Intel® Server Management Pack for Windows

User Guide

Revision 1.0

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Revision History

Date	Revision	Description
June 21, 2007	1.0	Initial Release

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**Intel® Server Management Pack for Windows User Guide**

1 Introduction

The Intel® Management Pack for Windows* provides essential server management tools for small and medium sized businesses. This Management Pack adds server management functionality for Intel server platforms running Microsoft Windows by building upon the extensive capabilities of Microsoft System Center Essentials 2007.

In Microsoft* System Center Essentials 2007, the managed computers (shown as nodes in the following diagram) may be servers, desktop computers, or laptop computers. With the Intel Server Management Pack for Windows, you can manage one Intel server right out of the box. You can then add licenses to manage additional nodes as your business grows. The System Center family of products includes the following three products:

- Microsoft System Center Essentials 2007 **Single Server Edition** (stand-alone system management for one server)
- Microsoft System Center Essentials 2007 **Small Network Edition** (system management for up to four servers and 15 clients)
- Microsoft System Center Essentials 2007 **Standard Edition** (system management for up to 15 servers and 50 clients)

All three Microsoft System Center Essentials 2007 products are installed on the Microsoft System Center Essentials 2007 server from the Intel System Management Software CD, then unlocked with the license keys.

The following diagram identifies the elements in a typical small network installation of Microsoft System Center Essentials 2007.
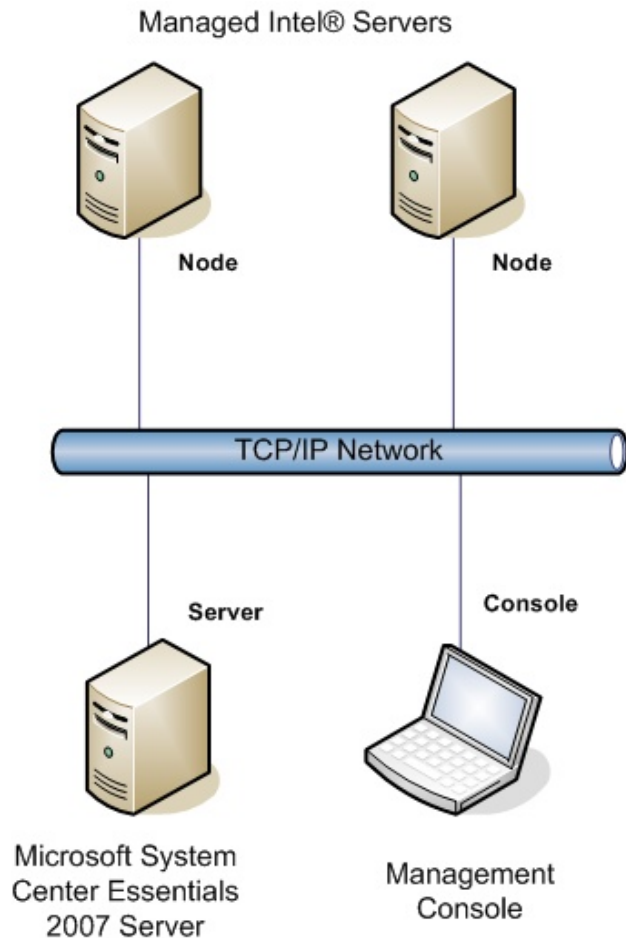
Note: Microsoft System Center Essentials 2007 requires Microsoft Active Directory and only one copy of the Server may be installed in a network domain. The prerequisite checker in the installer will inform you if another instance of Microsoft System Center Essentials 2007 has been detected.

If you have already installed Microsoft System Center Essentials 2007, you just need to install the Intel Server Management Pack for Windows. You can also use the Intel Server Management Pack for Windows with Microsoft System Center Operations Manager 2007 (available from Microsoft).

Contact your Intel Sales representative or visit shop.intel.com to order additional Microsoft System Center Essentials 2007 license keys.

