

### WE KEEP IT GREEN®

## Supermicro Server Manager (SSM)

Maximizes server uptime and health with minimal efforts from an Enterprise IT administrator

he Supermicro Server Manager utility monitors and manages a wide portfolio across multiple generations of Supermicro servers within a single console as in Figure 1 below.

SSM provides capabilities to monitor the health of server components including memory, hard drives and RAID controllers. It enables the datacenter administrator to monitor and manage power usage across all Supermicro servers allowing users to maximize their CPU payload while mitigating the risk of tripped circuit. Firmware upgrades on Supermicro servers became easier now with a couple of clicks. Administrators can now mount an ISO image on multiple servers and reboot the servers with those images. The tool also provides pre-defined reports and many more features that will make managing Supermicro servers simpler.

	🛛 🕄 🛛 Host Viev	v			_			3 Commands
Ionitoring All	Host Status:	All Status	Service State	us: All Status 🔻 I	ind:			✓ ІРМІ
All Host View Service View San Jose	Host Status	Service S	▲Host Name	Host Type	Address	Last Check	Duration	Change BIOS Cfg
	📀 Up	📀 ок	10.134.14.11	IPMI	10.134.14.11	15 second	00d 00h 10m	Change DMI Info
- Host View	📀 Up	🙆 Critical	10.134.14.12	IPMI	10.134.14.12	15 second	00d 00h 10m	Clear BMC and BIOS Lo Reset Chassis Intrusion
Service View	🚫 Up	🙆 Critical	10.134.14.13	IPMI	10.134.14.13	15 second	00d 00h 10m	
Undefined Group	🚫 Up	O Unknow	10.134.14.23	Agent Managed,Wi	10.134.14.23	04 second	00d 00h 15m	Stop Blinking UID LED
	🚫 Up	📀 ок	10.134.14.24	Agent Managed, Wi	10.134.14.24	03 second	00d 00h 15m	Blink UID LED
	🚫 Up	O Unknow	10.134.14.26	Agent Managed, Wi	10.134.14.26	03 second	00d 00h 15m	Export Asset Info
	🚫 Up	📀 ок	10.134.14.33	Agent Managed, IP	10.134.14.33	02 second	00d 00h 15m	Export BIOS Cfg
	🚫 Up	ОК	10.134.15.152	Agentless	10.134.15.1	04 second	00d 00h 25m	Export BMC Log
	Q Up	ОК	softlab1	Agent Managed, IP	10.134.14.30	03 second	00d 00h 15m	Export DMI Info
	🚫 Up	ОК	softlab2	Agent Managed, IP	10.134.14.31	02 second	00d 00h 15m	Export Factory BIOS Cfg
	O Up	-	swdb.supermicro.c	IPMI	10.134.14.9	15 second	00d 00h 10m	Graceful Power Off
		<b>U</b>						Load Factory BIOS Cfg
	Detail	Detail						Mount ISO Image
	📑 swdb.st	swdb.supermicro.com						
	Host Statu	Host Status Service Status						
	Status		🐼 Up					Unmount ISO Image
								🗔 Update BIOS
lonitoring	Address		10.134.14.9					📮 Update BMC
ioniconing	Descript		Firmware: AMI			> System Information		
eporting	Last Che	eck	Aug 15, 2014 11:57:02 AM				> Remote Control	

Fig 1: Screenshot of SSM Console

#### **Key Features**

- 1. Monitor Server hardware and service health. Upgrade Server BIOS and IPMI firmware and configurations
- 2. Groups together server clusters spread across different networks and manage remotely as in Figure 2
- 3. Check Asset information (SD5 should be installed)
- 4. Check System utilization through IPMI (Only available on X10)
- 5. Mount bootable iso image to install operating systems
- 6. Flexibility to monitor and manage power on a node or in a rack across your datacenter with configurable policies
- 7. Remote console to target machines through VNC
- 8. Log and Report the server information and availability
- 9. Update SuperDoctor5 on target systems
- 10. Administer E-mail alerts through SMTP protocol





Fig 2: Remote Management across Server clusters

#### **BENEFITS**

- Easy to use console reduces deployment time of Supermicro servers to hours
- Upgrade and Configuration commands on multiple machines in parallel exponentially reduces hardware maintenance time
- Single tool installation and single console to harness the advantages of multiple features
- CLI and WebUI provides options to integrate Supermicro server management in existing framework
- Support for open source Nagios Plugins leverages existing work from the community

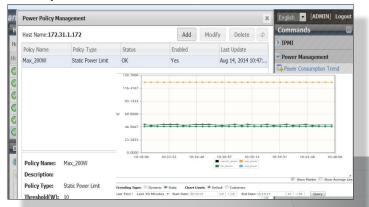
# SUPERMICR Supermicro Server Manager (SSM)

#### **Common Use Cases Scenarios**

Integrate Supermicro Server Management in existing Datacenter infrastructure framework with CLI option

******	******	******
Product - X8DTU		
SSM version - 1.0-Beta	a-build.127-20110	9425161702
Copyright(c) 1993-2011	L Super Micro Com	nputer, Inc.
******************	******	*********
Monitored Item	High Limit	Low Limit
CPU1 Temp		
CPU2 Temp		
System Temp	81C/177F	
CPU1 Vcore	1352mV	824mV
CPU2 Vcore	1352mV	824mV
+1.5V	1656mV	1336mV
+5V	5536mV	4480mV
+5VSB	5536mV	4480mV
+12V	13250mV	10706mV
-12V	-11222mV	-12580mV
+3.3V	3648mV	2928mV
+3.3VSB	3648mV	2928mV
VBAT	3648mV	2928mV
Fan7		675RPM
Fan8		675RPM
Intrusion		
PS Status		
/dev/sda		
/dev/sdb		

