Legal Statements

INFORMATION IN THIS DOCUMENT IS PROVIDED IN CONNECTION WITH INTEL® PRODUCTS FOR THE PURPOSE OF SUPPORTING INTEL DEVELOPED SERVER BOARDS AND SYSTEMS. NO LICENSE, EXPRESS OR IMPLIED, BY ESTOPPEL OR OTHERWISE, TO ANY INTELLECTUAL PROPERTY RIGHTS IS GRANTED BY THIS DOCUMENT. EXCEPT AS PROVIDED IN INTEL’S TERMS AND CONDITIONS OF SALE FOR SUCH PRODUCTS, INTEL ASSUMES NO LIABILITY WHATSOEVER, AND INTEL DISCLAIMS ANY EXPRESS OR IMPLIED WARRANTY, RELATING TO SALE AND/OR USE OF INTEL PRODUCTS INCLUDING LIABILITY OR WARRANTIES RELATING TO FITNESS FOR A PARTICULAR PURPOSE, MERCHANTABILITY, OR INFRINGEMENT OF ANY PATENT, COPYRIGHT OR OTHER INTELLECTUAL PROPERTY RIGHT.

UNLESS OTHERWISE AGREED IN WRITING BY INTEL, THE INTEL PRODUCTS ARE NOT DESIGNED NOR INTENDED FOR ANY APPLICATION IN WHICH THE FAILURE OF THE INTEL PRODUCT COULD CREATE A SITUATION WHERE PERSONAL INJURY OR DEATH MAY OCCUR.

Intel may make changes to specifications and product descriptions at any time, without notice. Designers must not rely on the absence or characteristics of any features or instructions marked “reserved” or “undefined.” Intel reserves these for future definition and shall have no responsibility whatsoever for conflicts or incompatibilities arising from future changes to them. The information here is subject to change without notice. Do not finalize a design with this information.

The products described in this document may contain design defects or errors known as errata which may cause the product to deviate from published specifications. Current characterized errata are available on request.

Contact your local Intel sales office or your distributor to obtain the latest specifications and before placing your product order.

Intel is a trademark of Intel Corporation in the U.S. and other countries.

Microsoft, Windows, Windows Server, Active Directory, and Vista are trademarks, or registered trademarks of Microsoft Corporation in the United States and/or other countries.

* Other names and brands may be claimed as the property of others.

Copyright © 2017 Intel Corporation. All rights reserved.
## Revision History

<table>
<thead>
<tr>
<th>Description</th>
<th>Revision Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Support for Intel® Server Board based on Intel® Xeon® processor E5-2600 v5 platforms</td>
<td>JANUARY 2016</td>
</tr>
<tr>
<td>• Integrated with CR 7.1 Build 01</td>
<td></td>
</tr>
<tr>
<td>• Integrated with CR 7.1 Build 02</td>
<td></td>
</tr>
<tr>
<td>• Integrated with Appcore 3.4 Build 01</td>
<td></td>
</tr>
<tr>
<td>• Enable support for RHEL 6.5, 6.6, SLES 11.4, 12.0, 12.1 and Windows</td>
<td></td>
</tr>
<tr>
<td>• Integrated with Appcore 3.4 Build 02</td>
<td>FEBRUARY 2016</td>
</tr>
<tr>
<td>• Enable support for RHEL 7.0, 7.1 and 7.2</td>
<td></td>
</tr>
<tr>
<td>• BUG Fix on L1, L2 Cache reading in Processor</td>
<td>June 2016</td>
</tr>
<tr>
<td>• Integrated with CR7.1 Build 03</td>
<td></td>
</tr>
<tr>
<td>• Fix Tracker EPSD100254070 : Getting Error Message in Linux OS during IASC installation</td>
<td>July 2016</td>
</tr>
<tr>
<td>• Fix Tracker EPSD100254071 : Getting Error Message in Linux OS during IASC uninstallation</td>
<td></td>
</tr>
<tr>
<td>• Fix Tracker EPSD100252035: processor cache not show correctly for Alpha Board, “KB” missing for L1, L2 and L3.</td>
<td></td>
</tr>
<tr>
<td>• Fix Tracker EPSD100254550: IASC build 5 - Discrete sensor in cooling is not working</td>
<td>September 2016</td>
</tr>
<tr>
<td>• Fix Tracker EPSD100254553: IASC build 5 - Cooling - Temperature column the Plus “+” minus “-” button is not working properly</td>
<td></td>
</tr>
<tr>
<td>• Fix Tracker EPSD100254554: IASC build 5 - Serial over lan button - Network 2 and 3 successfully update when enable LAN Failover</td>
<td></td>
</tr>
<tr>
<td>• Fix Tracker EPSD100252073 : Serial over lan button - Network 2 and 3 successfully update when enable LAN Failover</td>
<td></td>
</tr>
<tr>
<td>• Fix Tracker EPSD100254084 : IASC build 8.1.4- Discrete cooling sensor is not working</td>
<td></td>
</tr>
<tr>
<td>• Integrated with Appcore 3.4 Build 03</td>
<td>November 2016</td>
</tr>
<tr>
<td>• Integrated with CR7.1 Build 10</td>
<td></td>
</tr>
<tr>
<td>Fix Tracker</td>
<td>Description</td>
</tr>
<tr>
<td>-------------</td>
<td>-------------</td>
</tr>
<tr>
<td>EPSD100256211</td>
<td>[Wolfpass/Buchanan Pass] IASC build 8.1.08 - The reading of Temperature sensor and Fan sensor that is not available in the system which is displayed in IASC console are not the same as in BMC web console</td>
</tr>
<tr>
<td>EPSD100256201</td>
<td>[Wolf pass] IASC build 8.1.08 - Report button - Report generated is not grouped correctly in Fan table</td>
</tr>
<tr>
<td>EPSD100256195</td>
<td>[Wolfpass/Buchanan pass] IASC build 8.1.08 - Autoscript for Rhel 7.3 shows incorrect OS version once RPM installation complete</td>
</tr>
<tr>
<td>EPSD100256208</td>
<td>[Sawtooth pass] IASC build 8.1.08 - The reading of Temperature sensor and Fan sensor that is not available in the system which is displayed in IASC console are not the same as in BMC web console</td>
</tr>
<tr>
<td>EPSD100256207</td>
<td>[Sawtooth pass] IASC build 8.1.08 - Fan present/removed icon under DISCRETE SENSOR table is not tally as in BMC Web console</td>
</tr>
<tr>
<td>EPSD100256167</td>
<td>[Sawtooth pass] IASC build 8.1.08 - Autoscript for Rhel 7.3 shows incorrect OS version once RPM installation complete</td>
</tr>
<tr>
<td>EPSD100256197</td>
<td>[Sawtooth pass] IASC build 8.1.08 - Report button - Report generated is not grouped correctly in Fan table.</td>
</tr>
<tr>
<td>-</td>
<td>Integrated CR 7.1 Build 11</td>
</tr>
<tr>
<td>-</td>
<td>Integrated with Appcore 3.4 (build integrated with CacheRiver V14.1 with Build 12).</td>
</tr>
<tr>
<td>-</td>
<td>Integrated with CR7.1 Build 12</td>
</tr>
<tr>
<td>-</td>
<td>[Purley] IASC Build 8.1.10 - User button show many user option in BMC User Configuration Column</td>
</tr>
<tr>
<td>-</td>
<td>Integrated with CR7.1 Build 13</td>
</tr>
<tr>
<td>-</td>
<td>Added RHEL 7.3 Support</td>
</tr>
<tr>
<td>-</td>
<td>IASC Build 8.1.12 – many users is displayed as NOT AVAILABLE in BMC User Configuration Table in the generated reports.</td>
</tr>
<tr>
<td>-</td>
<td>Integrated with CR7.1 Build 14</td>
</tr>
</tbody>
</table>
# Contents

