AMI® Data Center Manager V5.3.1 Release Notes

Table of Contents

1 Release Notes – AMI® Data Center Manager V5.3.1

AMI® Data Center Manager (AMI DCM) is a powerful software solution designed to help organizations manage their data centers with greater efficiency and sustainability. Whether you are responsible for infrastructure management or IT operations, AMI DCM provides you with the tools to optimize performance, reduce operating costs, and manage your Data Center carbon footprint.

By leveraging real-time data collection, predictive analytics, and advanced reporting features, AMI DCM enables you to make data-driven decisions that improve the sustainability, reliability, and availability of your critical data center infrastructure. With AMI DCM, you can achieve your sustainability goals while maximizing operational efficiency and minimizing environmental footprint.

1.1 Version 5.3.1 (July 2024)

New Features and Enhancements

- HTTPS based event handler support.
- Integration through iframe.
- Customization of severity for components health event.
- Showing part number for memory-based failure indicator.
- Using regular expression for SEL matching rules.
- Supporting "Forced Reconnect" for devices.
- Upgrade support from 5.2.2 and 5.3.0.

1.2 System Requirements

AMI® Data Center Manager has been validated on the following operating systems (64-bit version) and web browsers:

- Microsoft Windows Server 2016
- Microsoft Windows Server 2019
- Microsoft Windows Server 2022
- Red Hat Enterprise Linux 7.9 Server x86_64
- Red Hat Enterprise Linux 8.9 Server x86_64
- Red Hat Enterprise Linux 9.3 Server x86_64
- Novell SUSE Linux Enterprise Server 12 SP5 x86_64
- Novell SUSE Linux Enterprise Server 15 SP5 x86_64
- Ubuntu Server 18.04.6 x86_64
- Ubuntu Server 20.04.6 x86_64
- Ubuntu Server 22.04.4 x86_64
- Debian 11.9 x86_64
- Mozilla Firefox 126
- Google Chrome 125
- Microsoft Edge 125

It is recommended to install the AMI® DCM server on a system with at least:

- A x86 dual-core Processor of 2.6 GHz or higher
- 16GB RAM
- 200GB of hard drive space
- 1 Gigabit network

Below is the recommended configuration for a scaled environment managing up to 60,000 nodes:

- 2 * 16 core x86 Processor @ 2.60GHz or higher
- 192GB RAM
- 2TB SSD
- 10 Gigabit network

1.3 Supported Devices

AMI DCM offers comprehensive support for a wide spectrum of devices, spanning servers, chassis, storage solutions such as SANs, and networking devices such as switches, PDUs, smart power strips, UPSs, and CDUs. These devices are manageable via standard protocols such as IPMI 2.0, Redfish, SNMP, or SSH.

As such, there is no exhaustive list of officially supported devices and models by AMI DCM. If the device you intend to manage using DCM adheres to the aforementioned standard protocols, AMI DCM is well-equipped to manage it effectively.

For servers, AMI DCM consistently adds support for the latest iterations of BMCs, as well as iLO, iDRAC, iMM, iBMC, ensuring compatibility across a broad spectrum of servers from industry-leading manufacturers including Lenovo, IBM, Dell, HP, Supermicro, Inspur, Quanta, MiTac, Sugon, Huawei, Cisco, Fujitsu, Oracle, Hitachi, NEC, SGI, Wiwynn, Intel System Servers, and others.

Server power-capping may not be universally available across all server models. Servers that support power-capping will have "power control" indicated as one of their capabilities in the device table in the DCM web console.

Furthermore, server provisioning is available for Intel® Server Products and MiTAC servers using Intel® SDP Tool. Provisioning is also available for other servers that support Redfish-based provisioning. These servers will have "yes" indicated under "Provisioning Capability" in the device table in the DCM web console. The SDP Tool can be downloaded from this web site: Intel SDP Tool.

Certain devices, particularly networking devices and PDUs that may not follow standardized protocols, may not be fully supported by DCM. Users encountering issues with particular devices are encouraged to contact our support team for assistance. In most cases, our support team can add support for that specific device, which will be explicitly mentioned in the release notes of subsequent DCM versions.

