type	Target Class	Description
HewlettPackard.Servers.ProLiant.HPProLiantSNMPManagement.CqMgStor.HealthMonitor: HP ProLiant Insight Management Agents Health Monitor	Unit Monitor	HP ProLiant SNMP Management	Monitors the health of HP Insight Storage Agents
HewlettPackard.Servers.ProLiant.HPProLiantSNMPManagement.CpqNicMgmt.HealthMonitor: HP ProLiant Insight Management Agents Health Monitor	Unit Monitor	HP ProLiant SNMP Management	Monitors the health of HP Insight NIC Agents
HewlettPackard.Servers.ProLiant.HPProLiantSNMPManagement.cpqvcagent.HealthMonitor: HP ProLiant Insight Management Agents Health Monitor	Unit Monitor	HP ProLiant SNMP Management	Monitors the health of HP Version Control Agents
HewlettPackard.Servers.ProLiant.HPProLiantSNMPManagement.CpqRcmc.HealthMonitor: HP ProLiant Insight Management Agents Health Monitor	Unit Monitor	HP ProLiant SNMP Management	Monitors the health of HP ProLiant Remote Monitor Service
HewlettPackard.Servers.ProLiant.HPProLiantSNMPManagement.CpqRIIS.HealthMonitor: HP ProLiant Insight Management Agents Health Monitor	Unit Monitor	HP ProLiant SNMP Management	Monitors the health of HP ProLiant Rack Infrastructure Interface Service
HewlettPackard.Servers.ProLiant.HPProLiantSNMPManagement.sysdown.HealthMonitor: HP ProLiant Insight Management Agents Health Monitor	Unit Monitor	HP ProLiant SNMP Management	Monitors the health of HP ProLiant System Shutdown Service</Description>
HewlettPackard.Servers.ProLiant.HPProLiantSNMPManagement.CIMnotify.HealthMonitor: HP ProLiant Insight Management Agents Health Monitor	Unit Monitor	HP ProLiant SNMP Management	Monitors the health of HP Insight Event Notifier
HewlettPackard.Servers.ProLiant.HPProLiantSNMPManagement.hplopts.HealthMonitor: HP ProLiant Insight Management Agents Health Monitor	Unit Monitor	HP ProLiant SNMP Management	Monitors the health of HP iLO Passthrough Service

Overriding individual monitors

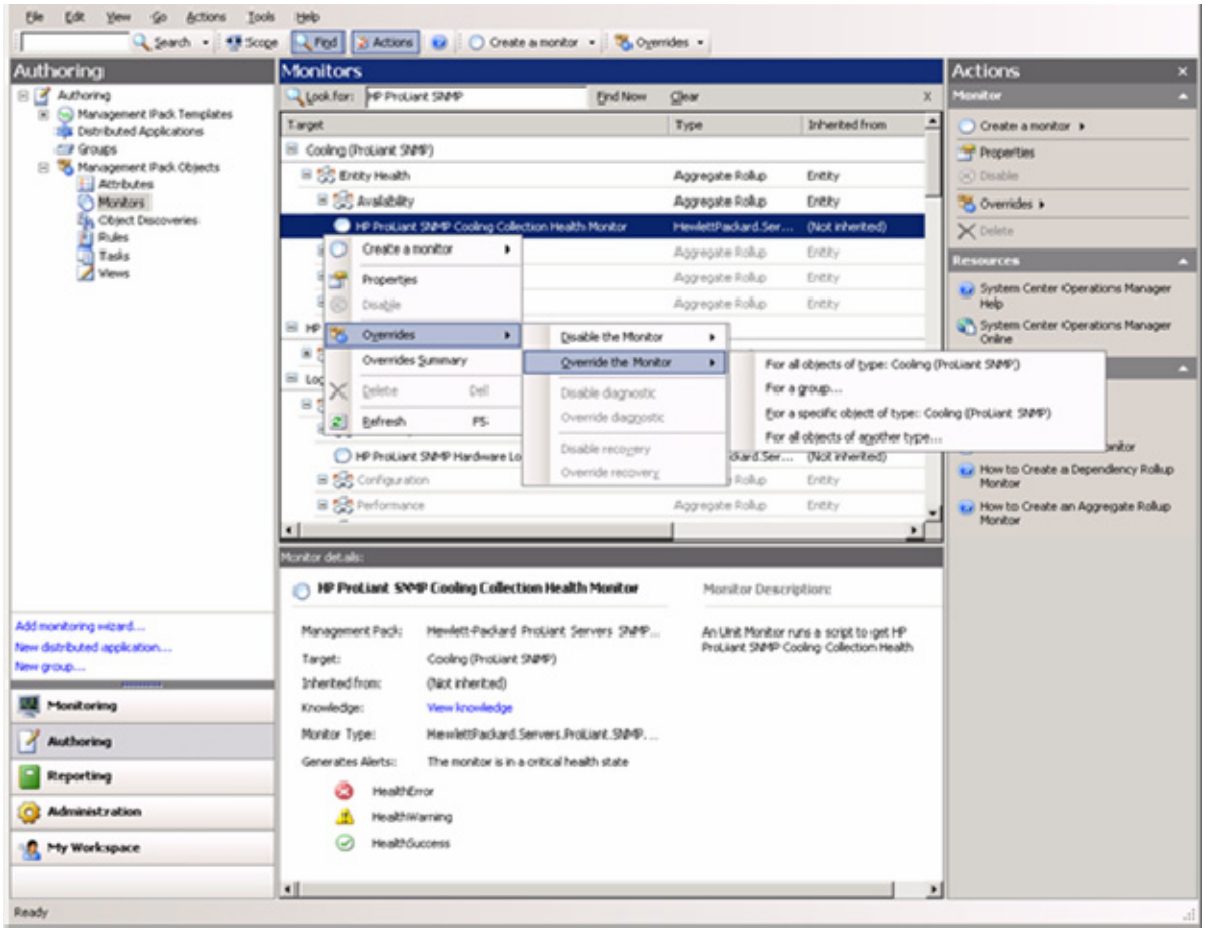
Use the following procedure to override individual monitor properties.