Legal Statements ........................................................................................................ 2

## Contents .................................................................................................................. 5

1 **Introduction** ......................................................................................................... 8

1.1 **Target Audience** ............................................................................................... 8

1.2 **Overview** ............................................................................................................. 8

1.3 **Features and Benefits** ........................................................................................ 9

1.4 **System Requirements** .......................................................................................... 11

1.4.1 **Supported Operating Systems** ....................................................................... 11

1.4.2 **Browser Requirements** .................................................................................. 12

1.4.3 **Supported Platforms** ..................................................................................... 12

1.5 **Supported Languages** .......................................................................................... 12

1.6 **Additional Information** ....................................................................................... 12

1.6.1 **Third Party Source Code/Binaries** .................................................................. 12

1.6.2 **Support Information** ........................................................................................ 12

1.6.3 **Related Documentation** ................................................................................... 13

1.7 **Terminology** ....................................................................................................... 14

2 **Getting Started** ................................................................................................... 15

2.1 **Installing Intel® Active System Console** ............................................................... 15

2.2 **TCP Information** ................................................................................................ 16

2.3 **Uninstalling Intel® Active System Console** .......................................................... 16

3 **Navigating Intel® Active System Console** ............................................................... 18

3.1 **System Information** ............................................................................................ 20

3.1.1 **Viewing System Health** .................................................................................... 21

3.1.2 **Viewing System Summary** .............................................................................. 21

3.1.3 **Viewing Processor Summary Readings** ............................................................ 22

3.1.4 **Viewing Memory Device Readings** ................................................................. 23

3.1.5 **Viewing Temperature and Fan Readings (Cooling Sensors)** .............................. 24

3.1.6 **Viewing Voltage and Current Sensors Readings** .............................................. 25

3.1.7 **Viewing Chassis Information** ......................................................................... 25
1.0 Introduction

The Intel® Active System Console is a simple, lightweight web application console that gives you a dashboard view of the Server hardware on which it is running. It helps you proactively monitor the health of your Server, allows remote configuration of Server, tracking of assets, alerting of any issues and generation of asset reports.

The Intel® Active System Console is a product offering from the Intel® System Management Software - a suite of software products designed to reduce the cost and time of managing servers and keep businesses running 24/7.

IASC is included with almost all Intel® Server Products at no additional charge giving your customer “peace of mind” that servers are healthy.

IASC offers the following:

- **Proactive alerting** allows the server administrator to plan routine maintenance activities and avoid unplanned downtime
- **Asset Inventory** tells you what components are installed in the server without having to shut down and open the system
- **Remote debug** isolates problems quickly saving hours and even days in the time it takes to debug and fix the issue.

1.1 Target Audience

The purpose of this document is to help system/server administrators install and use the Intel® Active System Console. It provides you detailed information on the features and benefits of Intel® Active System Console and how to use them. It describes the software requirements, supported operating systems, and the supported platforms. It also explains the installation and un-installation process.

1.2 Overview

The Intel® Active System Console helps you in proactive monitoring of the health of your Server, allows remote configuration of Server, tracking of assets, alerting of any issues and generation of asset reports. It gives you an overall view of the server hardware. This comprises information on hardware components of the system - overall health of the server and component health, sensors, System Event Log (SEL), storage (Logical Drives, Hard Drives), processors, memory, Field Replaceable Unit(FRU)s as well as BMC configuration.

Get Peace of Mind

It improves security, reduces costs, and helps businesses move from reactive to proactive system management. The software enables secure remote management and monitoring of servers,
clients, and applications from virtually any location—in a way that IT generalists can understand without attending weeks of training. It’s all about IT made easy:

Simple
- Makes it easy to set up and maintain a reliable and secure IT infrastructure
- Streamlines tasks throughout server life cycle with remote management
- Manages IT functions with a single suite of tools

Secure
- Keeps IT informed with automated daily health reports and alerts
- Improves reliability and stability with application and patch deployment

Smart
- Designed specifically for small to midsize business
- Reduces travel time and costs
- Provides a proactive solution to server management with reports and alerts

IASC displays the hardware sensors, Field Replaceable Unit (FRU) data, and System Event Log (SEL) for any system.

To launch the Intel® Active System Console, go to Start> Programs> Intel® Server Management Software >Intel® Active System Console.

You can also launch IASC from any client using the URL: https://<ipaddressofserver>:9393/asc

1.3 Features and Benefits

This section discusses the features and benefits of Intel® System Management Software suite of Products in general and the IASC in particular.

Intel® System Management Software

The following table lists the comparative features and benefits of Intel® System Management Software suite of Products:

<table>
<thead>
<tr>
<th>Features</th>
<th>Intel® Active System Console</th>
<th>Intel® SNMP-SA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Server Environment</td>
<td>Enterprise</td>
<td>Enterprise</td>
</tr>
<tr>
<td>User Interface</td>
<td>Web Based</td>
<td>Integrates into enterprise tools such as HP* OpenView</td>
</tr>
</tbody>
</table>
### Operating System Support
- Windows, Linux

### Single, easy to use console
- X

### Hardware Predictive Failure Analysis
- X
- X

### Sensor readings
- X
- X

### Hardware Event Log
- X

### Hardware and Software Inventory
- X (Hardware and Operating System)

### OS and Application Monitoring

### Software Patch Deployment

### Application Deployment

### Alerting
- X (Email and BMC SNMP)
- X (SNMP)

### Reporting
- X

### BMC Configuration
- X

### Power Management

### Performance Views

### Remote Management
- X
- X

### Multi Server Management

### Remote Power On/Off/Reboot

### Serial Over LAN (Console Redirection)

### OEM Customization

---

**Intel® Active System Console**

The Intel® Active System Console has the following features:

- Viewing System Health in the Dashboard
- Viewing Other System Information as follows:
  - Viewing System Summary
  - Viewing Processor Summary Readings
  - Viewing Memory Device Readings
  - Viewing Temperature and Fan Readings (Cooling Sensors)
  - Viewing Voltage and Current Sensors Readings
  - Viewing Chassis Information
  - Viewing Storage Readings
  - Viewing Miscellaneous Readings
Viewing System Events
Generating Reports
Checking for software updates

1.4 System Requirements

This section details the software requirements, supported operating systems and the supported platforms for the Intel® Active System Console.

1.4.1 Supported Operating Systems

- Microsoft Windows* Server 2012 R2 64-bit
- Microsoft Windows* Server 2016 R2 64-bit
- RHEL6* update5 (EM64T)
- RHEL7 (EM64T)
- RHEL7.1 (EM64T)
- RHEL7.2 (EM64T)
- RHEL7.3 (EM64T)
- SLES* 11.x (EM64T)
- SLES* 12.x (EM64T)

The below OSes are not supported after Build 03

- Windows* Server 2012 Enterprise
- Windows* Server 2008 Enterprise
- RHEL* 6.x 32 bit
- SUSE* 11.x 32 bit

Important Note:

a) OS without GUI (Graphical User Interface) is not supported.
b) For Red Hat OS version, before installing the IASC execute RHELx86_64AUTO.sh script (> sh RHELx86_64AUTO.sh) with OS DVD inn the DVD for installing the dependent package for IASC.
1.4.2  Browser Requirements
The application has been tested to run on Microsoft® Internet Explorer 7.x or later and Mozilla Firefox® 3.6 or later versions. It is best viewed in screen resolution from 1024 X 768 to 1440 X 900.