2 Release Notes – Previous Versions

Version 5.3.0 (April 2024)

New Features and Enhancements

- AMI license model (Intel License model is deprecated).
- Export device information from "Device Statistics" in dashboard.
- Return username for device management in RESTful API.
- Streaming data to Kafka – Feature with basic functionalities.
- Scale up to support 60K servers.
- Traditional Chinese language support.
- Single license for HA mode.
- RESTful API enhancements for scalability.
- Tabbed view in settings page
- Support "last connection time" for devices in RESTful API

New Device Support

- HPE Gen 11
- Huawei DC Switch (CE6865-48S8CQ-EI, Huawei S5720S-52P-LI-AC Lan Switches are supported)
- Mellanox Switch (MSN2010-CB2F)
- Cumulus Linux Switch (Edgecore F0PEC4654004Z, Mellanox MSN4600-CS2FC)
- Tripp Lite UPS (SMART1500RM2UN)
- HDS Storage (HP P9500, HP XP8)
- HP 3PAR Storage (HP 3PAR 7400, HP 3PAR 8200, HP 3PAR 8440)
- EMC Isilon A200, F800 Storage devices
- Lenovo Think System SD650 V3
- AMD-based servers:
  o Lenovo: SR655 V3, SR 665 V3, SR645 V3, SD665 v3
  o Microsoft: C2196
  o Supermicro: AS -2025HS-TNR

Version 5.2.2 (December 2023)

New Features and Enhancements

- Supported AD group for tenant users.
- Supported tenant user to do provisioning.
- Maximum image file size limit increased to 1GB for firmware provisioning.
- Scripts for automatic failover.
- PSIRT security fixes.

New Device Support

- Panduit P24D03M and P24D01M PDUs
- Vertiv/Geist PDU models (PDU_VERTIV_I20471L, PDU_VERTIV_NU30027L_B, PDU_VERTIV_VP5665V_W, PDU_VERTIV_VP8930, PDU_GEIST_CWY1301-AJ28-RDU2)

Version 5.2.1 (November 2023)

New Features

- AMI Rebranding
- PSIRT security fixes
- Support for RHEL 9.2

Version 5.2 (June 2023)

New Features

- Carbon Usage Effectiveness (CUE) calculation.
- What-If server consolidation analysis
- What-If carbon calculator
- Carbon emission factor pre-configuration using data from Wattime.org.
- Comparing carbon emission at different times.
- IT energy efficiency calculation
- Renewable energy estimation
- Managing devices using IPv6
- Displaying passive instance details in active instances.
- Using non-privileged accounts for device management.

New Device Support

- Intel D50DNP servers
- Advantech SKY-8201S servers
- Moonshot CMM 1.0/2.0 with SSH
- DIGITALFREAKS PDU DPDUv2

Usability and Security Improvements:

- Support RHEL 9.1
- Usability Improvements
- 3rd party component updates
- Security Enhancements
- Upgradable from version 4.1 and above.

Version 5.1

What-If Carbon Emission analysis for server replacement.

- Device level Carbon Emission report.
- API for Carbon Emission
- API for Low Utilization Servers
- Scalability - Support 40k devices
- Advanced Provisioning for Intel Servers
- Support CoolIT CHx40 CDU
- Support SSD through RAID controller.
- Support HP chassis / blades through OneView.
- Support Dell iDRAC servers without Intel® Intelligent Power Node Manager.
- Support Cisco device with UCS Manager 4.2(1i).
- Support PLANET AGS-6336-8P2SV Managed Switch.
- Usability Improvements
- 3rd party component updates

- Security Enhancements
- Upgradable from 4.0 and above.

Version 5.0.1

- 3rd party component updates
- Security Enhancements

Version 5.0

Carbon Emission calculation, report, projection, threshold, and alert.

- Scalability - Support 20k Redfish based devices.
- Vendor based discovery / add / import.
- Support SDPTool v4.1 with CUP.
- Provisioning API
- Historical Power Status API
- Support Moonshot chassis.
- Support contact sensor with Raritan PX2-2475 PDU
- Support ZTE R5300 server's disk info.
- Support Ubuntu Server 22
- Usability Improvements
- Security enhancements

Version 4.1

- Discover and model GPU (experimental)
- Support HP Synergy chassis.
- Support Brocade fiber switch with RX/TX power level threshold.
- Support Huawei storage devices.
- Support Dell 15G servers.
- Support additional Cisco network devices.
- Allowing extending metrics for PCC telemetry data
- Support report for max power.
- Support report scope filter based on custom attribute.
- Support linking from 3rd party software to UI pages in DCM.
- Support Windows Server 2022
- Support Debian 11
- Usability Improvements
- Security enhancements

Version 4.0.1

- AMI Data Center Manager Console 4.0.1 has been updated to use Log4j version 2.17.

