



LINUX CLUSTER MONITOR

- One Year Progress Review -

Supermicro Solution and Integration Center

April 5th 2021

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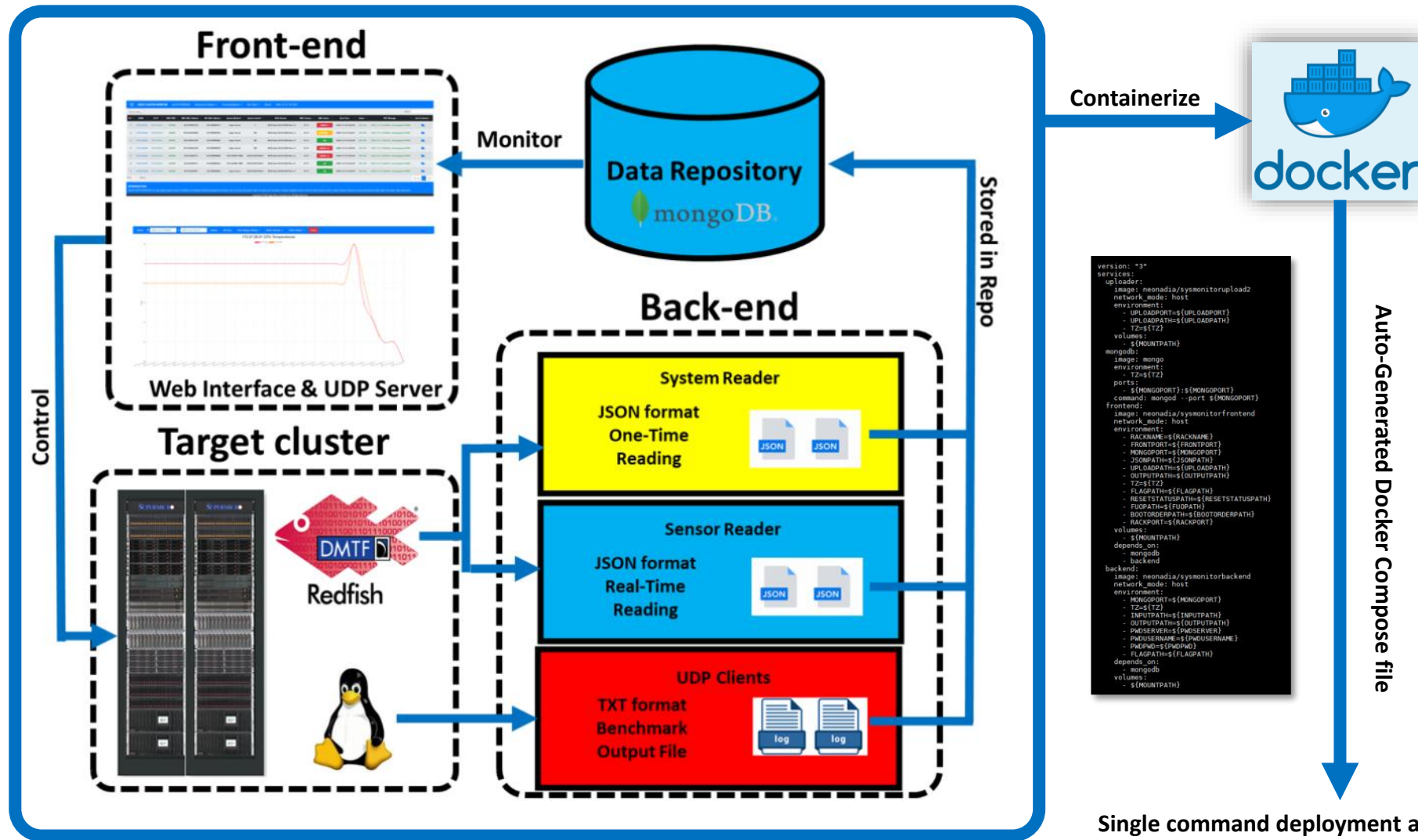