1.4.3  Supported Platforms

Intel® Server Board S2600WF
Intel® Server Board S2600BP
Intel® Server Board S2600STB

For the latest and up-to-date list of supported operating systems, system requirements and platforms supported refer to the release notes available with the product.

1.5  Supported Languages

English only

1.6  Additional Information

This section lists additional IASC related information that will help you use it appropriately.

1.6.1  Third Party Source Code/Binaries

Link to third party source code/binaries:
http://support.intel.com/support/motherboards/server/sysmgmt/sb/CS-031025.htm

1.6.2  Support Information

If you encounter an issue with your server platform or management software, please follow these steps to obtain support on your product.

1. Get connected to our support web page for 24x7 support when you need it to get the latest and most complete technical support information on all Intel® Enterprise Server, Storage Platforms and Management Software. Information available at the support site includes:
   • Latest BIOS, firmware, drivers and utilities available through Intel’s download center.
   • Product documentation and flash demos, installation and quick start guides
• Full product specifications, technical advisories and errata
• Compatibility documentation for memory, hardware add-in cards, chassis support matrix, and operating systems
• Server and chassis accessory parts list for ordering upgrades or spare parts
• A searchable knowledgebase to search for product information throughout the support site

2. Utilize the community forums or chat with a live person.

3. You can also contact an Intel support representative using one of the following support phone numbers. Charges may apply. Intel customer support suggests running the Intel® System Information Tool (depending on the operating system being used) for Microsoft Windows®, Linux® or EFI® to extract relevant data that pertains to the issue being encountered and provide the information when asked by a support agent.

Intel now offers Channel Program members round-the-clock 24x7 technical phone support on Intel® server boards, server chassis, server RAID controller cards, and Intel® Server Management.

Warranty Information
Connect to Intel's website to obtain warranty information.

NOTE: Requires Login to the Reseller Site to obtain the 24x7 Number.

### 1.6.3 Related Documentation

The following table lists the related documentation:

<table>
<thead>
<tr>
<th>Document/ Information</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intel® Active system Console Release Notes</td>
<td>Available at the same package</td>
</tr>
</tbody>
</table>
1.7 Terminology

The following table lists the terminology used in this document and the description:

<table>
<thead>
<tr>
<th>Term</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMC</td>
<td>Baseboard Management Controller</td>
</tr>
<tr>
<td>CIM</td>
<td>DMTFs Common Information Model - CIM provides a common definition of management information for systems, networks, applications and services, and allows for vendor extensions</td>
</tr>
<tr>
<td>GUI</td>
<td>Graphical User Interface</td>
</tr>
<tr>
<td>Intel® SMS</td>
<td>Intel® System Management Software</td>
</tr>
<tr>
<td>IPMI</td>
<td>Intelligent Platform Management Interface. Operates independent of the operating system (OS) and allows you to manage a system remotely even in the absence of the OS</td>
</tr>
<tr>
<td>RMCP</td>
<td>Remote Management Control Protocol – Protocol used by IPMI for communicating over LAN</td>
</tr>
<tr>
<td>SEL</td>
<td>System Event Log</td>
</tr>
<tr>
<td>SMBIOS</td>
<td>System Management BIOS (SMBIOS) is specification to lay out data structures (and access methods) in a BIOS which allows a user or application to store and retrieve information specifically about the Server</td>
</tr>
<tr>
<td>SNMP</td>
<td>Simple Network Management Protocol</td>
</tr>
<tr>
<td>SOL</td>
<td>Serial Over LAN</td>
</tr>
<tr>
<td>Upgrade</td>
<td>Enhanced versions of Intel® SMS with new platform support or new features are uploaded to Intel Website. Users installing Intel® SMS from a CD can upgrade to a new version using multiple ways. Intel recommends all users to upgrade to a new versions</td>
</tr>
</tbody>
</table>
2.0 Getting Started

This section provides information on how to install and use the Intel® Active System Console.

2.1 Installing Intel® Active System Console

For Linux*

To install the software, run with root privilege.

- Get the zip package and unzip to a folder
  
  cd Linux/<OS_NAME>  [RHEL5 | RHEL6 | RHEL7 | SUSE10 | SUSE11 | SUSE12]

- Run the following command to untar the package
  
  tar -xvf [ASC package name]

- After untar ASC package following folder will appear
  
  /ASC and /common

- Then run the following commands.
  
  *cd ASC
  *./install

For Microsoft Windows*

- Insert Intel® Server Deployment and Management media, go to System Management Software Tab or user can browse ASC package folder and start the ASC installation main interface manually.

- Click on the “Click to Install” button for Intel® Active System Console Install. This will take you to the prerequisite Page, choose “Install Software” if enabled. Then, once the prerequisite software is installed click the “Continue Installation” button.

Notes:

- While installing, user will be asked to change the default password of “admin”.
  
  We recommend you set a strong password for “admin” (for example, use a combination of letters, numbers, or keyboard characters not defined as letters or numerals such as ` - _ = + ! ` # @ $ ; : . , ? & ^)

- The IASC installed in the server also serves as an MSM agent monitoring this server.
2.2 TCP Information

The following TCP ports are used by Intel® Active System Console.

<table>
<thead>
<tr>
<th>Port #</th>
<th>Description</th>
<th>Firewall Exception Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>7777</td>
<td>Use for discovery and management by Intel® Multi Server Manager (MSM).</td>
<td>Yes **</td>
</tr>
<tr>
<td>9393</td>
<td>Use for web server hosting</td>
<td>Yes ***</td>
</tr>
<tr>
<td>4369</td>
<td>Use for socket based IPC on the software backend.</td>
<td>No</td>
</tr>
<tr>
<td>9191</td>
<td>Use for lighttpd web service.</td>
<td>No</td>
</tr>
<tr>
<td>521</td>
<td>Use for lighttpd web service / PHP CGI.</td>
<td>No</td>
</tr>
</tbody>
</table>

Notes:
** 7777 is required to add on the firewall approval list only when used to manage IASC with Intel® Multi-Server Manager.
*** 9393 is required to add on the firewall approval list if accessing IASC remotely over the network with a supported web browser.

Refer to Chapter 5 for more security features.

2.3 Uninstalling Intel® Active System Console

To uninstall, run the following:

**Linux** -
```
cd /usr/local/asc/bin/
"sh uninstall"
```

**Windows** - You can uninstall ASC from Windows either
- from Add/Remove Program options
- from Start Menu->All Programs->Intel->Uninstall Intel® Active System Console

You will be asked to reboot the server to complete installation. You can either reboot immediately or postpone it. All files and registry entries will be completely removed only on reboot.

Note: The database will also be removed on uninstallation. If you want the database for any further storage make sure you copy the database SMS.db to appropriate location before uninstall.

- (in Linux*)
• C:\Program Files\Intel\ASC\SMS.db (in Windows* 32 bit)
• C:\Program Files (x86)\Intel\ASC\SMS.db (in Windows* 64 bit)
3.0 Navigating Intel® Active System Console

This section details how you can navigate the Intel® Active System Console to use its features.

By default, the Intel® Active System Console opens in the System>DASHBOARD view displaying overall server health as shown in Figure 1.

Figure 1. Intel® Active System Console Login page (By default, IASC opens in Dashboard page)

The left side Navigation menu comprises buttons that have submenu items.