Version 4.0

- Warranty expiration notification
- Offline mode for devices
- Support firmware version for hard disk and host NIC on AMI servers.
- Mount ISO image for HP / Dell / Lenovo servers.
- New firmware detection for AMI servers

- Performing firmware updates, BIOS setting changes, and mounting ISO images for AMI Server Products using Redfish.
- Redfish based firmware update for HP / Dell servers.
- Support additional component inventory / health for H3C and Netapp storage.
- Support AMI Whitley servers.
- Manage Dell iDRAC 7 / Cisco servers through Redfish.
- Manage Oracle servers through SSH protocol.
- Manage Gigabyte blade chassis through IPMI protocol.
- Support Enlogic PDU
- Support EMC Connectrix DS4100B switch.
- Support Cisco ASA 5525 firewall
- Mapping between switch port and managed devices
- Auto login to server BMC to simplify KVM access (experimental)
- Enhanced report (group scope, capacity report, CSV support, etc.)
- Event Statistic
- High Availability through DB replication and manual failover.
- API enhancement (capacity and utilization data for space / power / weight, get device location).
- Switch port utilization monitoring with threshold-based notification.
- Support "IPMI Dump" as part of the diagnostic tools.
- Usability Improvements
- Security enhancements

Version 3.9.1

- Updating some 3rd party components to address newly identified CVEs.

Version 3.9

- Network port status monitoring and change alert.
- Hard power off single server.
- Health monitoring with component instance level details.
- Match keywords in device SEL log
- Consolidated firmware inventory.
- Batch provisioning task sequences for AMI Purley servers.
- Support additional inventory for AMI Purley servers: Backplane.
- Restore BIOS settings to default for AMI Purley servers.
- Redfish based firmware update for SMC Purley servers.
- Health monitoring for additional network / storage devices: F5 switch, NetApp storage, Arista switch, Mellanox switch, H3C switch.
- Component firmware version distribution and outlier (BIOS, PSU, Backplane).
- Reports support
- Archive events
- Enhanced RESTful API (link devices to discovery task, custom attributes management).
- Device diagnostics (SNMP walk, IPMI Ping, Redfish dump and export DCM server logs).
- Usability Improvements
- Security enhancements

Version 3.8

- Retrieving recent SEL logs when a server becomes unhealthy.
- Events for asset change

- Events for long-time-disconnection
- Searching devices by health status, firmware version.
- Watchdog sensor health monitoring.
- Threshold for IPMI analog sensor.
- Support for temperature sensor monitoring through Raritan PX3 PDUs.
- Inventory / health monitoring when devices are managed through Redfish protocol (Lenovo XClarity, Dell iDRAC 8/9, Intel RMM4, H3C, Huawei iBMC, Kontron).
- Support for more components for inventory / health monitoring.
- Inventory / health monitoring and sensor reading for SuperMicro Chassis
- SEL log for Sugon I620-G30 servers
- Enhanced RESTful APIs (Managing device capabilities, PDU outlet management, filling device health information)
- Support for Ansible Modules
- Enhanced Audit Logs
- Support for boot source overrides for AMI Purley servers.
- PDU outlet power on / off
- The capability to download / email a snapshot of the dashboard.
- Support for Ubuntu Server 20
- Other usability improvements
- Security enhancements

Version 3.7

- Supporting health and inventory monitoring for more devices like Inspur M4, Dell servers with iDRAC 7, and SuperMicro Purley servers.
- Collecting system event log from Dell iDRAC 8 / 9 servers, Lenovo XClarity servers, and HP iLO4 / iLO 5 servers.
- Sending health alert to device vendor through email.
- Separated API package.
- Enhanced RESTful API (statistics, event / threshold management, SSD SMART data, unhealthy SSDs, getting SNMP walk data, discovery, power on / off, rediscovery, enhanced query, real-time monitoring, unhealthy devices, etc.)
- Usability improvements
- Mounting ISO image for AMI Purley / Grantley servers
- Managing SuperMicro Purley servers with Redfish protocol
- Supporting non-root account for Linux (requires sudo).
- Supporting CentOS 8, Debian 10.