Outline



- ❑ System architecture
- ❑ Latest updates overview
- ❑ Page by page introduction
- ❑ L12 test archive: Facebook project
- ❑ Quick deployment steps

System Architecture



Single command deployment anywhere:
\$ docker_deploy RACK

Outline



- ☐ System architecture
- ☐ Latest updates overview
- ☐ Page by page introduction.
- ☐ L12 test archive: Facebook project
- ☐ Quick deployment steps

Latest Updates Overview



Front-end:

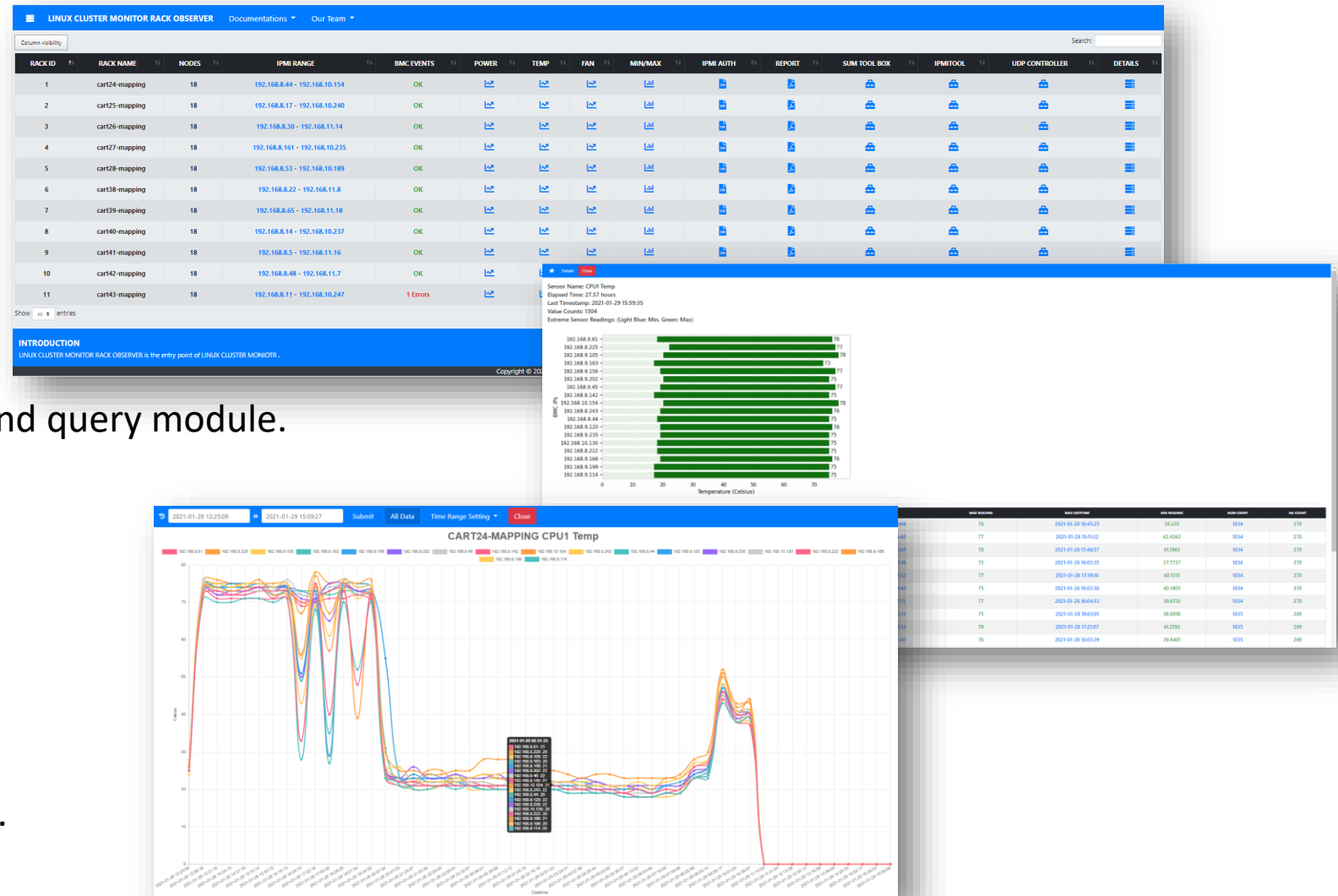
1. More advance features.
2. Min/Max reading page.
3. Benchmark support.
4. Parallelize optimized.