For a quick overview of the tasks performed by these buttons and their sub menu items see following Table:
## System

<table>
<thead>
<tr>
<th>Menu Button</th>
<th>Submenu</th>
<th>Task</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dashboard</td>
<td>Displays aggregate of the system health in the Dashboard (chassis, storage, cooling, processor, memory, and power).</td>
<td></td>
</tr>
<tr>
<td>Summary</td>
<td>Displays a table of all hardware sensors and the threshold settings.</td>
<td></td>
</tr>
<tr>
<td>Processor</td>
<td>Displays processor details and speed information.</td>
<td></td>
</tr>
<tr>
<td>Memory</td>
<td>Displays memory size and type information.</td>
<td></td>
</tr>
<tr>
<td>Cooling</td>
<td>Displays all System/Processor fans. It shows the current health status of the fan and the current reading of the fan in RPM.</td>
<td></td>
</tr>
<tr>
<td>Power</td>
<td>Displays all Voltage and Current sensors. It shows the current health status and the current reading of the Voltage and Current sensors.</td>
<td></td>
</tr>
<tr>
<td>Chassis</td>
<td>Displays the state of the chassis intrusion sensor and enables identifying the system by turning on/off the Chassis ID LED</td>
<td></td>
</tr>
<tr>
<td>Storage</td>
<td>Displays information about the hard disk drives, logical disk drives, and media or DVD drives.</td>
<td></td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>Lists out all the Sensors which are not categorized under any of the main sensors. These include some BIOS and other discrete sensors.</td>
<td></td>
</tr>
<tr>
<td>Events</td>
<td>Lists all the server event logs.</td>
<td></td>
</tr>
</tbody>
</table>

## Configuration

### BMC

Baseboard Management Controller. Has the following submenu buttons:
Manages the interface between system management software and platform hardware.

<table>
<thead>
<tr>
<th>Submenu</th>
<th>Task</th>
</tr>
</thead>
<tbody>
<tr>
<td>Users</td>
<td>Helps you add/delete/edit a BMC User.</td>
</tr>
<tr>
<td>Network</td>
<td>Lists all the Network present on the motherboard.</td>
</tr>
<tr>
<td>Serial Over Lan</td>
<td>SOL. Settings help change the Baud rate of the system.</td>
</tr>
<tr>
<td>SNMP Alerts</td>
<td>Help send SNMP based alerts to the target server (fan failure, memory error, etc.</td>
</tr>
<tr>
<td>BIOS</td>
<td>BIOS settings.</td>
</tr>
<tr>
<td>--------------</td>
<td>----------------------------------------</td>
</tr>
<tr>
<td><strong>Basic Email</strong></td>
<td>Simple mail configuration that sends all server alerts to mail server.</td>
</tr>
<tr>
<td><strong>Advanced Email</strong></td>
<td>Helps configure user specific Email alerts. Feature-rich customized user settings available.</td>
</tr>
</tbody>
</table>

### Reports

| **Generation** | Helps generate reports on many categories. For example, Asset Information, All System Events, Critical Events, Sensor Values, and BMC Settings. The file can be exported either in XML, HTML, or CSV format. |

### 3.1 System Information

This section lists the Hardware choices available shown in Figure 1.

The Hardware choices and their functions are listed in the following Table:

<table>
<thead>
<tr>
<th>Hardware choice</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>System</strong></td>
<td>Displays system health information.</td>
</tr>
<tr>
<td>Dashboard</td>
<td>Default IASC view. Displays chassis, Processor, Storage, Memory, Cooling, Power, and other Miscellaneous information in a convenient dashboard view.</td>
</tr>
<tr>
<td>Summary</td>
<td>Displays a table of all hardware sensors and the threshold settings.</td>
</tr>
<tr>
<td>Processor</td>
<td>Displays processor details and speed information.</td>
</tr>
<tr>
<td>Memory</td>
<td>Displays memory size and type information.</td>
</tr>
<tr>
<td>Cooling</td>
<td>Displays all System/Processor fans. It shows the current health status of the fan and the current reading of the fan in RPM.</td>
</tr>
<tr>
<td>Power</td>
<td>Displays all Voltage and Current sensors. It shows the current health status and the current reading of the Voltage and Current sensors.</td>
</tr>
<tr>
<td>Chassis</td>
<td>Displays the state of the chassis intrusion sensor and enables identifying the system by turning on/off the Chassis ID LED.</td>
</tr>
<tr>
<td>Storage</td>
<td>Displays information about the hard disk drives, logical disk drives, and media or DVD drives.</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>Lists out all the Sensors which are not categorized under any of the main sensors. These include some BIOS and other discrete sensors</td>
</tr>
<tr>
<td>Events</td>
<td>Lists all the server event logs.</td>
</tr>
</tbody>
</table>
### 3.1.1 Viewing System Health

The **System** page as shown in Figure 1 displays the health of the system and its components. The UI gets refreshed every 10 minutes.

### 3.1.2 Viewing System Summary

To view information on the board, BIOS, and Firmware, in the **System** page, click the **Summary** button to display System Summary, FRU data, and Power Supply as shown in Figure 2.

![Figure 2. System Summary page](image)

**System Summary:**

- **System Name:** Computer name given to a server.
- **Asset Tag:** Name given to a server for easy server asset tracking such as hardware and software configuration information during server deployment.
- **BIOS version details:** Current values obtained from server.
- **System GUID value:** Global Unique Identifier for each system on the network.
• Manufacture, Platform ID and Serial Number: Details of server baseboard manufacture, product name and serial number.

• SDR (Sensor Data Recorded) Package version, BMC (Baseboard Management Controller) and HSC (Hot Swap Backplane) version.

• Operating System Name, Kernel Version and Version Build.

FRU Data:
Display entire FRU for server baseboard, chassis board, PDB (Power Distribution Board) and Power Supply unit.

Power Supply:
Display system sensor type code for “Other Units Based” threshold sensors.

3.1.3 Viewing Processor Summary Readings

To view the processor summary readings, click System -> Processor to display processor summary, processor configuration, and discrete sensor readings shown as follows:

![Processor Summary Table]

**NOTE:**
IASC get the L1, L2 & L3 Cache from SMBIOS table Type 7. In this case, by pressing "F2" BIOS
show L1, L2 & L3 Cache difference from IASC. Because in BIOS setup, the cache size is for per core instead of socket, but in SMBIOS Type 7, the cache size is for socket instead of per core. Example show in above picture:
IASC:
L1 = 896KB (64KB X 14 (cores))
L2 = 3584KB (256KB X 14 (cores))
L3 = 35840KB
BIOS:
L1 = 64KB
L2 = 256KB
L3 = 35840KB

3.1.4 Viewing Memory Device Readings

To view the processor memory device readings, click System -> Memory to display memory device details and discrete sensor readings shown as follows:

![Table of Memory Device Readings]

**Figure 4 – Memory Device Readings**

Displays the health of each populate memory module. It lists the entire memory bank supported in the Server. If a memory module is populated in the memory slot, it will list the corresponding size, speed, and type of module. If the slot is not populated, then it will list as not populated.
3.1.5 Viewing Temperature and Fan Readings (Cooling Sensors)

To view the temperature and fan readings, click System -> Cooling to display the Cooling Sensors page shown as follows:

**Figure 5 - Cooling Sensors**

Display all System threshold temperature and fans, display discrete temperature sensors. It shows the current health status of the fan and the current reading of the fan in RPM. Click on any of the System threshold temperature and fans to view the upper and lower threshold details.
3.1.6 Viewing Voltage and Current Sensors Readings

To view the voltage and current readings, click **System -> Power** to display the Voltage and Current Sensors page shown as follows:

**Figure 6. Power Sensors**

Lists all the current reading of the voltage sensors present on the base board. The details of each voltage sensor list the upper/lower critical and warning values.