Version 3.6.2

- Addressing certain security issues.

Version 3.6.1

- Removing Optane Health commands to avoid some platform compatibility issues.

Version 3.6

- Collecting and exporting CPU telemetry data
- Restful APIs
- Flexible Grouping

- Inventory information collection for Huawei iBMC based servers, Sugon servers, and Inspur servers.
- Health monitoring for Cisco Catalyst Switches and HDS F700/F900 storage devices (experimental)
- Recurrent discovery tasks
- Event acknowledgment
- Health & inventory monitoring for additional Dell server components.
- Power monitoring, capping and temperature monitoring for Dell MX7000.
- RHEL 8 support
- Various usability improvements and security enhancements.

Version 3.5

- Weight Capacity Management
- Enhanced inventory support
- BIOS configuration for Intel S2600WFT, S2600ST, S2600BP servers
- Replaced Oracle JDK with OpenJDK
- Support additional platforms (Lenovo n1200 enclosure, ServerTech PDU, SMC chassis, SMC micro server)
- UI / Usability improvements
- System / Component Failure Analysis by model & location
- RAID health support for selected HP and DELL servers.
- System health monitoring for iLO4, iLO5, iDRAC 9, XClarity Controller, and Huawei iMana based servers.
- Security enhancements

Version 3.4

- AMI Data Center Manager Console 3.4 has been updated to include up-to-date 3rd party components (PostgreSQL 9.6.11, JRE 8 update 202, Tomcat 7.0.92, bouncycastle 1.60, Jackson 2.9.8, Xalan 2.7.2, zlib 1.2.11; commons-fileupload 1.3.3, javamail 1.6.1, smtp 1.6.1, Pio 3.1.7, remove Dom4j, replace axis2 with cxf 3.2.7), which covers functional and security updates.
- Lightweight Asset Management
- Grouped Email Notification
- Server Health Recovery Report
- SSD Life Span Estimation
- Usability improvement for firmware update
- Inventory information support (experimental)
- Enhanced BMC Console URL support (as an alternative for KVM access)
- Exposing web API for data extraction
- UI improvements
- Security enhancement
- Additional OS support (SLES 15, Debian v9, Windows Server 2019)

Version 3.3

- Server model reliability statistics
- Firmware upgrade for Intel S2600WFT, S2600ST, S2600BP servers (experimental).
- SSD health monitoring through in-band
- FPGA health monitoring
- Displaying rack view

- EMC VNX 5700 storage support
- Hitachi chassis support
- Huawei MM910 chassis support
- Cisco blade management through UCS manager
- HPE PDU support
- Hoffman PDU support
- ServerTech / Raritan PDU temperature monitoring.
- HP Procurve switch / Racktivity PDU support
- Lenovo PDU support
- New Eaton PDU support
- Cisco Nexus Switch support
- Support CentOS 7.5
- Support Ubuntu Server 16 and 18, drop the support for Ubuntu Server 12
- Support Debian v8.11
- Improved AD authentication
- UI improvements
- Performance improvement
- Security improvement

Version 3.2

- High availability support
- New UI enhancement

Version 3.1

- Brand new look and feel.
- Multi-tenancy

Version 3.0

- SNMP alert receiving
- Humidity data trending
- Telemetry hub data display with proper configurations on Node Manager 4.0 SKUs.

Version 2.9

- Energy comparison report
- Searching device by power state (on/ off).

Version 2.8

- Server component health status monitoring.
- Lenovo AMM component health status monitoring.
- Server age distribution.

Version 2.7

- Out-of-band remote KVM.
- Real time server sensors monitoring.
- Cisco UCS blade level modeling.

Version 2.6

- Support (row level) cabinet PDU modeling and what-if analysis.
- Visualizing blade servers in a chassis.
- What-if power and space capacity analysis.
- Predictive failure analysis of server fans (experimental feature).

Version 2.5

- Device placement based on power and space capacity.
- Server model distribution.
- Server component faults UI improvement.
- Power capping support for IBM IMM2 platform.
- Cooling anomaly detection (experimental feature).