Back-end:

1. System password reading and query module.
2. Real-time diagram display.
3. Benchmark support.
4. Testing data backup.

Docker:

1. UDP server/client.
2. Containerize the program.
3. Compose the docker image.
4. Multi-clusters deployment.



Outline



- ☐ System architecture
- ☐ Latest updates overview
- ☐ Page by page introduction.
- ☐ L12 test archive: Facebook project
- ☐ Quick deployment steps

New: Clusters View



No Clusters View page

Before

By the end of Feb. 2020

The screenshot shows the 'Linux Cluster Monitor Rack Observer' interface. It features a table with 15 columns: Rack ID, Rack Name, Nodes, IPMI Range, BMC Events, Power, Temp, Fan, Min/Max, IPMI Auth, Report, SUM Tool Box, IPMITool, UDP Controller, and Details. There are 11 rows of data, each representing a different cluster mapping. The 'BMC Events' column shows 'OK' for most clusters, but the last one (cart143-mapping) shows '1 Errors'. The interface includes a search bar, a 'Column visibility' dropdown, and a 'Show' button. At the bottom, there is an 'INTRODUCTION' section and a copyright notice for Super Micro Computer Inc.

RACK ID	RACK NAME	NODES	IPMI RANGE	BMC EVENTS	POWER	TEMP	FAN	MIN/MAX	IPMI AUTH	REPORT	SUM TOOL BOX	IPMITOOL	UDP CONTROLLER	DETAILS
1	cart24-mapping	18	192.168.8.44 - 192.168.10.154	OK										
2	cart25-mapping	18	192.168.8.17 - 192.168.10.240	OK										
3	cart26-mapping	18	192.168.8.30 - 192.168.11.14	OK										
4	cart27-mapping	18	192.168.8.161 - 192.168.10.235	OK										
5	cart28-mapping	18	192.168.8.53 - 192.168.10.189	OK										
6	cart38-mapping	18	192.168.8.22 - 192.168.11.8	OK										
7	cart39-mapping	18	192.168.8.65 - 192.168.11.18	OK										
8	cart40-mapping	18	192.168.8.14 - 192.168.10.237	OK										
9	cart41-mapping	18	192.168.8.5 - 192.168.11.16	OK										
10	cart42-mapping	18	192.168.8.48 - 192.168.11.7	OK										
11	cart43-mapping	18	192.168.8.11 - 192.168.10.247	1 Errors										

Current version

By the end of March 2021

New contents:

- Number of Nodes.
- Cluster status.
- Min/Max reading.
- Sensor reading.
- SUM Tool Box.
- UDP Controller (Benchmark).
- PDF report.

Usage:

1. Home page of Linux Cluster Monitor.
2. Cluster level monitoring.
3. Cluster level tuning.

New: Clusters View

Documentations

- Deployment Manual
- Development Notes

Our Team

- HPC Overview
- Benchmark BLOG
- Our Solutions

IPMITOOL COMMAND LINE

Step 1: Config Input IPs

Option 1: Upload a text file of the BMC IPs

Option 2: Input IPs

Step 2: Enter IPMITOOL commands

IPMI 3: Config Input IPs

Option 1: Upload a text file of the BMC IPs

Option 2: Input IPs

Option 3: Initiate Target Clients

Option 4: Download Upload Benchmark Input

Option 5: Run Benchmarks

IPMI 4: Config Input IPs

Option 1: Upload a text file of the BMC IPs

Option 2: Input IPs

Option 3: Initiate Target Clients

Option 4: Download Upload Benchmark Input

Option 5: Run Benchmarks

LINUX CLUSTER MONITOR RACK OBSERVER

Documentations Our Team

Column visibility Search:

RACK ID	RACK NAME	NODES	IPMI RANGE	BMC EVENTS	POWER	TEMP	FAN	MIN/MAX	IPMI AUTH	REPORT	SUM TOOL BOX	IPMITOOL	ULI CONTROLLER	DETAILS
1	cart24-mapping	18	192.168.8.44 - 192.168.10.154	OK										
2	cart25-mapping	18	192.168.8.17 - 192.168.10.240	OK										
3	cart26-mapping	18	192.168.8.30 - 192.168.11.14	OK										
4	cart27-mapping	18	192.168.8.161 - 192.168.10.235	OK										
5	cart28-mapping	18	192.168.8.53 - 192.168.10.189	OK										
6	cart38-mapping	18	192.168.8.22 - 192.168.11.8	OK										
7	cart39-mapping	18	192.168.8.65 - 192.168.11.18	OK										
8	cart40-mapping	18	192.168.8.14 - 192.168.10.237	OK										
9	cart41-mapping	18	192.168.8.5 - 192.168.11.16	OK										
10	cart42-mapping	18	192.168.8.48 - 192.168.11.7	OK										
11	cart43-mapping	18	192.168.8.11 - 192.168.10.247	1 Errors										

Show All entries

Previous 1 Next

INTRODUCTION

LINUX CLUSTER MONITOR RACK OBSERVER is the entry point of LINUX CLUSTER MONIOTR.

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Power Sensor Readings

Report Name: CPU Temp

Report Time: 2021-09-20 15:00:05

Last Timestamp: 2021-09-20 15:00:05

Value Count: 1004

Extreme Sensor Readings (Light Blue: Min, Green: Max)

Sensor	Min	Max
101.160.0.1	15	75
101.160.0.2	15	75
101.160.0.3	15	75
101.160.0.4	15	75
101.160.0.5	15	75
101.160.0.6	15	75
101.160.0.7	15	75
101.160.0.8	15	75
101.160.0.9	15	75
101.160.0.10	15	75
101.160.0.11	15	75
101.160.0.12	15	75
101.160.0.13	15	75
101.160.0.14	15	75
101.160.0.15	15	75
101.160.0.16	15	75
101.160.0.17	15	75
101.160.0.18	15	75
101.160.0.19	15	75
101.160.0.20	15	75
101.160.0.21	15	75
101.160.0.22	15	75
101.160.0.23	15	75
101.160.0.24	15	75
101.160.0.25	15	75
101.160.0.26	15	75
101.160.0.27	15	75
101.160.0.28	15	75
101.160.0.29	15	75
101.160.0.30	15	75
101.160.0.31	15	75
101.160.0.32	15	75
101.160.0.33	15	75
101.160.0.34	15	75
101.160.0.35	15	75
101.160.0.36	15	75
101.160.0.37	15	75
101.160.0.38	15	75
101.160.0.39	15	75
101.160.0.40	15	75
101.160.0.41	15	75
101.160.0.42	15	75
101.160.0.43	15	75
101.160.0.44	15	75
101.160.0.45	15	75
101.160.0.46	15	75
101.160.0.47	15	75
101.160.0.48	15	75
101.160.0.49	15	75
101.160.0.50	15	75
101.160.0.51	15	75
101.160.0.52	15	75
101.160.0.53	15	75
101.160.0.54	15	75
101.160.0.55	15	75
101.160.0.56	15	75
101.160.0.57	15	75
101.160.0.58	15	75
101.160.0.59	15	75
101.160.0.60	15	75
101.160.0.61	15	75
101.160.0.62	15	75
101.160.0.63	15	75
101.160.0.64	15	75
101.160.0.65	15	75
101.160.0.66	15	75
101.160.0.67	15	75
101.160.0.68	15	75
101.160.0.69	15	75
101.160.0.70	15	75
101.160.0.71	15	75
101.160.0.72	15	75
101.160.0.73	15	75
101.160.0.74	15	75
101.160.0.75	15	75
101.160.0.76	15	75
101.160.0.77	15	75
101.160.0.78	15	75
101.160.0.79	15	75
101.160.0.80	15	75
101.160.0.81	15	75
101.160.0.82	15	75
101.160.0.83	15	75
101.160.0.84	15	75
101.160.0.85	15	75
101.160.0.86	15	75
101.160.0.87	15	75
101.160.0.88	15	75
101.160.0.89	15	75
101.160.0.90	15	75
101.160.0.91	15	75
101.160.0.92	15	75
101.160.0.93	15	75
101.160.0.94	15	75
101.160.0.95	15	75
101.160.0.96	15	75
101.160.0.97	15	75
101.160.0.98	15	75
101.160.0.99	15	75
101.160.0.100	15	75