1. Select the **Authoring** tab, and select **Monitors.**

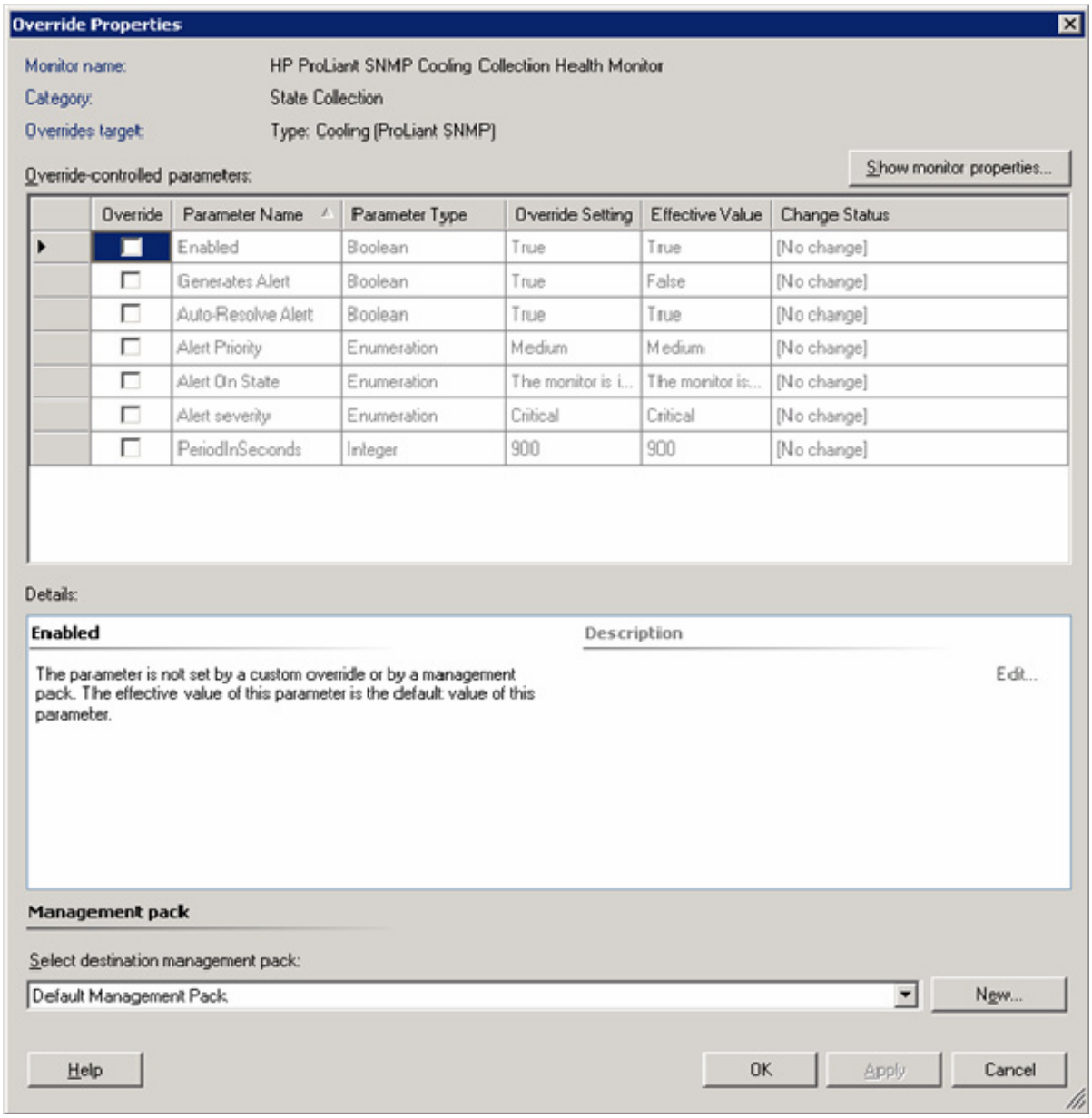


2. Enter the monitor rule name in the Look for textbox.

3. Select the monitor rule from the Search results screen. The information appears in the Monitor Details pane.

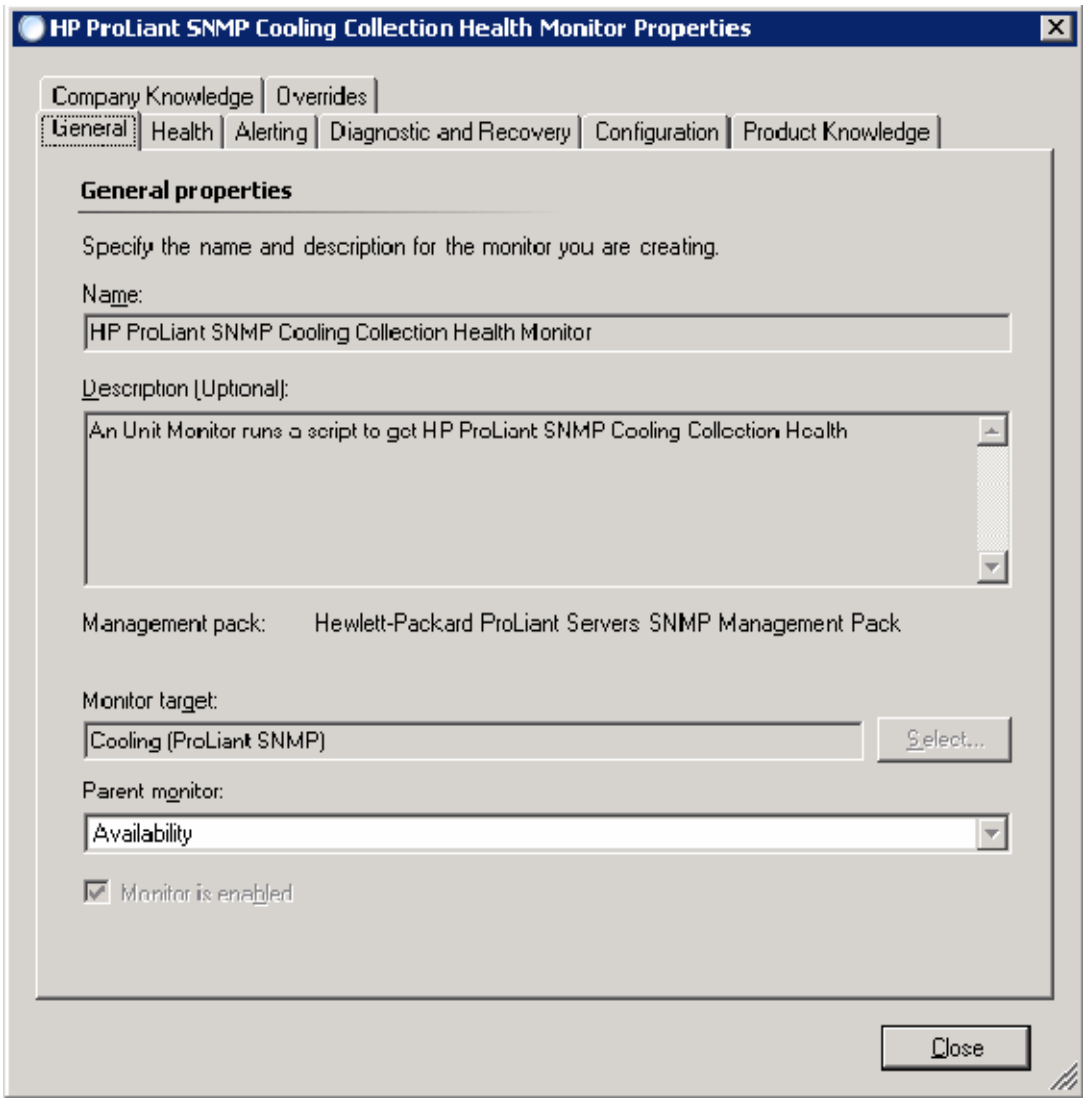


4. To access the definition of the monitor, click **View Knowledge**. The Properties dialog window appears.

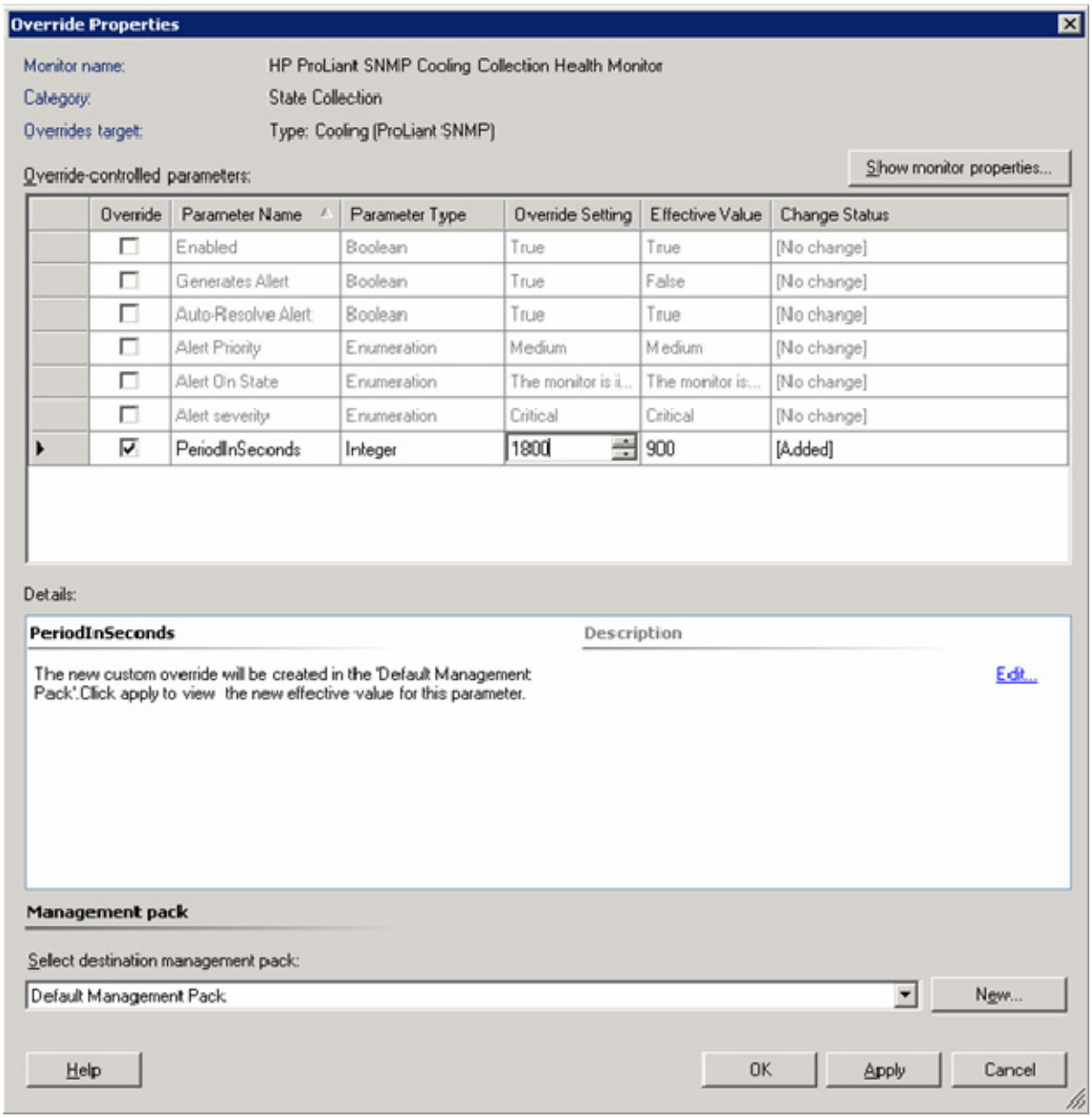


5. Click **Close**.

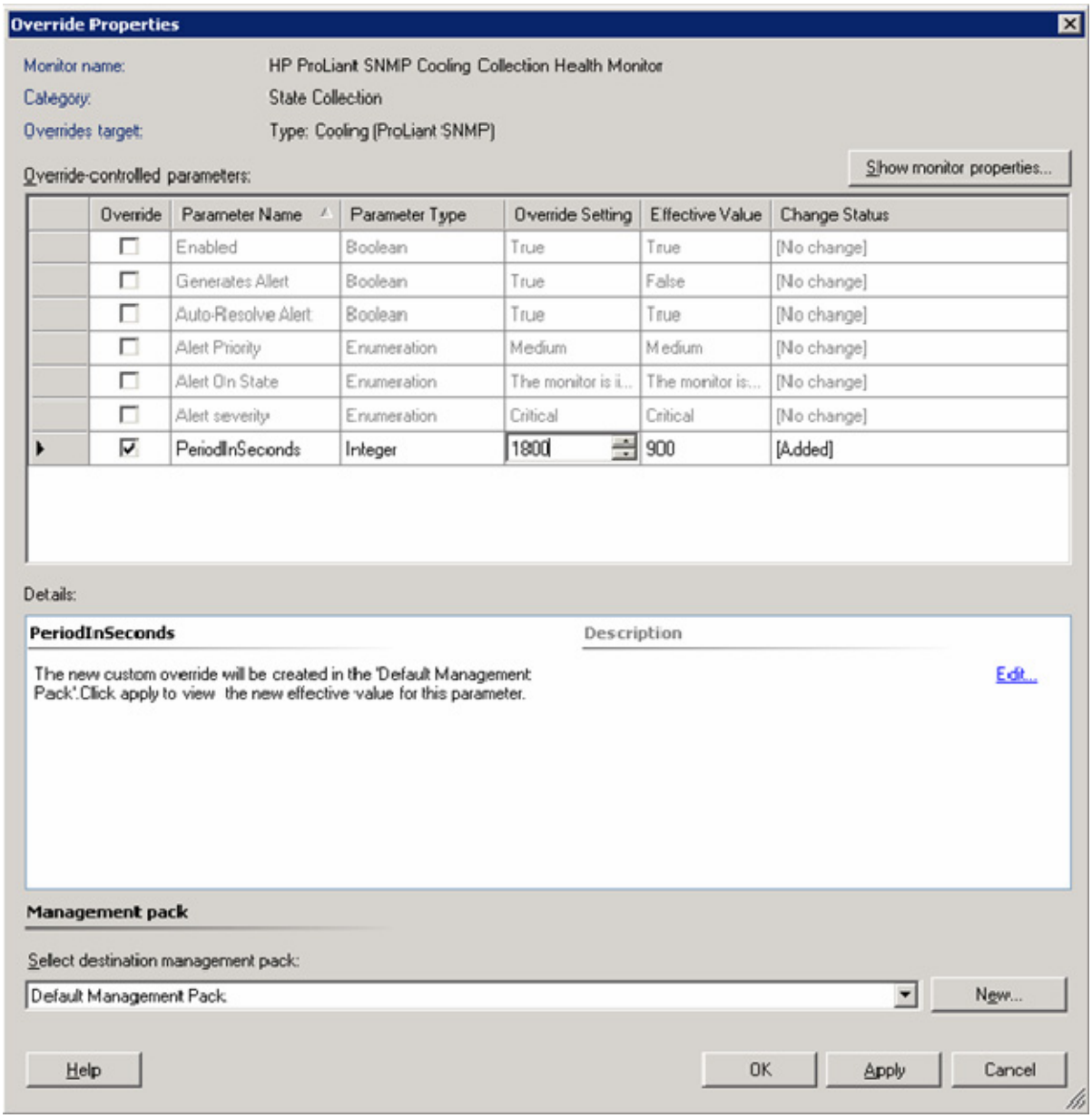
6. To override the settings of this monitor, click **Overrides>Override the Monitor**.



7. Select the **Override** checkbox next to the appropriate Parameter Name from the menu. The Override Properties dialog window appears.



