

Supermicro System Management Software 14th Generation Platform Edition

Complete Solutions to Help Organizations Optimize IT Infrastructure Utilization and Security



SYSTEM MANAGEMENT SOFTWARE

Supermicro Delivers Total Software Solution to Fulfill System Management Lifecycle Tasks



System Management Software Suite Bundles

Supermicro's system management software suite consists of a set of specialized applications available in the following bundles.

Suite Bundle	Standard	Basic	Advanced	Enterprise
Description	Fundamental single node monitoring and management features for system setup and maintenance.	Single node or small-scale remote system configuration, management and update features.	Medium or large-scale system management to improve performance, uptime, and management of peripheral devices.	Extended data center management for enhanced security, proactive service, software-defined infrastructure, and more.
License	No license required	SFT-OOB-LIC	SFT-DCMS-SINGLE (Optional add-on SFT-DCMS-SVC-KEY (1))	SFT-DCMS-SINGLE + SFT-SDDC-SINGLE (Optional add-on SFT-DCMS-SVC-KEY (1))
SuperCloud Composer (SCC)	N/A	N/A	N/A	Supported
Supermicro Server Manager (SSM)	N/A	N/A	Supported	Supported
SuperServer Automation Assistant (SAA)	Partially Supported	Partially Supported	Supported	Supported
3rd Party Software Plug-ins	N/A	N/A	Supported	Supported
Local Host Diagnostics/Daemons ²	Supported	Supported	Supported	Supported
IPMIView Mobile (Android/IOS)	Supported	Supported	Supported	Supported

¹Onsite Services via SSM/SAA/ Service Calls (Call Home) requires SFT-DCMS-SINGLE + SFT-DCMS-SVC-KEY & SLA contract with Supermicro Global Service ² Local Host Diagnostics/Daemons category includes Thin-Agent Service and Super Diagnostics Offline software. For detailed information, please check with your Supermicro sales representative or refer to Supermicro website:

https://www.supermicro.com/en/solutions/management-software



SCC – SUPERCLOUD COMPOSER

SuperCloud Composer (SCC) is a composable cloud management platform that provides a unified dashboard to administer software-defined data centers. This cloud infrastructure management product brings speed, agility, and simplicity to IT administration by integrating data center tasks into a single intelligent management solution, with a robust composer engine that can orchestrate cloud workloads through a streamlined industry-standard Redfish[®] API. SCC can manage a broad portfolio of multi-generation Supermicro servers and third-party systems through its data center lifecycle management feature set from a single unified console.

Benefits	Features
Cost Savings - CapEx/OpEx	 Expands on optimized Supermicro Building Block Solutions[®] Third party vendor support
Intelligent Data Center Management	 POD & rack-level management (including ToR switch) Call home management Asset management (monitoring, updates) GPU/Storage Performance Metrics Liquid Cooling Management from CDU to Cooling Tower
Frictionless Deployments	 Zero-touch provisioning for network configuration Hardware lifecycle management for software-defined data centers Northbound Redfish APIs provide seamless integration
Dynamically Configured Servers	Zero-touch OS deployment in seconds
Device Scaling of Resources	 Monitor/manage resource pools in a composable, disaggregated infrastructure Software-defined node composer Expands storage and accelerators capacities to existing compute nodes Support for third party devices expands available resource selection
Unified End User Experience Data Driven Decisions	 Single pane of glass for data center deployment Rich analytics & telemetry
Compliance & Governance	 Manage silicon Root of Trust (RoT) SSL security compliance User-defined role-based access control



Interface: WebUI/Redfish Northbound API Supported OS: Linux Per-Node License: Enterprise (SFT-DCMS-SINGLE + SFT-SDDC-SINGLE)





SCC Dashboard

Displays an aggregated view of POD health, visualized system data analytics, and activity event timeline tracking, providing at-a-glance awareness of data center operations as well as detailed system status, composed node status, and allocated storage.

Compute Node

Provides an inventory of fluid pools of compute where each physical fabric resource can be managed individually without the need to use the BMC web UI directly.

	Appliance @ Address						IBAC Webs
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				Serial Number	\$2234597850	Hoolith	10000
				Term Fector	2	700	
				Manufacturer	Supermicro	Tosk	
				BIOS Version	15		



POD View Rack Management

Offers the flexibility to organize data center requirements based on common workloads assigned to a rack deployment either at the edge or physical appliances in a remote data center.