Version 2.4

- New widget on server component faults.
- More options in the rack power capacity view.
- Additional data elements and visualization on advanced telemetry for Node Manager 3.0 platforms.
- Experimental support for platforms based on Redfish standard and rack scaling architecture.

Version 2.3

- Chatsworth daisy chain support.
- Historical datacenter layout.
- Support stopping import task.
- Per datacenter dashboard.
- More OSes support (refer to System Requirements).

Version 2.2

- Improved PDU support in hierarchy and logical group.
- Chatsworth Gen1 and Gen 2 PDU support.
- New user role (power user) support.
- Rack orientation in visualized layout.
- Fahrenheit support (experimental feature).

Version 2.1

- LDAP support
- 2D orthogonal thermal map (row level front-panel thermal visualization & room level thermal visualization).
- Power/space capacity view in physical layout.
- Improvements on physical layout (e.g., configurable origin position, tooltips adjustment, unavailable area modeling, etc.).
- Export hierarchy.

Version 2.0

- Visualizing layout of racks in a room.
- Support enclosure level monitoring on IBM CMM platforms.
- A new device status gadget for an overview of device management status.
- Out-of-band resource utilization (Compute Usage Per Second: CUPS) data on Grantley servers.
- Improvements on powering on/off server or servers.
- Support reporting power of unmanaged chassis by aggregating blade power data with a multiplier.
- Support disabling power/temperature monitoring capability on certain servers with incorrect data reported.

Version 1.5

- Support IBM enclosure temperature monitoring.
- Including enclosure temperature in cooling analysis.
- Support IBM x240 compute node monitoring.
- Support blade level modeling for IBM blade systems.
- Providing what-if power-utilization analysis with power prediction.
- Providing email alerts.
- Support power-on/off server or servers with batch policies.
- Product scalability improvements.

Version 1.4

- Active Directory integrated authentication.
- Chatsworth PDUs and rack temperature monitoring through Chatsworth PDU temperature sensors.
- Enhancements to the command line tool.
- Improving Virtual KVM Gateway functions which is enabled through certain license options.

Version 1.3

- Providing console of Virtual KVM Gateway with the functions which is enabled through certain license options.

Version 1.2

- Support for searching devices using the device model, connection status, or capability.
- Support task management of importing hierarchy/devices.
- Providing a command line tool to manipulate hierarchy.
- Providing a new widget of power data summary with peak power data and top power consumers.

Version 1.1

- Support monitoring and limiting enclosure level power consumption of enclosure of HP ProLiant SL Scalable system.
- Support blade level modeling for Dell and HP enclosure.
- Providing static power profiles for EMC and NetApp storage device.

- Support associating in-band communication channel to out-of-band IPMI devices to monitor in-band CPU utilization.
- Support guest role authorization.
- Providing event reminders of sound and blinking.
- Support Ubuntu Server 12 x64.

Legal Information

INFORMATION IN THIS DOCUMENT IS PROVIDED IN CONNECTION WITH AMI® PRODUCTS. NO LICENSE, EXPRESS OR IMPLIED, BY ESTOPPEL OR OTHERWISE, TO ANY INTELLECTUAL PROPERTY RIGHTS IS GRANTED BY THIS DOCUMENT. EXCEPT AS PROVIDED IN AMI'S TERMS AND CONDITIONS OF SALE FOR SUCH PRODUCTS, AMI ASSUMES NO LIABILITY WHATSOEVER, AND AMI DISCLAIMS ANY EXPRESS OR IMPLIED WARRANTY, RELATING TO SALE AND/OR USE OF AMI 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 AMI, THE AMI PRODUCTS ARE NOT DESIGNED NOR INTENDED FOR ANY APPLICATION IN WHICH THE FAILURE OF THE AMI PRODUCT COULD CREATE A SITUATION WHERE PERSONAL INJURY OR DEATH MAY OCCUR.

AMI 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." AMI 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 AMI sales office or your distributor to obtain the latest specifications and before placing your product order.

Copies of documents which have an order number and are referenced in this document, or other AMI literature, may be obtained by visiting AMI's Web Site.

Intel processor numbers are not a measure of performance. Processor numbers differentiate features within each processor family, not across different processor families. See http://www.intel.com/products/processor_number for details.

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