8. All available overriding parameters display in the dialog window. Select the entry to override, and enter the **Override Setting** numerical value.



Security for HP tasks

Security settings are required to run HP tasks properly. HP tasks are categorized into three types:

- Console Tasks that launch an external tool, which does not communicate to the System Center Essentials interface. (Type A)
  - HP System Management Homepage
  - HP Integrated Lights-Out
  - HP Systems Insight Manager
  - Remote Desktop
  - Remote Desktop (Console)

- Computer Management

- Console Tasks that launch an external tool, which directly communicate to the System Center Essentials interface. (Type B)
  - HP Custom Data Manager
- Tasks that run on a managed node under System Center Essentials Health Service. (Type C)
  - HP ProLiant Integrated Management Log Export
  - HP ProLiant Integrated Management Log Clear

To use these tasks properly, the following user role profile and credentials are required:

- Type A—These tools are launched locally on the current user's credentials. These include the password validation process, which asks for the login information individually. They are dependant on the current user's credentials and the security management of the tool.
- Type B—HP Custom Data Manager accesses the SDK interface and the Connector interface of System Center Essentials. The SDK Interface provides the capability to read the HP Server custom data, and the Connector interface provides the capability to write HP Server custom data. Reading permission is assigned to members of the following Operator roles:
  - Advanced Operator
  - Author
  - Operator
  - Read-Only Operator
  - Administrator of System Center Essentials

  Writing permission is assigned to the Administrator role.
- Type C—These log tasks require proper System Center Essentials role settings. Tasks can be executed with Operator, Advanced Operator, Author and Administrator profiles. The operator profile can select each task individually to allow access to members. For more information, see the System Center Essentials User Guide for Security and User Role settings.