3.1.7 Viewing Chassis Information

To view chassis status, click **System -> Chassis** to display shown in following figure. The user can also identify the server by turning the LED on or off. To do this, click the ‘ON’ / ‘Off’ button.
Notes:

- For systems that do not support the chassis sensor, the system LED is currently Not Supported status is displayed.
- For some platforms, the status of LED is not supported, but the user will still be able to turn the LED on and off as shown in Figure 7.

![Chassis Information page/ Identify Chassis On/Off Dialog](image)

Figure 7 – Chassis Information page/ Identify Chassis On/Off Dialog

Display physical security status of the chassis. Also helps identify chassis (physical Server) by turning the blue LED in the front panel of the chassis on/off (LED blinks till it is turned off).

### 3.1.8 Viewing Storage Readings

To view the temperature and fan readings, click **System -> Storage** to display the Storage Sensors page as shown in following figure.

![Storage Device, Logical Drives, Drive Sensor Information page](image)

Figure 8 – Storage Device, Logical Drives, Drive Sensor Information page

- **Storage Device.** The Storage page lists out all the Storage drives present in the server. Each drive name includes the Model Number, device name serial number and the total Hard Disk capacity.
- **Logical Drive.** Each correctly mounted logical drive is listed including it total and free space.
• **Drive Sensor.** The Drive Status and the Drive Presence sensors are displayed for each drive slot. These indicate the corresponding Hard drive presence or absence status.

* A **warning alert** gets generated in the Events page if the Hard disk space crosses the threshold of 75% and a **Critical alert** is generated if it crosses the 90% margin.

### 3.1.9 Viewing Miscellaneous Readings

This section lists out all the Sensors which are not categorized under any of the main pages. These include some BIOS and other discrete sensors. It lists the name of the Bus Sensors and shows the corresponding health along with the values.

![Figure 9. Miscellaneous Information page (Bus Sensors, BIOS and other discrete sensors)](image)

### 3.1.10 Viewing System Events

This page lists all the server events as follows:

![Figure 10 – System Events Information page](image)
The description, severity, status of events (open or closed) and time stamp for each of the events is listed.

The top row heading shows a list of filters and actions that can be taken on the table. There are filters for State, Severity and Module Type. If a particular value in filter is selected, only events belonging to that filter value appears in the table.

- **Severity filter.** Use for viewing only critical/warning/informational events. The column headings follow the filters and actions. The entire table can be sorted based on each column.

To sort the table based on a column click on column heading. First click on the column sorts it in ascending (lexicographic) order. Any further clicks, the order toggles between ascending and descending.

- **Open Status.** If in open state, check for event description. If critical event, take immediate corrective action.

**Actions**

Two sets of actions can be performed on events.

- **Delete Events.** All the events listed in the table can be deleted from database. Here again, two options are available:
  - Delete all events from Database. Here the events are deleted from ASC database. This include all open and closed Server Events as well as Application Events.
  - Delete all events from Baseboard Management Controller (BMC). Here the Server Events are deleted from BMC SEL store.

  **Notes:**
  You cannot selectively delete events from either database or BMC. Either all events or none are deleted.

  If you delete from database, it cannot be recovered. So, backup event logs by exporting Reports. Also a refresh for new events information will not display anything until after ~5-6 mins.

- **Close Selected.** Update the status of events to close. Based on the type of events two results are observed. If the event is regular events, close will just update the status to close. If any active events are appearing in bottom scroll log, that will be gone. If the event
contributes to Server health, displayed as “Open *” in the Status column, closing the event causes the IASC to ignore the event and re-compute the health of the component. This may cause the health of the Server from being critical to go to healthy state in IASC (if the event that closed is the only one causing the critical state).

For instance “memory ....”
### 4.0 Configuring Server Hardware and Reports Generation

This section explains configuring the server hardware using IASC. It details the options available in the Configuration feature of the Intel® Active System Console. Click **Configuration** button to access the menu with the configuration options on Baseboard Management Controller as follows:

*Note: Only users with ADMIN privilege can configure a Server using ASC.*

![Configuration Menu](image.png)

**Figure 11 – Configuration Menu**

### 4.1 Configuring BMC

This section explains configuring the BMC. It details the options available in the BMC Configuration feature of the Intel® Active System Console. The BMC Configuration window has the choices listed in Figure 11.

#### 4.1.1 Configuring BMC Users

The BMC User Configuration section helps you edit a BMC User. While doing so, you can set the privilege level as Administrator, Operator, or User.

Baseboard Management Controller supports authentication and authorization for remote access (out-of-band access). Users have to configure a BMC Username and password to access BMC in out-of-band fashion.
You can also enable or disable the User.

In the left navigation pane, click the **Configuration>Users** button to view the BMC User window as shown in Figure 12.

![BMC User Configuration window](image)

**Figure 12. Intel® Active System Console BMC User Configuration window**

You can enable or disable the User by clicking **Edit Selected** to display the following dialog:

![Edit User dialog](image)

**Figure 13. Configuring BMC User Settings: Edit User dialog**
4.1.2 Configuring Network

Click the Configuration>Network.

<table>
<thead>
<tr>
<th>Network</th>
<th>Enable</th>
<th>IP Address</th>
<th>Gateway</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>✔</td>
<td>10.223.132.53</td>
<td>10.223.132.62</td>
</tr>
<tr>
<td>3</td>
<td>✔</td>
<td>0.0.0.0</td>
<td>0.0.0.0</td>
</tr>
</tbody>
</table>

Figure 14. Configuring BMC Network Window

This page lists all the networks present on the motherboard. This indicates the LAN channels over which a baseboard controller (BMC) can be reached out-of-band.

To enable, check the enable box.

- To edit the settings, select the network channel and then choose either static or DHCP IP address.
- If you are choosing the option "IP address from a DHCP server" then you must have a DHCP Server present in your network environment for the server to obtain an IP address automatically.
  - User Privilege can be either set to Admin, User, or Operator.
  - Admin user privilege configuration is needed for read, execute, and write privileges.

*Note: These are not Operating System IP Addresses.*

LAN Failover

BMC FW provides the LAN Failover capability such that the failure of the system HW associated with one LAN link will result in traffic being routed to an alternate link.

Intel® Active System Console enables LAN FAILOVER feature dynamically on the supported platform. On enabling LAN FAILOVER, only LAN Channel No. 1 will be allowed for configuration. Other active LAN channel shares the same configuration when the network connection of LAN channel 1 is broken.

<table>
<thead>
<tr>
<th>Enable LAN Failover</th>
<th>Network</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Network</td>
</tr>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Network</th>
<th>Enable</th>
<th>IP Address</th>
<th>Gateway</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>✔</td>
<td>10.223.128.208</td>
<td>10.223.128.253</td>
</tr>
<tr>
<td>3</td>
<td>✔</td>
<td>0.0.0.0</td>
<td>0.0.0.0</td>
</tr>
</tbody>
</table>

Figure 155. Configuring LAN FAIL Over

*Note:*

This feature is supported only on Intel® Xeon® Process E5 family based platforms. For more details on LAN Failover feature, refer Motherboard TPS.
4.1.3 Configuring Serial Over Lan (SOL) Settings

Base-board controller supports re-direction of Server boot sequence video console over LAN channel. Users can see the entire screen output of boot sequence and control it using keyboard simulating actual Server control. This console is lost once the operating system boots up. This feature is known as Serial-over-LAN.

Using ASC you can enable/disable or edit Serial-Over-LAN settings in base-board controller.

To change SOL settings, select LAN channel -> select baud rate -> select privilege level -> click **Update**.

You can enable authentication in which case only users with valid username and password can do SOL console redirection.

You can enable encryption in which case the entire SOL traffic will be encrypted and protected from network snooping.