Liquid Cooling Console

Provides is a powerful tool to collect vital information on physical assets and sensor data from a CDU (Cooling Distribution Unit), including pressure, humidity, pump and valve status, and more.

۲	P Address 00303.05.03	a void Cooling Console					Physical Assets / Liquid	Dooling Cons
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0			•••	Manufacturer	Supermicro			
0								

SSM – SUPERMICRO SERVER MANAGER

Supermicro Server Manager (SSM) is the all-in-one solution to manage Supermicro systems from a single console view, allowing IT data center administrators to monitor and manage a wide portfolio across multiple generations of Supermicro servers from a single console. SSM features server service and component monitoring (CPU, memory, storage controller) with alerts, power usage management, firmware update automation, OS deployment and many more features that help streamline server management.

Features

- All-in-one, single pane-of-glass view console for server management
- 24/7 health monitoring and alerts
- · Simultaneous multi-system operations with groups
- Firmware and OS deployment
- Power policy configuration
- Automated notifications and updates for newly available firmware

 Style
 <th

Dashboard Overview

Interface: WebUI/REST APIs Supported OS: Windows, Linux Per-Node License: Advanced (SFT-DCMS-SINGLE)

🖵 Monitoring - 👌 Provision -	& Configuration								
Host View: 🔇 All									
Q. Enter Group Name				Host Vi	ew Service	fiew			
V QUERY GROUPS							≣ 23 <u>≛</u> r 1	🕲 15 🖸 8	00
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V PHYSICAL GROUPS	🕑 Up	🖉 ак	10.141.81.99	IPMI,NM	10.141.81.39		8 hours age	01d 06h 35m 01s	>>
MidPlane_10.142.163.26	🕑 Up	🖉 ок	10.141.83.38	Redfish	10.141.83.38		8 hours ago	01d 06h 35m 15s	>>
V LODICAL GROUPS	O Up	🖉 ок	10.141.174.57	NN, Redfish	10.141.174.57		8 hours ago	01d 06h 35m 10s	>>
	🕑 Up	🖉 ок	10.141.179.72	IPMI	10.141.179.72		8 hours ago	01d 05h 35m 09s	>>
	Oup	🖉 ок	10.141.180.82	Redfish	10.141.180.82		8 hours ago	01d 06h 34m 67s	>>
	Up	🖉 ок	10.142.161.181	IPM	10.142.161.181	MidPlane_10.142	8 hours ago	01d 06h 34m 53s	>>
	Up	🛇 ок	10.142.162.164	IPM	10.142.152.164	NisPlane_10.142	8 hours ago	01d 06h 35m 07s	>>
	O Down	Critical	10.142.162.169	IPMI,NM	10.142,162.169	MidPlane_10.142	8 hours ago	39d 03h 33m 3	>>
	O Down	Critical	10.142.162.176	IPM	10.142.162.176	MidPlane_10.142	8 hours ago	21d 02h 25m 32s	>>
	Up	🛇 ок	10.142.162.178	IPMI	10.142.162.178	MidPlane_10.142	8 hours ago	01d 06h 34m 54s	>>
	O Up	Critical	10.142.163.26	CMM_IPMI	10.142.163.25	MisPlane_10.142	8 hours ago	01d 05h 35m 02s	>>
	OUp	Ок	10.142.168.214	IPM	10.142.168.214	NidPlane_10.142	8 hours ago	01d 06h 35m 08s	>>
	OUp	🖉 ак	10.142.171.185	IPMI,NM	10.142,171,185	MidPlane_10.142	8 hours ago	01d D6h 35m 00s	>>
	O Down	Critical	10.142.171.190	IPMI,NM	10.142.171.190	MidPlane_10.142	8 hours ago	14d 05h 47m 34s	>>
	O Down	Critical	10.142.172.144	IPMI,NM	10.142.172.164	MidPlane_10.142	8 hours ago	14d 05h 47m 26s	>>
	OUp	🖉 ак	10.142.175.73	IPM	10.142.175.73	MidPlane_10.142	8 hours ago	01d 06h 35m 04s	>>
	QUp	Ок	10.184.13.102	NM.Redfish	10.184.13.102	0P1	8 hours ago	01d 06h 35m 13s	
	OUp	Ок	10.184.13.221	NM Redfish	10.184.13.221	GP1	8 hours ago	01d 06h 34m 55x	
	O Down	Critical	10.184.14.74	NM.Redfish	10.184.14.74	GP1	8 hours ago	84d 02h 47m 4	>>
	O Down	Critical	10.184.14.151	NM.Redfish	10.184.14.151	GP1	8 hours ago	28d 07h 02m 23s	