Event rules for HP ProLiant servers

ProLiant base hardware events

Windows® Event ID	Base hardware event description	Target class
1025	Memory degraded	Memory (ProLiant SNMP)
1026	Memory degraded	Memory (ProLiant SNMP)
1027	Memory degraded	Memory (ProLiant SNMP)
1028	Memory degraded	Memory (ProLiant SNMP)
1031	Memory degraded	Memory (ProLiant SNMP)
1071	Memory degraded	Memory (ProLiant SNMP)
1072	Memory error tracking disabled	Memory (ProLiant SNMP)
1092	Power on self test degraded	Others (ProLiant SNMP)
1103	Power subsystem degraded or failed	Power Supplies (ProLiant SNMP)
1114	Processor degraded	Processors (ProLiant SNMP)
1115	Base system degraded	Others (ProLiant SNMP)
1124	Power subsystem degraded or failed	Power Supplies (ProLiant SNMP)
1125	Power subsystem degraded or failed	Power Supplies (ProLiant SNMP)
1126	Power subsystem degraded or failed	Power Supplies (ProLiant SNMP)
1128	Power subsystem degraded or failed	Power Supplies (ProLiant SNMP)
1137	DC-DC power converter degraded or failed	Power Supplies (ProLiant SNMP)
1138	DC-DC power converter degrader or failed	Power Supplies (ProLiant SNMP)
1139	DC-DC power converter degraded or failed	Power Supplies (ProLiant SNMP)
1142	PCI adapter failed	Others (ProLiant SNMP)
1155	Rack power supply failed	Others (ProLiant SNMP)
1156	Rack power supply degraded	Others (ProLiant SNMP)
1160	Rack power subsystem not redundant	Others (ProLiant SNMP)
1161	Rack power subsystem degraded	Others (ProLiant SNMP)
1162	Rack power subsystem degraded	Others (ProLiant SNMP)
1163	Rack server power subsystem degraded	Others (ProLiant SNMP)
1164	Rack server power subsystem degraded	Others (ProLiant SNMP)
1165	Rack server power subsystem degraded	Others (ProLiant SNMP)
1166	Rack enclosure power subsystem degraded	Others (ProLiant SNMP)

Windows® Event ID	Base hardware event description	Target class
1167	Rack enclosure power subsystem degraded	Others (ProLiant SNMP)
1169	Rack enclosure power subsystem degraded	Others (ProLiant SNMP)
1172	Rack enclosure power subsystem degraded	Others (ProLiant SNMP)
1173	Rack enclosure power subsystem degraded	Others (ProLiant SNMP)
1174	Rack enclosure power subsystem degraded	Others (ProLiant SNMP)
1175	Rack enclosure power subsystem degraded	Others (ProLiant SNMP)
1176	Rack power subsystem degraded	Others (ProLiant SNMP)
1177	Rack enclosure power subsystem degraded	Others (ProLiant SNMP)
1178	Rack enclosure power subsystem degraded	Others (ProLiant SNMP)

ProLiant environmental hardware events

Windows® Event ID	Environmental hardware event description	Target class
1082	Temperature failed and system shutdown	Temp Sensors (ProLiant SNMP)
1083	Temperature degraded	Temp Sensors (ProLiant SNMP)
1085	Fan failed	Cooling (ProLiant SNMP)
1086	Fan degraded	Cooling (ProLiant SNMP)
1088	Fan failed	Cooling (ProLiant SNMP)
1129	Fan degraded	Cooling (ProLiant SNMP)
1130	Fan failed	Cooling (ProLiant SNMP)
1131	Fan degraded	Cooling (ProLiant SNMP)
1134	Temperature failed and system shutdown	Temp Sensors (ProLiant SNMP)
1135	Temperature degraded	Temp Sensors (ProLiant SNMP)
1147	Rack enclosure temperature degraded or failed	Others (ProLiant SNMP)
1148	Rack enclosure temperature degraded or failed	Others (ProLiant SNMP)
1150	Rack fans failed	Others (ProLiant SNMP)
1151	Rack fans degraded	Others (ProLiant SNMP)

ProLiant remote management processor events

Windows® Event ID	Remote management processor event description	Target class
1109	Remote Management Processor battery failed	Management Processors (ProLiant SNMP)
1110	Remote Management Processor failed	Management Processors (ProLiant SNMP)
1111	Remote Management Processor degraded	Management Processors (ProLiant SNMP)
1112	Remote Management Processor battery connector degraded	Management Processors (ProLiant SNMP)
1113	Remote Management Processor keyboard connector degraded	Management Processors (ProLiant SNMP)
1116	Remote Management Processor mouse connector degraded	Management Processors (ProLiant SNMP)
1117	Remote Management Processor power connector degraded	Management Processors (ProLiant SNMP)
1181	Remove Management Processor failed reset	Management Processors (ProLiant SNMP)

ProLiant cluster hardware events

Windows® Event ID	Cluster hardware event description	Target class
1167	Cluster resource degraded	Others (ProLiant SNMP)
1168	Cluster resource failed	Others (ProLiant SNMP)
1169	Cluster network degraded	Others (ProLiant SNMP)
1170	Cluster network failed	Others (ProLiant SNMP)
1171	Cluster service degraded	Others (ProLiant SNMP)
1172	Cluster service failed	Others (ProLiant SNMP)

ProLiant network interface events

Windows® Event ID	Network interface event description	Target class
1281	Network interface failed	Networks (ProLiant SNMP)
1283	NIC teaming failed	Networks (ProLiant SNMP)
1285	Network interface failed	Networks (ProLiant SNMP)
1287	NIC teaming failed	Networks (ProLiant SNMP)