Optimize power consumption in datacenter operations with custom policies



#### **Hardware and Software Requirements**

HARDWARE	4.0 GB free disk space, An Ethernet network interface carc Available 8.0 GB RAM(May need more depending on the number of managed system)
Operating System	Red Hat Enterprise Linux Server 5.x(64-bit), 6.x(64-bit), 7.x(64-bit), SUSE Linux Enterprise 11.x(64-bit), 12.x(64-bit), Windows 2008 Server R2 64-bit, 2012 Server R2 64-bit, 2016 Server 64-bit
Browser	Internet Explorer 11.x or higher, Firefox 3.x or higher
Screen Resolution	1024 x 768

#### **Order Information**

SKU: SFT-DCMS-Single

Please contact your Supermicro Sales representative or your local authorized reseller for more information. Website: http://www.supermicro.com/products/nfo/SMS\_SSM.cfm

#### Upgrade BIOS on server clusters in less than 10 minutes\*

\* Depends on remote machines CPU, memory and network speeds

PMI - Update BIOS Arguments	1.4.4.4.4	Select Languag	e: English 💌 [ADMIN] L
Upload BIOS image file	+++++		Commands
	111111		✓ IPMI
BIOS image file Browse No file selected.	Address	Last Check Duration	Change BIOS Cfg
	172.31.1.179	04 minutes a 01d 09h 40m 08s	Change BMC Cfg
Options	172.31.1.178	04 minutes a 02d 14h 25m 42s	Change DMI Info Clear BMC and BIOS Lo
	172.31.1.176	04 minutes a 01d 13h 12m 38s	Reset Chassis Intrusi
Reboot	172.31.40.40	03 minutes a 00d 01h 23m 37s	BMC Cold Reset
Forces the managed system to reboot Fach SMBIOS	172.31.1.171	04 minutes a 02d 14h 15m 53s	Stop Blinking UID LED
Flash SMBIOS Overwrites SMBIOS data. This option is used only for specific purposes. Unless you are	172.31.1.173	04 minutes a 02d 14h 15m 53s	Blink UID LED
familiar with SMBIOS data, do not use this option.	172.31.1.172	04 minutes a 01d 13h 04m 31s	Export Asset Info
Preserve ME	811111		Export BIOS Cfg
Preserves ME firmware region. This option is used only for specific purposes. Unless you			Export BMC Cfg
are familiar with ME firmware, do not use this option.	/////		Export DML Info
Preserve NVRAM	/////		Export Factory BIOS
Preserves NVRAM. This option is used only for specific purposes. Unless you are familiar with BIOS NVRAM, do not use this option.	(/////		Export System Utilizatio
			Graceful Power Off
			Load Factory BIOS Cfg
Next Close			Mount ISO Image
			Power Off
			Power On
			Reset
			Update BIOS
			Update BMC

### Generate history reports to understand server's health helping administrators take pro-active steps to mitigate business impact

listory Repo	rt		_	_	_	
History Type :	State History 💌	Monitor : All 👻	State : All Sta	ate 👻 State T	ype : All State	Type 👻
ast Time : La:	st 24 Hours 🔻	Start Date: 8/14/14	4 : 32	End Date: 8/15/	14 4	: 32 Query
< < 1 2 > >>						
Host Name	Service Name		State	State Type	Attempt	Status Information
172.31.40.40	IPMI Health All	Aug 14, 2014 6:43:59 AM	ок	HARD	1/3	Checked:11, OK:11
172.31.40.40	IPMI Health All	Aug 14, 2014 6:46:03 AM	Critical	SOFT	1/3	Checked:11, OK:10, Critical:1 Critical items: PS1 Status=Ba
172.31.40.40	IPMI Health All	Aug 14, 2014 6:48:06 AM	ок	HARD	1/3	Checked:11, OK:11
172.31.40.40	IPMI Health All	Aug 14, 2014 6:48:31 AM	Critical	SOFT	1/3	Checked:11, OK:10, Critical:1 Critical items: PS1 Status=B
172.31.40.40	IPMI Health All	Aug 14, 2014 6:50:36 AM	Critical	HARD	1/3	Did not reply IPMI requests!
172.31.40.40	IPMI Health All	Aug 14, 2014 6:52:51 AM	ок	HARD	1/3	Checked:10, OK:10
172.31.40.40	IPMI Health All	Aug 14, 2014 6:54:51 AM	Warning	SOFT	1/3	No sensor data.
172.31.40.40	IPMI Health All	Aug 14, 2014 6:56:45 AM	Critical	SOFT	2/3	Checked:17, OK:16, Critical:1 Critical items: Chassis Intru-Bad;
172.31.40.40	IPMI Health All	Aug 14, 2014 6:56:59 AM	Critical	HARD	1/3	Checked:17, OK:16, Critical:1 Critical items: Chassis Intru=Bad;
172.31.40.40	check_ipmi	Aug 15, 2014 3:06:15 AM	Down	SOFT	1/3	Did not reply IPMI requests!