Click **Configuration>Serial Over Lan** to display the **Serial Over Lan** window as shown in following figure:

![Figure16. Configuring SOL Settings Window](image)

Note:

Configuring Baud Rate will not be supported on Intel® Xeon® E5, E5 V2, E5 V3, E5 V4, E5 V5 Process based platforms and the Baud Rate will be shown as “NOTAVAILABLE”. For more details, refer Motherboard TPS.
4.1.4 Configuring SNMP Alerts

SNMP Alerts help send SNMP-based alerts to the target server. Alerts include fan failure, memory error, and so on.

If you want base-board controller to send alerts about any change in Server hardware in the form of SNMP Traps to any SNMP Manager you can set it up using Active System Console.

SNMP Alerts help send SNMP Traps to the target server. Alerts include fan failure, memory error, and so on. Click Configuration > SNMP Alerts to display the SNMP Alerts settings window as shown in following figure:

![Figure 17. Configuring SNMP Alerts Settings Window](image)

To set an alert, enter the IP address of target SNMP Manager or trap receiver -> click Apply.

4.1.5 Configuring BIOS

Click Configuration > BIOS to display the BIOS settings window as shown in the following figure:

![Figure 18. Configuring BIOS Window](image)

Set Boot Order. Helps select system boot order - Hard Disk, DVD, Network, and so on - for the next reboot cycle. Select desired boot order -> click Update.
When Admin Password is set on the BIOS, user will be prompted as shown in the below image to enter the BIOS Admin password to update the boot order change. This feature is supported only on Intel® Xeon® Processor E5-XXXX V1 & V2 Sequence-based Servers.

![Image of BIOS Admin Credentials for Boot Order]

**Figure 169. BIOS Admin Credentials for Boot Order**

**Power Action.** Helps set power action in case of power breakdown. You have the option to choose one of the following:

- Stay powered off. Server remains in a powered off state even if the power is restored back.
- Restore to Original State. Server will either get powered up or it will remain in an Off state depending on previous power state during the power breakdown.
- Power Up. Server powers up when the power is restored back.

### 4.1.6 Configuring Basic Email: Use Default Email Profile

Email Alerting helps you receive Server Health Alert messages. For this, you must first configure your mail settings either through Basic Email settings or through Advanced Email settings.

Click **Configuration>Basic Email** to display the Email Alerts Settings window as shown in following figure:
Email Alerting helps you receive Server Health Alert messages. For this, you must first configure your mail settings either through Basic Email page or through Advanced Email.

For configuring Basic Email settings, you must have a mail server in your network environment. If not present, you must setup a mail server to use this feature.

- Select Default -1 profile to receive all Hardware alerts that include critical, warning, and informational.

OR

- Select Default-2 profile to get only the critical Hardware events alert.

Enter the mail server IP address, its hostname and then enter the To Email address to which the alert has to be sent. Click Apply to set the basic Email alert setting.
4.1.7 Configuring Advanced Email: Create and Apply Email Profiles

Click Configuration>Advanced Email to display the advanced Email Alerts Settings window as shown in following figure:

![Figure 22. Advanced Email Alerts Settings Window](image)

Advanced Email Settings is rich in customized user settings. To create an advanced Email, do the following:

- Enter the following:
  - Profile name
  - Mail server IP address. If a mail server is not present, then you need to set one up to use this feature.
  - From address of the Email
  - One/multiple “To” address/s
  - Subject line. For example, Chassis Intrusion Detected
  - Specific comments
- Next, in the Alerts pane
  - Click Select all to select all the alerts (Select Clear All to deselect all as needed)
  - OR
  - Select only specific alerts based on your need.
- Next, click Apply to apply the settings.

To create another advanced Email, create a separate profile in step1 and then follow the same procedure.
4.2 Generating Reports

This option helps you generate reports on categories such as Asset Information, All System Events, Critical Events, Sensor Values, and BMC Settings. Click Reports>Generation to display the Report Generation window as shown in the following figure:

![Figure 23. Generating Reports Window](image)

The file can be exported either in HTML, XML, or CSV format.

4.3 User Settings

A User setting icon is provided on the main IASC page on the top corner right hand side. Clicking on the setting icon will open the user setting page. Here, new users can be added or existing user privilege can be edited or users can be deleted.

![Figure 24. User Settings Window](image)

4.4 Viewing Software Updates

This feature is no longer supported.
5.0 Security Features

The Intel® Active System Console offers multiple security features as protection against unauthorized access to the application.

- It supports role-based multiple user authentication as follows:
  - ADMIN. Users with administrator privileges.
    Default Administrator user is admin. Only admin can create new users and assign privileges. Any user can, however, change password.
  - USER. Users with read-only privileges. Configuration changes using the application not permitted.
- IASC supports SSL based data encryption to securely communicate between client and application
- Secure Socket Layer allows two communicating devices to encrypt data using a public certificate and private key.
- The certificate used in IASC is a self-signed one to reduce the cost of deployment. All modern browsers will detect self-signed certificate and give a warning that the “certificate is invalid” since the authority that signed the certificate is not a publicly acknowledged authority. However, Users can override the warning and accept the certificate. You should do this only if you are sure that the certificate is originated from the application itself (by making sure you first launch the application from a trusted network and add the certificate to the trusted list). Once a certificate is accepted, the warning goes away as long as you launch the application from the same client.

Customers having a valid certificate from a public CA can use that certificate instead of auto-generated one.

Replacing Certificate in a Windows® Installation

To replace certificate in a Windows® installation, do the following:

- After installation, shut down the web-server for Certificate replacement.
  - Run services.msc from Run command in Windows. This will launch Services window.
  - Search for LightTPDService and stop the service.
- Go to application installation directory (C:\Program Files\Intel\ASC\ in default case) and go inside conf folder.
- Replace lighttp.crt with your valid certificate. If the name is different rename it to lighttp.crt.
- Replace the private key file, lighttp.pem with your private key file.
- Set all the permissions of the key file to only Administrator. No other users should be able to read or write this file.
- Set the permissions of the lighttp.pem to read-write for Administrator and read-only for other users.
- If you do not want to change the file names of your certificate/key file pair, make appropriate changes in the lighttpd-inc.conf in the same folder.
- Restart the web-service LightTPDService from the Service window.

**Replacing Certificate in Linux® Installation**

To replace certificate in a Linux installation, do the following:

- After installation, shut down the web-server for Certificate replacement. 
  /etc/init.d/lighttpd stop.
- Go to the folder /etc/lighttpd/ and replace lighttp.crt with your valid certificate. If the name is different rename it to lighttp.crt.
- Replace the private key file, lighttp.pem with your private key file.
- Set the permissions of the files as below:
  -rw-r--r-- 1 root root 1326 Mar 28 12:11 lighttp.crt
  -rw------- 1 root root 3005 Mar 28 12:11 lighttp.pem

  Only root is allowed to read the private key file and write the public certificate file
- If you do not want to change the file names of your certificate/key file pair, make appropriate changes in the lighttpd.conf in the same folder.
- Restart the web-server
  /etc/init.d/lighttpd start

- IASC uses a custom http TCP port (9393) so it does not conflict with site’s access control lists or firewall rules.
  for proper access to the application, appropriate changes should be done in firewall rules to exclude this port from blocking.
  Customers can modify the port if they want by editing the /etc/lighttpd/lighttpd.conf (in Windows, %ProgramFiles%\Intel\IASC\conf\lighttpd-inc.conf) and restarting the web-service.
- IASC uses TCP port 7777 for the communication between IASC and Intel® Multi-Server Manager (MSM). The port can be blocked by customer firewall if you don’t have MSM.
- IASC may use TCP port 9191, 4369, 521 for internal only, those ports all can be blocked by firewall for security purpose.