ProLiant server storage events

Windows® Event ID	Storage server event description	Target class
1061	Drive array physical drive failed	Storage (ProLiant SNMP)
1063	Drive array spare drive failed	Storage (ProLiant SNMP)
1064	Drive array physical drive failed	Storage (ProLiant SNMP)
1065	Drive array accelerator degraded or failed or battery failed	Storage (ProLiant SNMP)
1066	Drive array accelerator degraded or data degraded or failed	Storage (ProLiant SNMP)
1067	Drive array accelerator degraded or failed or battery failed	Storage (ProLiant SNMP)
1075	Storage system fan degraded	Storage (ProLiant SNMP)
1076	Storage system temperature failed	Storage (ProLiant SNMP)
1077	Storage system temperature degraded	Storage (ProLiant SNMP)
1101	Storage system side panel degraded	Storage (ProLiant SNMP)
1104	Storage system fault-tolerant power supply degraded	Storage (ProLiant SNMP)
1107	SCSI tape drive failed	Storage (ProLiant SNMP)
1119	SCSI tape drive degraded	Storage (ProLiant SNMP)
1120	SCSI tape drive degraded	Storage (ProLiant SNMP)
1121	IDE drive degraded	Storage (ProLiant SNMP)
1145	External array logical drive failed	Storage (ProLiant SNMP)
1146	External array physical drive failed	Storage (ProLiant SNMP)
1147	External array spare drive failed	Storage (ProLiant SNMP)
1148	External array accelerator failed or data failed or battery failed	Storage (ProLiant SNMP)
1149	External array accelerator failed or data failed or battery failed	Storage (ProLiant SNMP)
1150	External array accelerator failed or data failed or battery failed	Storage (ProLiant SNMP)
1151	External array controller degraded or failed	Storage (ProLiant SNMP)
1152	Storage system fan degraded	Storage (ProLiant SNMP)
1153	Storage system power supply degraded	Storage (ProLiant SNMP)
1154	Storage system power supply UPS degraded	Storage (ProLiant SNMP)
1155	Storage system temperature degraded	Storage (ProLiant SNMP)
1156	SCSI tape library failed	Storage (ProLiant SNMP)
1158	SCSI tape library degraded	Storage (ProLiant SNMP)
1159	SCSI tape library door degraded (disabled at default)	Storage (ProLiant SNMP)
1161	SCSI CD library degraded	Storage (ProLiant SNMP)

Windows® Event ID	Storage server event description	Target class
1164	Drive array controller degraded	Storage (ProLiant SNMP)
1165	Drive array controller degraded	Storage (ProLiant SNMP)
1173	Fibre Channel tape controller degraded	Storage (ProLiant SNMP)
1174	Fibre Channel tape library degraded	Storage (ProLiant SNMP)
1175	Fibre Channel tape library door degraded	Storage (ProLiant SNMP)
1176	Fibre Channel tape drive degraded	Storage (ProLiant SNMP)
1177	Fibre Channel tape drive degraded	Storage (ProLiant SNMP)
1178	Fibre Channel tape drive degraded	Storage (ProLiant SNMP)
1179	External array controller degraded or failed	Storage (ProLiant SNMP)
1180	Drive array tape library degraded	Storage (ProLiant SNMP)
1181	Drive array tape library door degraded	Storage (ProLiant SNMP)
1182	Drive array tape drive degraded	Storage (ProLiant SNMP)
1183	Drive array tape drive degraded	Storage (ProLiant SNMP)
1184	Drive array tape drive degraded	Storage (ProLiant SNMP)
1185	Fibre Channel controller degraded	Storage (ProLiant SNMP)
1186	IDE ATA disk degraded	Storage (ProLiant SNMP)
1187	ATA RAID logical drive degraded	Storage (ProLiant SNMP)
1188	Storage system fan degraded	Storage (ProLiant SNMP)
1189	Storage system temperature degraded	Storage (ProLiant SNMP)
1190	Storage system power supply degraded	Storage (ProLiant SNMP)
1192	SCSI tape drive failed	Storage (ProLiant SNMP)
1193	External tape drive degraded	Storage (ProLiant SNMP)
1194	External tape drive degraded	Storage (ProLiant SNMP)
1195	External tape drive degraded	Storage (ProLiant SNMP)
1196	Storage system recovery server degraded	Storage (ProLiant SNMP)
1197	External tape library degraded	Storage (ProLiant SNMP)
1198	External tape library door degraded	Storage (ProLiant SNMP)
1199	Drive array controller degraded	Storage (ProLiant SNMP)
1201	Drive array spare drive degraded	Storage (ProLiant SNMP)
1202	Drive array physical drive degraded	Storage (ProLiant SNMP)
1203	Drive array physical drive degraded	Storage (ProLiant SNMP)
1204	Drive array accelerator degraded or failed or battery failed	Storage (ProLiant SNMP)
1205	Drive array accelerator data degraded or failed	Storage (ProLiant SNMP)
1206	Drive array accelerator degraded or failed or battery degraded	Storage (ProLiant SNMP)
1207	Drive array tape library degraded	Storage (ProLiant SNMP)