Host Monitoring View

SSM SERVICE CALLS (CALL HOME)

Features

- Automated report and ticket generation from Supermicro Global Service Team (Supermicro service agreement required)
- Multi-level service call notifications
- Monitor pre-defined critical hardware failures of fully built systems by Supermicro
- Customer-defined sensor monitoring
- Enhanced relay SSM server via HTTPS service

Per-Node License: Enterprise: (SFT-DCMS-SVC-KEY) Others: Service contract with SMCI[™] Global Services & Support





Monitoring - 🖥 Provision - 🖌 Configu	ation *		
Memory			
Status Overview	a	Memory List Status Host Name Part Number Serial Number	
		All Stat V Enter Host Name Enter Part Number Enter Serial Ni V Hynix HMA42087MFR4N-TF 2133 MHz 16 08 10.141.180.82(191-04M/A1) 1902/3410(18 02:28:55	imbe Enter Manufacturer
-	Critical: 0 Marning: 0 DK: 110	Winks HIMA420R7MFR4N-TF 2133 MHz 16 CB 10.141.180.82 (P2-0MMA1 1007A780 2023/10/16 08:28:55	~
		Micron 16ATF2064AZ-201A1 2133 MHz 16 GB 10.142.171.185 (DIMMA2 0FABB36 2023/10/16 0.8:29:01	~
		Micron 16ATF2G64AZ-2G1A1 2133 MHz 16 G8 10.142.171.185 (DIMM82) 0FA887DD (2023)10/16 03:29-01	~
Top 5 Manufacturers	ż	Micron 16ATF2064AZ-201A1 2133 MHz 16 68 10.162.171.185 (DIMMAT) (0FAB9789 (2023/10/16 03.29.01	~
Simung		Micron 16ATF2064AZ-201A1 2133 MHz 16 GB 10.162.171.185 (DIMM81) 0FA897C4 (2023/10/16 03 29 01	~
Micron Technology		Micron 18ADF2072PDZ-302E1 2034 MHz 16 GB 10.142.172.144 (P2-DIMME1) F1866428 (2023)10/02 07:53:85	~
SK Hymix		Micron 18ADF2072PDZ-302E1 2934 MHz 16 GB 10.142.172.144 (P1-DIMM81) [F1865354] (2023)[10/02 07:58:85	~
Hypix			

Component Status Overview –

Supermicro® Server Manager

Provides a single console view of the components' status including health, model and host; supporting CPU, memory and storage adapters

System Host Report –

View reports on system host availability, system information and Service availability/status.

Reporting C C	Single Host Status Rep								_
8 SSM Server Report	Host Name: 10.141.180.82	15 Year: 2023		Not Selected	Query				
Server Availability Report	Stacked Bar Chart O Line Ch 100.00%	art Include "undete	mined"				_		
History Report	90,00%								
Host Report Host Availability Report	80.00%								- >
Single Host Status Report	70.00%								/
Single Host with Services Status Report	40.00%							1	
Host Status Detailed Report	40 50.00%							A	
Service Report	¥ 30.00%							/	
Service Availability Report	20.00%						1		-
Single Service Status Report	10.00%						- /		
	0.00%		• · · •		-	•			
	01	02	03 04	05	OS	07	08	69	1
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	Single Host Status Report		- Up	Down - U	nreacnable	-			
	Month	Up		Down			Unreache	side	
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	2023/02	0.00%		0.00%			0.00%		
	2023/03	0.00%	0.00%		0.00%		0.00%		
	2023/04	0.00%	0.00% 100.00% 92.43% 100.00%			0.00% 0.00% 0.52% 0.00%		0.00%	
	2023/05	100.02%							
	2023/06	99.43%						0.00%	
	2023/07	100.02%							
	2023/08	100.00%	100.00%		0.00%		0.00%		
	2023/09	45.99%		54.01%			0.00%		
	2023/10	20.75%	20.25%		79.25%		0.00%		
Maritoring									
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w GU[] Select Language: English (ADMIN) Logout