**Traceability and Security Audit**

- IASC keeps track of who all logged-in and logged out and from which client. Any unauthorized attempts to login are also kept track of. This is recorded in the form of events in the Event Table.
Administrators of the tool should periodically do an audit on the events table to find out if there is any misuse of the application or any unauthorized attempts to access the tool.

5.1 Security Recommendations

No security feature is fool proof unless you follow certain standard security procedures and controls.

- **Security controls.** Implement, update and monitor industry security products for servers, such as but not limited to: anti-virus, anti-spyware, host based firewall, intrusion prevention, and so on.

- **Remote access.** The platform should be managed by those familiar with securing remote access functions as well as managing systems that are exposed to the Internet.

- When assigning passwords for the ASC and BMC user accounts, make them strong enough to minimize your risk that someone could guess the passwords and thus use the ASC to change the server configuration or interrupt its power/temperature controls. ASC warns the user if the password is weak, so follow the warning and guidelines.

- **Network controls.** If the management console is being established to allow internet based access it is recommended to be placed within a network enclave that is consistent with many companies’ internal policy of maintaining a “DMZ” or zone of networks that is more closely monitored than internal networks.

- **Firewall.** Enable firewall software/services on Server where you install ASC or to the network, and only enable exceptions to allow access to the web server on each server. Where possible, limit which remote clients (e.g. using IP address ranges) can connect to the web server.

- To prevent successful Cross-Site Scripting and Forgery attack (XSS/CSRF) the users should follow certain security guidelines:
  - Make sure you access the application only from trusted clients.
  - Do not leave the application logged-in for a prolonged time and close the browser as soon as you finish the usage.
  - Do not visit any suspicious site or click on any public links in any other tabs in the browser while you are accessing the application.
  - Change the passwords frequently to prevent unauthorized access by any internal user and to reduce social engineering attacks.
  - Delete and create new application user accounts to reduce the risk of unauthorized access from internal users or ex-users.
6.0 Troubleshooting Guidelines

If you face any issues or doubts while using IASC, you may refer to the Help section available in each page of IASC. If the issue persists, read the following sections for known issues and troubleshooting tips.

INSTALLATION ISSUES AND ENVIRONMENT REQUIREMENTS

- If you are not able to access the IASC installed in a server from a remote location but you are able to ping the server or connect remotely to the server, then it could be a firewall issue. Troubleshoot this by disabling the firewall temporarily and try connecting to the IASC URL remotely again. If it works by disabling the firewall, then try adding the ports 9393, 9191, and 7777 to the exception list of firewalls to the server.

IASC uses ports 9393, 9191, and 7777 which should be excluded from system’s firewall if you have to reach the tool from other systems remotely or from outside of your private network.

- System runtime components such as Microsoft Visual C++ Redistributions 2005 and 2010 x86 are pre-requisites for IASC installation, the IASC installer will install those components automatically.

- During installation of IASC on Linux* Operating Systems, the License Agreement may be loaded with Firefox* browser and cannot be closed by clicking the “Close” button. This is due to the Firefox* browser’s default setting which disabled any external script to terminate the browser.

To enable the button,

**Step 1:** In Mozilla Firefox browser, type about:config in the URL textbox.

**Step 2:** Search for dom.allow_scripts_to_close_windows and double-click it to set the value to “true”.

**Step 3:** Click the “Close” button, it shall close the License Agreement and browser in all.
4. Installation of IASC on RHEL* 5.x requires `libxslt.so`, a compiled library file which is not installed by default OS setting. This may halt the installation with dependency error message. To resolve the issue, install compatible `libxslt.<os_arch>.rpm` before re-installing IASC.

5. For RHEL* 6.4 (Legacy Boot and UEFI Optimized Boot), SLES 11 (UEFI Optimized Boot only) and their consecutive releases. The Intelligent Platform Management Interface (IPMI) drivers must always be started manually before starting IASC service, including the installation. To start the IPMI service,

   **Step 1:** Enter `modprobe ipmi_devintf*` in a Linux Terminal.

   * This command works only if the openIPMI package has been installed in the OS.

   **Step 2:**
   (i) For first-time installation of IASC, re-launch the installation script after **Step 1**, IASC service will use the latest setting of IPMI.

   (ii) For post-installation, run `/usr/local/asc/bin/IASCService.sh` script to restart IASC after **Step 1**, this will update the IPMI setting in IASC.

   **Note:** Both steps have to be performed for each System reboot.

6. (i) Installation of IASC on RHEL* 6.x (x64 architecture only) requires the following 32-bit shared library files which are not installed with the OS by default setting. The shared libraries could be installed from the RHEL* OS installation image disc (ISO) containing their respective RPMs.
Table 2: Required RPMs for IASC Installation

<table>
<thead>
<tr>
<th></th>
<th>Required RPMs</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>zlib-1.2.3* x86_64*</td>
</tr>
<tr>
<td>2</td>
<td>libxml2-2.7.6* x86_64*</td>
</tr>
<tr>
<td>3</td>
<td>libgpg-error-1.7* x86_64*</td>
</tr>
<tr>
<td>4</td>
<td>libgcrypt-1.4.5* x86_64*</td>
</tr>
<tr>
<td>5</td>
<td>libxml1-1.1.26* x86_64*</td>
</tr>
<tr>
<td>6</td>
<td>libstdc++-4.4.7* x86_64*</td>
</tr>
<tr>
<td>7</td>
<td>compat-libstdc++-33-3* x86_64*</td>
</tr>
<tr>
<td>8</td>
<td>ncurses-libs-5.7-3* x86_64*</td>
</tr>
<tr>
<td>9</td>
<td>ncurses-devel-5.7-3* x86_64*</td>
</tr>
<tr>
<td>10</td>
<td>db4-4.7* x86_64*</td>
</tr>
<tr>
<td>11</td>
<td>nspr-4.9* x86_64*</td>
</tr>
<tr>
<td>12</td>
<td>nss-util-3.14.0* x86_64*</td>
</tr>
<tr>
<td>13</td>
<td>readline-6.0* x86_64*</td>
</tr>
<tr>
<td>14</td>
<td>sqlite-3.6.20* x86_64*</td>
</tr>
<tr>
<td>15</td>
<td>nss-softokn-3.12.9* x86_64*</td>
</tr>
<tr>
<td>16</td>
<td>nss-3.14.0.0* x86_64*</td>
</tr>
<tr>
<td>17</td>
<td>cyrus-sasl-lib-2.1.23* x86_64*</td>
</tr>
<tr>
<td>18</td>
<td>libidn-1.18-2* x86_64*</td>
</tr>
<tr>
<td>19</td>
<td>libcom_err-1.41.12* x86_64*</td>
</tr>
<tr>
<td>20</td>
<td>openssl-2.4.23* x86_64*</td>
</tr>
<tr>
<td>21</td>
<td>keyutils-1.4-4* x86_64*</td>
</tr>
<tr>
<td>22</td>
<td>keyutils-libs-1.4-4* x86_64*</td>
</tr>
<tr>
<td>23</td>
<td>libgssapi-2.0.94* x86_64*</td>
</tr>
<tr>
<td>24</td>
<td>krb5-libs-1.10.3* x86_646*</td>
</tr>
<tr>
<td>25</td>
<td>openssl-1.0.0-27* x86_64*</td>
</tr>
<tr>
<td>26</td>
<td>libssh2-1.4.2* x86_646*</td>
</tr>
<tr>
<td>27</td>
<td>openssl098e-0.9.8e-17* x86_64*</td>
</tr>
<tr>
<td>28</td>
<td>libcurl-7.19.7* x86_64*</td>
</tr>
</tbody>
</table>

Note: The RPMs have inter-dependency which requires them to be installed in sequence as numbered as in Table 2.