Windows® Event ID	Storage server event description	Target class
1208	Drive array tape library door degraded	Storage (ProLiant SNMP)
1209	Drive array tape drive degraded	Storage (ProLiant SNMP)
1210	Drive array tape drive degraded	Storage (ProLiant SNMP)
1211	Drive array tape drive degraded	Storage (ProLiant SNMP)
1212	Storage system fan degraded	Storage (ProLiant SNMP)
1213	Storage system temperature degraded	Storage (ProLiant SNMP)
1214	Storage system fault-tolerant power supply degraded	Storage (ProLiant SNMP)
1215	Fibre Channel controller degraded	Storage (ProLiant SNMP)
1216	Drive array physical drive degraded	Storage (ProLiant SNMP)
1217	Drive array spare drive degraded	Storage (ProLiant SNMP)
1218	Storage system fan degraded	Storage (ProLiant SNMP)
1219	Storage system temperature degraded	Storage (ProLiant SNMP)
1220	Storage system fault-tolerant power supply degraded	Storage (ProLiant SNMP)
1221	SAS/SATA physical drive degraded	Storage (ProLiant SNMP)
1222	SAS/SATA logical drive degraded	Storage (ProLiant SNMP)
1223	SAS tape drive degraded	Storage (ProLiant SNMP)

Technical support

Additional references

The following additional information sources are available:

- Web pages related to the HP Server Management Packs for System Center Essentials (http://www.hp.com/servers/integration)
- *HP Server Management Pack for Microsoft® System Center Essentials Troubleshooting Assistant*

Before contacting HP support

Before contacting HP for support, review the following steps and collect the necessary system information to help expedite a resolution:

1. Review the troubleshooting information found in this guide.

   IMPORTANT: Before proceeding, access the HP website (http://www.hp.com/servers/integration) to verify you are using the current version of the *HP Server Management Pack for Microsoft® System Center Essentials User Guide*. Use the part number and the date on the title page to determine which version you are using. The contents of this guide are updated frequently and newer versions are placed on the HP website. Download and open the updated file to use the current *HP Server Management Pack for Microsoft® System Center Essentials User Guide*.

2. See the HP website (http://www.hp.com/servers/integration) for product updates.
3. If you cannot resolve the problem with the information contained in this guide, then have the following information about your System Center Essentials environment available:
   - Microsoft® Windows® operating system version and patch levels
   - The HP Server Management Pack for Microsoft® System Center Essentials version installed
   - The versions of Insight Management Agents as associated plug-in tools (such as Version Control Agents and Insight Diagnostics)
   - HP server type and models
   - HP server serial number
   - Screen prints of any error messages received
   - Detailed description of the problem

Technical support contact information for the HP Server Management Packs for System Center Essentials

For technical support for System Center Essentials, contact Microsoft® support.

For technical support for the HP Server Management Packs for System Center Essentials, e-mail HP support (mailto:MOMIntegrationPack.Support@hp.com). See "Before contacting HP support (on page 81)" for a list of information to include in your e-mail. Be sure to include a contact name and e-mail address.

For technical support for HP products, excluding the HP Server Management Packs for System Center Essentials, see "HP contact information (on page 82)."

HP contact information

For the name of the nearest HP authorized reseller:

- In the United States, see the HP US service locator webpage (http://www.hp.com/service_locator).
- In other locations, see the Contact HP worldwide (in English) webpage (http://welcome.hp.com/country/us/en/wwcontact.html).

For HP technical support:

- In the United States, for contact options see the Contact HP United States webpage (http://welcome.hp.com/country/us/en/contact_us.html). To contact HP by phone:
  - Call 1-800-HP-INVENT (1-800-474-6836). This service is available 24 hours a day, 7 days a week. For continuous quality improvement, calls may be recorded or monitored.
  - If you have purchased a Care Pack (service upgrade), call 1-800-633-3600. For more information about Care Packs, refer to the HP website (http://www.hp.com).
- In other locations, see the Contact HP worldwide (in English) webpage (http://welcome.hp.com/country/us/en/wwcontact.html).

Acronyms and abbreviations

ATA

Advanced Technology Attachment

BIOS

Basic Input/Output System

CPU

central processing unit

DLL

dynamic link library

FAQ

frequently asked questions

HTTP

hypertext transfer protocol

I/O

input/output

IDE

integrated device electronics

IMP

Insight Management Pack

IP

Internet Protocol

IRQ

interrupt request

MIB

management information base

MP

Management Pack

NIC

network interface controller

PCI

peripheral component interface

RAID

redundant array of inexpensive (or independent) disks

SAS

serial attached SCSI

SATA

serial ATA

SCSI

small computer system interface

SIM

Systems Insight Manager

SMH

System Management Homepage

SNMP

Simple Network Management Protocol

SP1

Service Pack 1

SQL

structured query language

UPS

uninterruptible power system

WMI

Windows Management Instrumentation

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