Features

The Intel Server Management Pack for Windows has the following features:

- Intel Agent Managed and Agentless Computers are added to the Microsoft System Center Essentials 2007 Monitoring views

- Provides a new hardware event log in the Windows Event Viewer

- Ability to launch Intel Command Line Interface (Intel CLI), remote KVM, and a Serial Over LAN (SOL) console from the Microsoft System Center Essentials 2007 console

- Supports Intelligent Platform Management Interface (IPMI) based Intel servers

- Supports remote power control and system reset

- Provides power usage graphs for Power Supply Management Interface (PSMI)-supported agent-based servers

- Supports graceful power off and reset when the operating system and management agent are present

- Supports remote BMC configuration from within the Intel Server Management Pack for Windows console and Intel CLI.

- Includes the Intel® Management Pack for Windows Console that shows you sensor readings, Field Replaceable Unit (FRU) data, and the System Event Log (SEL) for the selected Intel computer

- Supports "Maintenance Mode" in Microsoft System Center Essentials 2007

System Requirements

This hardware and software prerequisites for Intel Server Management Pack for Windows is the same as Microsoft System Center Essentials 2007, except where noted in this section.

Please refer to the Intel Server Management Pack for Windows *Release Notes* for changes to the system requirements that occurred after this document was published.

Microsoft System Center Essentials 2007 Server

The system must meet the minimum hardware and software perquisites for Microsoft System Center Essentials 2007. The system must have one of the following versions of Windows (IA-32 or Intel 64 architecture version):

- Windows Server 2003 Standard or Enterprise Edition, with SP1 or later
- Windows Server 2003 R2, with SP1 or later

Managed Intel® Server

The server must meet the minimum hardware and software perquisites for Microsoft System Center Essentials 2007 managed nodes, and it must have one of the following versions of Microsoft Windows (IA-32 or Intel 64 architecture version, unless otherwise noted):

- Windows Server 2003 Standard or Enterprise Edition, with SP1 or later
- Windows Server 2003 R2, with SP1 or later
- Windows XP Professional, with SP1 or later
- Windows 2000 Professional or Server, with SP4 (IA-32 architecture version)
- Windows Vista Enterprise Edition

Management Console

The system must meet the minimum hardware and software perquisites for Microsoft System Center Essentials 2007 consoles, and it must have one of the following versions of Microsoft Windows (IA-32 or Intel 64 architecture version, unless otherwise noted):

- Windows Server 2003 Standard or Enterprise Edition, with SP1 or later
- Windows Server 2003 R2, with SP1 or later
- Windows XP Professional, with SP1 or later
- Windows Vista Enterprise Edition
- Sun* Java* Runtime Environment (JRE) 1.4.2 or later if Intel Advanced Remote Server Control (Intel ARSC) is installed

Installation

The Intel Server Management Software CD includes an *autorun* launch point on CD #1 for the Microsoft System Center Essentials 2007, Intel Server Management Pack for Windows, and the Intel Utilities. The installer will prompt the user for CD #2, if needed.

You must install the Intel Server Management Pack for Windows on the following systems:

- The Microsoft* System Center Essentials 2007 or Microsoft System Center Operations Manager 2007 management server
- All managed Intel servers (requires a minimum of the management agent)
- All other systems that have the Microsoft System Center Essentials 2007 user interface installed

The Intel Server Management Pack for Windows installer is automatically launched after installing Microsoft System Center Essentials 2007 on your management server from the Intel System Management Software CD. If you have a Microsoft System Center Essentials 2007 or Microsoft System Center Operations Manager 2007 installation without the Intel Server Management Pack for Windows, install the management pack from the Intel Server Management Software CD.

The Intel Server Management Pack for Windows installer is also automatically launched after installing Microsoft System Center Essentials 2007 user interface from the Intel System Management Software CD. If you have previously installed Microsoft System Center Essentials 2007 user interface from another source, you must install the Intel Server Management Pack for Windows from the Intel System Management Software CD on the system with the Microsoft System Center Essentials 2007 user interface.

To install the Intel Server Management Pack for Windows on the managed nodes, use one of the following methods:

- Install Intel Server Management Pack for Windows from the Intel System Management Software CD on each managed server by going to each server and using the local Windows console.
- Deploy the Intel Server Management Pack for Windows from the management server using the Microsoft System Center Essentials 2007 software deployment tools after you have installed the Intel Server Management Pack for Windows on the management server. This option allows you to remotely install the Management Pack.