(ii) The IASC installation package has included a shell script RHELx86_64AUTO.sh for the convenience of installing the 26 RPMs all in once.

To use the script,

Step 1: Insert a RHEL* 6.x OS installation image disc containing the 32-bit shared library RPMs to the system.

Step 2: Unzip the shell script and run sh RHELx86_64AUTO.sh in a Linux Terminal.

Disclaimer: The RHELx86_64AUTO.sh script is intended to be used as an installation auxiliary, and it is not maintained as an Intel product, thus its content may be outdated and rendered the script erroneous. However, user may install each of the RPMs directly from the RHEL* OS ISO Disc or download using yum install.

7. User may see the following warnings during installation of IASC on SLES*:

Insserv: warning: script 'K01Appcore' missing LSB tags and overrides
Insserv: warning: script 'S01Appcore' missing LSB tags and overrides

Insserv warning are bootscript comment header warning. User may ignore these warnings as they do not affect the installation.
• Installation of IASC on Microsoft Windows 8* and Windows 2012* R2 requires UAC to be disabled using direct registry modification.

**Step 1:** Launch regedit.exe, look through directories for  
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows\CurrentVersion \Policies\System  

**Step 2:** Look for entry EnableLUA, and alter the values as followed  
UAC Enabled: 1  
UAC Disabled: 0  

**Step 3:** Save the setting and reboot the system if required.

9. If at any time, any of the following essential services of IASC are down, IASC will not work properly. If you are facing some issues in accessing the tool, you should check if the following services are running.  
   In Windows*, start the following services and verify,  
   • IASCServiceManager  
   • Appcore  
   In Linux*, run the following commands and verify,  
   • /etc/init.d/lighttpd status  
   • /etc/init.d/ascpolicy status  
   • /etc/init.d/Appcore status  

10. If web-server seems to be non-responsive on Linux* OS, run the following command:  
    
    /etc/init.d/lighttpd   restart  

11. User must make sure two Windows* services, IASCServiceManager and Appcore, are always running on Windows* OS. To run the services, execute the batch file “IASCService.bat” in the
installed path, user may run “services.msc” from command line and search for the service names.

Manually start these services if they are stopped. If the problem persists due to Baseboard Management Controller (BMC) interface being non-responsive, a power cycle may resolve the problem.

12. User must make sure that the system installed with IASC is NOT installed with SNMP-SA or equivalent applications. IASC may provide incorrect and incomplete information or even ceased from running as it would conflict with SNMP-SA on using the same system resources.

13. Installation of IASC in Linux* Operating Systems will show warning message (shown below message) at the end of the installation process. This warning is to let user know user may experience IASC login failure if the system network configuration not working properly. For more details refer section 10.

“!!! Warning......!!!!
Please check the DNS server setting or add the hostname into system file /etc/hosts in order for the Active System Console to do name resolution for the system name to avoid login fail issue, refer to the software Release Notes for details.”

USER LOGIN ISSUES AND BROWSER SETTINGS

- IASC supports secure transport using SSL/TLS authentication process with self-signed certification. But as the certification is not signed by publicly acknowledged authority, default security settings of web browsers may blocked IASC Login Page from loading and prompt warning messages of “Untrusted Connection” (Firefox) or “Invalid Security Certification” (Internet Explorer)

To resolve this,

Method 1: Override the warnings and accept the certificate, proceed to login page. User must ensure the certificate is originated from the application on a trusted secure network.

Method 2: Add your own certificate, please refer to User Guide for further instructions.
• When user logged into IASC webpage https://system_IP:9393/asc/ for the first time, IASC may appear unresponsive for a few minutes as it is updating its system health data enquiries with latest information.

• When using Internet Explorer to launch IASC, users may clicked button with no response, or not able to launch pop-up active windows upon clicking button.

   To resolve this, user must edit setting of Internet Explorer:

   **Step 1:** Go to **Menu -> Tools -> Options -> Security -> Select Internet Zone -> Custom Level -> Scripting**

   **Step 2:** Under Scripting, enable all Active Scripting and Scripting options.

   **Step 3:** Save the new setting, then restart Internet Explorer and load IASC page.

• User may not able to save the reports generated by Report feature of IASC in Internet Explorer* due to browser setting.

   To change this,

   **Step 1:** Go to **Tools -> Internet Options -> Advanced -> Security**, and uncheck the ‘Do not save encrypted pages to disk’.

   **Step 2:** Retry generating the reports and save.

• The “waiting” icon (spinning wheel, flashing dots) and Critical Event scrolling may not work if the browser does not allow animation to play.

   To enable the feature in Internet Explorer,

   **Step 1:** Go to **Tools -> Internet Options -> Advanced -> Multimedia**, and check the ‘Play animations’ option.

   **Step 2:** Refresh browser or re-launch IASC.

• When IASC login shows “Login Failed Try Again” or no activity, user should follow the methods below to debug the issue.
To resolve this, 

**Method 1:** If Appcore service is stop, restart the service by running shell script file `/usr/local/asc/bin/IASCService.sh`.

**Method 2:** Check the network connection. If DNS network connection is disconnected, IASC will keep looping until time-out. If user decides not to use DNS network anymore, user can set the system hostname into the `/etc/hosts` refer below example (mysys_hostname added into hosts file). Restart IASC service after setting the system hostname.

Rhat OS:
SuSE OS:

```
File Edit View Terminal Help
#
# hosts  This file describes a number of hostname-to-address
# mappings for the TCP/IP subsystem. It is mostly
# used at boot time, when no name servers are running.
# On small systems, this file can be used instead of a
# "named" name server.
# Syntax:
# # IP-Address  Full-Qualified-Hostname  Short-Hostname
#
127.0.0.1   localhost  msys_hostname
# special IPV6 addresses
::1   localhost  ipv6-localhost  ipv6-loopback
fe00::0   ipv6-localnet
```

**KNOWN INFORMATIONAL IRREGULARITIES AND ISSUES**

- Part of system sensor information, such as on Memory and Processor, are not available in IASC that installed on system with GPT volume.

- Sensor Events are generated by IASC only if the sensor is functional and providing analyzable reading; sensors which are showing `NOT_AVAILABLE` state are not used in system health calculation, e.g. PCIe Corr sensor.

- When a CD/DVD is inserted to the system, IASC® would show “0MB space left” and generates a Critical warning. Once the CD/DVD is removed from system, IASC® returns to Healthy state.

- IASC may not able to comprehend FRUSDR details which have special characters such as “&, *, #”, thus blank values may be shown.

- IASC is not supported on Virtual Environment and Non-BMC Server Board.

- SOL BAUD Rate configuration is not available for Intel® Server S1200RP product family.

- HSC FW version for Intel® Server S1200RP product family is shown in unseparated format on screen.
• Boot order changes might not be successful if "syscfg /bbo" command is being used before using IASC to change the boot order. Use bios F2 setup page, press F9 to load bios default & reconfigure the boot order if this issue happen.

• IASC may not display the Serial number and Model number of the configured RAID volumes and it may display NOT_AVAILABLE in Model number and Serial Number columns of Storage information.

• IASC may not display the Serial number and Model number of the USB drives if the firmware is not available for the devices and it may display NOT_AVAILABLE in Model number and Serial number columns for storage information.

• IASC may not display proper build version in some Linux Operating System due to browser limitations, which is due to taking data from stored cache on the hard driver. It is required to clear browser cache to display proper IASC build version in Linux.