L12 Test Report for CART24-MAPPING

Report Name: CPU Temp

Report Time: 2021-09-20 15:00:05

Last Timestamp: 2021-09-20 15:00:05

Value Count: 1004

Extreme Sensor Readings (Light Blue: Min, Green: Max)

Sensor	Min	Max
101.160.0.1	15	75
101.160.0.2	15	75
101.160.0.3	15	75
101.160.0.4	15	75
101.160.0.5	15	75
101.160.0.6	15	75
101.160.0.7	15	75
101.160.0.8	15	75
101.160.0.9	15	75
101.160.0.10	15	75
101.160.0.11	15	75
101.160.0.12	15	75
101.160.0.13	15	75
101.160.0.14	15	75
101.160.0.15	15	75
101.160.0.16	15	75
101.160.0.17	15	75
101.160.0.18	15	75
101.160.0.19	15	75
101.160.0.20	15	75
101.160.0.21	15	75
101.160.0.22	15	75
101.160.0.23	15	75
101.160.0.24	15	75
101.160.0.25	15	75
101.160.0.26	15	75
101.160.0.27	15	75
101.160.0.28	15	75
101.160.0.29	15	75
101.160.0.30	15	75
101.160.0.31	15	75
101.160.0.32	15	75
101.160.0.33	15	75
101.160.0.34	15	75
101.160.0.35	15	75
101.160.0.36	15	75
101.160.0.37	15	75
101.160.0.38	15	75
101.160.0.39	15	75
101.160.0.40	15	75
101.160.0.41	15	75
101.160.0.42	15	75
101.160.0.43	15	75
101.160.0.44	15	75
101.160.0.45	15	75
101.160.0.46	15	75
101.160.0.47	15	75
101.160.0.48	15	75
101.160.0.49	15	75
101.160.0.50	15	75
101.160.0.51	15	75
101.160.0.52	15	75
101.160.0.53	15	75
101.160.0.54	15	75
101.160.0.55	15	75
101.160.0.56	15	75
101.160.0.57	15	75
101.160.0.58	15	75
101.160.0.59	15	75
101.160.0.60	15	75
101.160.0.61	15	75
101.160.0.62	15	75
101.160.0.63	15	75
101.160.0.64	15	75
101.160.0.65	15	75
101.160.0.66	15	75
101.160.0.67	15	75
101.160.0.68	15	75
101.160.0.69	15	75
101.160.0.70	15	75
101.160.0.71	15	75
101.160.0.72	15	75
101.160.0.73	15	75
101.160.0.74	15	75
101.160.0.75	15	75
101.160.0.76	15	75
101.160.0.77	15	75
101.160.0.78	15	75
101.160.0.79	15	75
101.160.0.80	15	75
101.160.0.81	15	75
101.160.0.82	15	75
101.160.0.83	15	75
101.160.0.84	15	75
101.160.0.85	15	75
101.160.0.86	15	75
101.160.0.87	15	75
101.160.0.88	15	75
101.160.0.89	15	75
101.160.0.90	15	75
101.160.0.91	15	75
101.160.0.92	15	75
101.160.0.93	15	75
101.160.0.94	15	75
101.160.0.95	15	75
101.160.0.96	15	75
101.160.0.97	15	75
101.160.0.98	15	75
101.160.0.99	15	75
101.160.0.100	15	75