Other Management Packs from Intel

Please refer to the Intel Server Management Pack for Windows *Release Notes* for the latest information of other Intel Management Packs that may be available.

Where To Find More Information

http://support.intel.com for Intel support

http://www.microsoft.com/systemcenter/sce/default.mspx for Microsoft System Center Essentials 2007 information

2   Views

The Intel Server Management Pack for Windows adds eight views to the Microsoft System Center Essentials 2007 console under Monitoring.

View	Intel Agent Managed Servers	Intel Agentless Servers (OOB)
Intel Server State	✓	
Intel Hardware Alerts	✓	
Intel Hardware Diagram	✓	
Intel Hardware State	✓	
Power Consumption (Watts)	✓	
Total Power Usage Percent	✓	
Intel Agentless Servers		✓
Intel Agentless Discovery Range		✓

To access these views, in the Microsoft System Center Essentials 2007, click on **Monitoring**, then choose the view.

To customize the view, right click on the view, select **Customize View**.

Intel® Server State View

The **Intel Server State** view lists all the Intel servers that have the Intel Server Management Pack for Windows agent installed.

Intel® Hardware Alerts View

The **Intel Hardware Alerts** view lists all the hardware alerts generated by the Intel servers with the agent installed.

Intel® Hardware Diagram View

The **Intel Hardware Diagram** view shows all the Intel Computers with agents and their subcomponents. For each computer, the health of the computer or component is indicated by one of the standard Microsoft System Center Essentials 2007 icons. The health at each level is rolled-up from lower levels, when present, otherwise it is based on the on-board sensors reported by the agent.

Intel® Hardware State View

The **Intel Hardware State** view shows the health of the same components that are shown in the Intel Hardware Diagram view, but in a tabular format. This view allows you to sort the values by selecting a column.

Power Consumption (Watts) View

The **Power Consumption (Watts)** view shows the power consumption reported by the selected servers. Only PSMI-capable power supplies with this power reporting capability are supported.

Total Power Usage Percent View

The **Total Power Usage Percent** view shows the total power consumption reported by the selected servers as a percent of the total rated power for the power supplies. Only PSMI-capable power supplies with this power reporting capability are supported.

Intel® Agentless Servers View

Agentless means that the management agent is not available (for example, the server may be powered off, or the Intel management agent is not installed on the managed server). The **Intel Agentless Servers** view reports all Intel servers that are agentless.

Intel® Agentless Discovery Range View

The **Intel Agentless Discovery Range** view provides a means to set the IP range used to discover Agentless servers on your network.

3 Intel® Server Management Pack Console

The Intel Server Management Pack Console displays the hardware sensors, Field Replaceable Unit (FRU) data, and System Event Log (SEL) for the Intel Computer selected in the Intel Computers view. This console is only available for Intel servers that have a baseboard management controller or National Semiconductor* PC87431x "mini" BMC.

To launch the Intel Server Management Pack Console, go to the **Intel Computers** view, select a computer, then choose the **Launch Intel Server Management Pack Console** task.

The Intel Server Management Pack Console has a navigation pane on the left side of the screen. The navigation menu includes the following choices:

Hardware Information

Sensor Readings (shows a table of all hardware sensors and the threshold settings)

Cooling (shows a table of all fan sensors and the threshold settings)

Voltage (shows a table of all voltage sensors and the threshold settings)

Power Supply (shows a table of all power supply sensors and the threshold settings)

Chassis Information (shows the state of the chassis intrusion sensor and sets the Chassis ID LED)

System Event Log (allows you to view and clear the SEL)

Memory (displays the memory size and type information)

Processor (displays the processor speed information)

Cache (displays the size information)

Storage (displays information about the hard disk drives, logical disk drives, and CD or DVD drives)

FRU (displays the Field Replaceable Unit information)

BMC Configuration

User Password (sets the BMC password for the null user)

Boot Options (sets the boot device for the next reboot. **Warning:** The system will be rebooted in 60 seconds after the user presses the Apply button.)

LAN Channel (sets the LAN channel properties for the BMC)

Power Options (sets the power restore options)

SOL Options (sets the Serial Over LAN options)

4   Tasks

The Intel Server Management Pack for Windows adds several new Monitoring tasks.