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n Name I	Compliance - : Next Updat	Host Name	Host Group	MB Model Name	SYS Model Name :	Available FWs	Last Check	_
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	O Not Compliant	10.141.81.39		X11DPU	SYS-6019U-TR4	BMC_01.74.13	9 hours ago	~
	Not Compliant	10.184.13.221	GP1	X12STD	SYS-6029U-TR4T	BMC_01.13.10	9 hours ago	»
	O Not Compliant	10.184.21.135	GP1	X13DAI-T	SuperServer	X13DAI-T_1.3a_1.00.54_SUN	9 hours ago	»
	🗢 ОК	10.141.174.57		X12DPU-6-G8-NI22	Super Server		9 hours ago	»
	🛛 ОК	10.184.13.102	GIP1	X13DDW	Super Server		9 hours ago	»
	• ок	10.184.14.151	GIP1	B125PE-CPU-25G	58E-610J		9 hours ago	»
	💿 ОК	10.184.17.123	GP1	H1355F	Super Server		9 hours ago	»
	🕏 ОК	10.184.25.21	GIP1	X13SEW-TF	X13SEW-TF		9 hours ago	»
W Notifi	O Not Compliant						9 hours ago	
	O Not Compliant	10.141.180.82		X12DPI-N6	SYS-620P-TRT	X12DPi-N(T)6_1.6_AS1.01.4	9 hours ago	»
	O Not Compliant	10.141.81.39		X11DPU	SYS-6019U-TR4	BMC_01.74.13	9 hours ago	»
	O Not Compliant	10.141.83.38		H1255W-INR	Super Server	H1255W-NTR_2.6a_A501.01	9 hours ago	»
	о ок	10.141.174.57		X12DPU-6-G8-NI22	Super Server		9 hours ago	»
UT_CM	O Not Compliant						9 hours ago	
	O Not Compliant	10.142.162.164	MidPlane_10	BH1255i-M25	MidPlane	BMC_01.02.62	9 hours ago	»
	O Not Compliant	10.142.162.176	MidPlane 10	BH1255I-M25	MidPlane	BMC 01.02.62	9 hours ago	»
	O Not Compliant	10.142.161.181	MidPlane_10	BH1255i-M25	MidPlane	BMC_01.02.62	9 hours ago	»
	© OK		MidPlane_10	BH1255i-M25	MidPlane			»

System Firmware Provisioning -

Automated notifications and updates for newly available firmware helps to keep system firmware up to date with customized intervals and scheduling.

OS Deployment –

Built-in Linux-based OS deployment for operating system provisioning with customized Kickstart configuration file.





SAA – SUPERSERVER AUTOMATION ASSISTANT

SuperServer Automation Assistant (SAA) is a next-generation CLI (Command-Line Interface) utility designed to streamline IT administrators' tasks in deploying, configuring, and updating at scales ranging from a single node to an entire data center.

SAA integrates management features from existing Supermicro tools, including SUM, SMCIPMITool, and IPMICFG, into a unified solution supporting Supermicro's latest platforms. It retains the ability to execute commands in parallel, enabling simultaneous management of multiple systems from a centralized host.

With comprehensive capabilities, SAA supports tasks such as basic BIOS, BMC firmware updates and configurations, and extend to peripheral device management and firmware updates.

Its versatile triple-channel management framework includes:

- In-band channel: Communicates through local system interfaces.
- Out-of-band (OOB) channel: Operates via the system's BMC, enabling management commands to run independently of the host OS
- Remote in-band channel: Leverages secure SSH and SFTP protocols to perform specific in-band operations from remote method.

This all-in-one tool provides IT administrators with an efficient and robust solution for system management.