L12 Test Report for CART24-MAPPING

Report Name: CPU Temp

Report Time: 2021-09-20 15:00:05

Last Timestamp: 2021-09-20 15:00:05

Value Count: 1004

Extreme Sensor Readings (Light Blue: Min, Green: Max)

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101.160.0.3	15	75
101.160.0.4	15	75
101.160.0.5	15	75
101.160.0.6	15	75
101.160.0.7	15	75
101.160.0.8	15	75
101.160.0.9	15	75
101.160.0.10	15	75
101.160.0.11	15	75
101.160.0.12	15	75
101.160.0.13	15	75
101.160.0.14	15	75
101.160.0.15	15	75
101.160.0.16	15	75
101.160.0.17	15	75
101.160.0.18	15	75
101.160.0.19	15	75
101.160.0.20	15	75
101.160.0.21	15	75
101.160.0.22	15	75
101.160.0.23	15	75
101.160.0.24	15	75
101.160.0.25	15	75
101.160.0.26	15	75
101.160.0.27	15	75
101.160.0.28	15	75
101.160.0.29	15	75
101.160.0.30	15	75
101.160.0.31	15	75
101.160.0.32	15	75
101.160.0.33	15	75
101.160.0.34	15	75
101.160.0.35	15	75
101.160.0.36	15	75
101.160.0.37	15	75
101.160.0.38	15	75
101.160.0.39	15	75
101.160.0.40	15	75
101.160.0.41	15	75
101.160.0.42	15	75
101.160.0.43	15	75
101.160.0.44	15	75
101.160.0.45		

Remake: Nodes View



Linux Cluster Monitor

Home About Download Cluster Report

Cluster Information

BMC IP	BMC MAC Address	System Model	System Serial #	BIOS Version	BMC Version	BMC Status	Last Update	Last Status	More Details
172.27.28.11	0CC47ADC0C38	Super Server	a	BIOS Date: 04/30/2019 Rev: 3.1	01.71	OK	2019-11-13 09:53:04	TBD	Click for more details
172.27.28.12	0CC47AA10D8D	Super Server	NA	BIOS Date: 04/30/2019 Rev: 3.1	01.71	OK	2019-11-13 09:53:04	TBD	Click for more details
172.27.28.13	0CC47ADC0C38	Super Server	NA	BIOS Date: 04/30/2019 Rev: 3.1	01.71	OK	2019-11-13 09:53:05	TBD	Click for more details
172.27.28.14	0CC47ADC0C38	Super Server	NA	BIOS Date: 04/30/2019 Rev: 3.1	01.71	OK	2019-11-13 09:53:05	TBD	Click for more details
172.27.28.15	0CC47A2BEEF1	Super Server	S262335XC0461	BIOS Date: 04/30/2019 Rev: 3.1	01.71	OK	2019-11-13 09:53:06	TBD	Click for more details
172.27.28.16	0CC47A2BEEF1	Super Server	S262335XC0461	BIOS Date: 04/30/2019 Rev: 3.1	01.71	OK	2019-11-13 09:53:07	TBD	Click for more details
172.27.28.17	0CC47A2BEEF1	Super Server	S262335XC0461	BIOS Date: 04/30/2019 Rev: 3.1	01.71	OK	2019-11-13 09:53:07	TBD	Click for more details
172.27.28.18	0CC47A2BEEF1	Super Server	S262335XC0461	BIOS Date: 04/30/2019 Rev: 3.1	01.71	OK	2019-11-13 09:53:08	TBD	Click for more details

Before

By the end of Feb. 2020

New contents:

- Benchmark status
- Sensor readings.
- Min/Max readings.
- OS IP displays.
- Node status
- PDF report.

.....