For the Microsoft System Center Essentials 2007 **Single Server Edition**, the following tasks are available:

- Intel® Server: Power Shutdown Graceful
- Intel® Server: Management Pack Console
- Intel® Server: Power Reboot Graceful

For Microsoft System Center Essentials 2007 **Small Network and Standard Edition**, the following tasks are available:

- Intel® Server: Power Shutdown Graceful
- Intel® Server: Management Pack Console
- Intel® Server: Power Reboot Graceful
- Intel® Server: Console Redirection (SOL) with Reset
- Intel® Server: Command Line Interface (CLI)
- Intel® Server: Console Redirection (SOL)
- Intel® Server: RMM2 Web Console
- Intel® Server: IMM-Adv KVM Viewer (ARSC)
- Intel® Server: Power Down Forced
- Intel® Server: Power Up
- Intel® Server: Power Reset Forced
- Intel® Server: Update Password for Agentless Management

Each task is briefly described in the following sections.

Intel® Server: Power Shutdown Graceful

This task issues a Shut Down command to the Windows Operating System for the selected Intel server.

Intel® Server: Management Pack Console

This task launches the Intel Server Management Pack Console for the selected Intel server.

Intel® Server: Power Reboot Graceful

This task issues a Restart command to the Windows Operating System for the selected Intel server. This command will end your Windows session, reboot the server, and restart Windows.

Intel® Server: RMM2 Web Console

This task launches the Intel Remote Management Module 2 Web Console for the selected Intel server. This task is only available for Intel servers that have the Intel RMM2 module. The Intel RMM2 Web Console allows you to configure the Intel RMM2.

For more information, refer to the *Intel® Remote Management Module User's Guide* provided with the Intel Remote Management Module.

Intel® Server: Console Redirection (SOL)

This task launches a Serial Over LAN (SOL) connection with the selected server without issuing a reboot command. A console window will be opened with text-based input and output to the server. The standard IPMI SOL hotkeys are available in the console window.

You must enable SOL on the selected server before you can launch this task. To configure SOL, do the following:

1. Select an Intel server from Intel Computers.

2. Choose Launch Intel Server Management Pack Console.

3. Choose BMC Configuration.

4. Choose SOL Options

5. Configure the desired LAN channel for SOL.

Intel® Server: Console Redirection (SOL) with Reset

This task issues a hard reboot command to the server then launches a Serial Over LAN (SOL) connection with the selected server. A console window will be opened with text-based input and output to the server. The standard IPMI SOL hotkeys are available in the console window.

You must enable SOL on the selected server before you can launch this task (see Launch SOL task).

Intel® Server: Command Line Interface (CLI)

The Intel Command Line Interface (Intel CLI) is a command line tool that allows users to issues commands directly to the baseboard management controller (BMC) on the Intel server. You must install the Intel CLI proxy before launching this task.

Launching the Intel Command Line Interface will open a command window and will connect to the computer selected in Intel Computers. The BMC will prompt for a user name and password.

Refer to the *Intel Command Line Interface User's Guide* for the command syntax.

Use the Intel System Management Software CD to install the Intel CLI proxy and the *User's Guide.*

Intel® Server: IMM-Adv KVM Viewer (ARSC)

This task launches the Intel ARSC viewer for the selected Intel server. The task is available only when the selected computer has either the Intel Management Module—Advanced Edition.

The Intel Management Module—Advanced Edition includes the Intel Advanced Remote Server Control (Intel ARSC) application. This provides remote keyboard, video, and mouse. Refer to the on-line help with the Intel ARSC application for more information.

Intel® Server: Power Down Forced

This task issues a hardware power off command to the selected Intel server.   This task is only available when the selected Intel Computer is powered on.

Intel® Server: Power Up

This task issues a hardware power on command to the selected Intel server. This task is only available when the selected Intel Computer is powered off.

Intel® Server: Power Reset Forced

This task issues a hardware reset command to the selected Intel server. This task is only available when the selected Intel Computer is powered on.

Intel® Server: Update Password for Agentless Management

This opens a window that allows you to configure the Baseboard Management Controller password for the selected Intel server.