Feature Highlights

- In-Band/Out-of-Band/Remote-In-Band, Single/Multiple nodes operation
- BIOS, BMC, CMM, CPLD, storage, PSU, and other peripheral firmware management capabilities
- Parallel execution and configuration across multiple • systems for large-scale management.
- Extended features of asset management, system . utilization, sensor information, BIOS/BMC event logs, and TPM provisioning
- · Unified CLI utility designed for seamless integration into user software stacks and scripting workflows

Local Host Single Node In-Band



ADMIN

Remote Single Node Out-of-Band



ADMIN

Remote Multi-Node Out-of-Band

ADMIN



Multiple System Nodes



License :

- Standard Update/Management: No license required
- Basic Remote Management: SFT-OOB-LIC
- Advanced Full Features: SFT-DCMS-SINGLE
- Service Calls: SFT-DCMS-SVC-KEY + SFT-DCMS-SINGLE
- * Essential Features only for UEFI version, refer to SAA UEFI User Guide for more detail



MANAGEMENT PLUG-INS – THIRD PARTY SOFTWARE COMPLIANCE

Supermicro Managemt Plug-ins allow users to take advantage of Supermicro proprietary features in third party management software, simplifying denata center administrators' system management across heterogenous hardware providers.

Plug-in for VMware vCenter

- Supports HTML5-based web clients
- Manage and monitor via BMC Redfish[®] API including system firmware updates

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 ▲ M > ■ 104 (M2451) ✓ ■ CCI > ■ 104 (M124199) 	issues and Alarms Al Issues Trigaered Alarms Performance Overview Advanced Tasks and Events Iasks Events Sessurce Allocation CPU	LOON SANSON CHASSS MAANGAR LOG COMPUBATION SYSTEMS MANTHAGEN OF
	Memory Storage Utilization Hardware Health Health Supermicro Plug-in	110 oct mage (known /mpr(M47_411.1571506_1752_05m

Interface: Web UI Supported OS: VMware vCenter License: Advanced (SFT-DCMS-SINGLE)

Plug-in for Microsoft SCOM

- · Centralized management on a single dashboard console
- Manage and monitor via BMC Redfish® API

Interface: GUI Supported OS: Windows License: Advanced (SFT-DCMS-SINGLE)



Plug-in for Nagios

- Essential system sensor monitoring features with event subscriptions
- Supports firmware updates and configuration

Interface: CLI Supported OS: Linux License: Advanced (SFT-DCMS-SINGLE)

Current Status:	CRITICAL (for 0d 0h 2m 5s)				
Status Information:	CRITICAL - System, State=Enabled, Model=Super Server, S/N=S213283X6507519 CRITICAL - Intrusion Sensor, State=HardwareIntrusion OK - SATAEmbedded:Embedded SATA Storage System, State=Enabled OK - NVMeSSD:NVMe Storage System, State=Enabled				
Performance Data:					
Current Attempt:	1/3 (SOFT state)				
Last Check Time:	10-30-2018 17:53:28				
Check Type:	ACTIVE				
Check Latency / Duration	: 0.000 / 2.715 seconds				
Next Scheduled Check:	10-30-2018 17:55:28				
Last State Change:	10-30-2018 17:53:28				
Last Notification:	N/A (notification 0)				
Is This Service Flapping	NO (0.00% state change)				
In Scheduled Downtime?	NO				
Last Update:	10-30-2018 17:55:27 (0d 0h 0m 6s ago)				
Active Checks: ENAB	LED				
Passive Checks: ENAB	LED				
Obsessing: ENAB	LED				
Notifications: DISA	BLED				
Event Handler: ENAB	LED				
Flap Detection: ENAB	LED				



OTHER APPLICATIONS – SDO, IPMIView MOBILE and TAS

On 14th generation platforms and above, Supermicro offers other useful applications for management purpose, including the hardware diagnostics application further assists troubleshooting, software applications for asset collection and mobile applications for system status check via cell phone.

Super Diagnostics Offline (SDO)

- Lightweight and OS independent
- Local/remote system hardware diagnostics
- · Comprehensive test report to aid with troubleshooting

Interface: GUI/CLI Supported OS: N/A; only UEFI Shell required



IPMIView Mobile (Android/IOS)

- Remote out-of-band single node basic BMC management with GUI
- Quick system status access and check via mobile app

Monitors system utilization under the running OS

• BMC state event log generation when device failure occurs

Interface: GUI Supported OS: Android, iOS

Thin-Agent Service (TAS)

Interface: OS Daemon

VMware ESXi

Supported OS: Windows, Linux, FreeBSD,



Hardware Devices / Components

SUPERMICR

Better

Better Performance Per Watt and Per Dollar

Faster

First-to-Market Innovation with the Highest Performance Server Designs



Greener

Reduced Environmental Impact and Lower TCO



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