LINUX CLUSTER MONITOR

CART24-MAPPING Advanced Features Documentations Our Team About 2021-04-01 09:14:38

Column visibility

Search:

ID	IKVM	OS IP	IPMI PWD	BMC MAC Address	NIC MAC Address	System Model #	System Serial #	BIOS Version	BMC Version	Boot Time	BMC Status	Status	UDP Message	Details	Sensors	Min/Max
1	192.168.9.81	192.168.9.53	ADMIN	3CECE2E608C	043F72BEE2CE	SYS-9029GP-TNVRT-0-F1016	S427567X0C22748	BIOS Date: 08/27/2020 Rev 3.22	01.10	2021-01-28 12:24:55	OK	FETCHING N/A	Initialize Needed!			
2	192.168.8.225	192.168.10.193	ADMIN	3CECE2E6086	043F72BEE36A	SYS-9029GP-TNVRT-0-F1016	S427567X0C22739	BIOS Date: 08/27/2020 Rev 3.22	01.10	2021-01-28 12:24:56	OK	FETCHING N/A	Initialize Needed!			
3	192.168.9.105	192.168.9.101	ADMIN	3CECE2E5F7A	043F72BEE862	SYS-9029GP-TNVRT-0-F1016	S427567X0C22744	BIOS Date: 08/27/2020 Rev 3.22	01.10	2021-01-28 12:24:56	OK	FETCHING N/A	Initialize Needed!			
4	192.168.9.163	192.168.10.248	ADMIN	3CECE2E6075	043F72BEE8B6	SYS-9029GP-TNVRT-0-F1016	S427567X0C22726	BIOS Date: 08/27/2020 Rev 3.22	01.10	2021-01-28 12:24:57	OK	FETCHING N/A	Initialize Needed!			
5	192.168.9.156	192.168.10.54	ADMIN	3CECE2E6084	043F72BEE916	SYS-9029GP-TNVRT-0-F1016	S427567X0C22729	BIOS Date: 08/27/2020 Rev 3.22	01.10	2021-01-28 12:24:58	OK	FETCHING N/A	Initialize Needed!			
6	192.168.9.202	192.168.8.163	ADMIN	3CECE2E6000	043F72BEE6A	SYS-9029GP-TNVRT-0-F1016	S427567X0C22742	BIOS Date: 08/27/2020 Rev 3.22	01.10	2021-01-28 12:24:58	OK	FETCHING N/A	Initialize Needed!			
7	192.168.9.45	192.168.9.73	ADMIN	3CECE2E6084	043F72C24F38	SYS-9029GP-TNVRT-0-F1016	S427567X0C22727	BIOS Date: 08/27/2020 Rev 3.22	01.10	2021-01-28 12:24:59	OK	FETCHING N/A	Initialize Needed!			
8	192.168.8.142	192.168.10.227	ADMIN	3CECE2E6090	043F72C24FC8	SYS-9029GP-TNVRT-0-F1016	S427567X0C22724	BIOS Date: 08/27/2020 Rev 3.22	01.10	2021-01-28 12:25:00	OK	FETCHING N/A	Initialize Needed!			
9	192.168.10.154	192.168.10.143	ADMIN	3CECE2E6081	043F72C25488	SYS-9029GP-TNVRT-0-F1016	S427567X0C22734	BIOS Date: 08/27/2020 Rev 3.22	01.10	2021-01-28 12:25:00	OK	FETCHING N/A	Initialize Needed!			
10	192.168.8.243	192.168.9.79	ADMIN	3CECE2E608E	043F72C255D0	SYS-9029GP-TNVRT-0-F1016	S427567X0C22723	BIOS Date: 08/27/2020 Rev 3.22	01.10	2021-01-28 12:25:02	OK	FETCHING N/A	Initialize Needed!			

Show 10 entries

Previous 1 2 Next

INTRODUCTION

LINUX CLUSTER MONITOR is an easy deploy program based on Redfish and Intelligent Platform Management Interface aims to monitor the system status on super server remotely. It includes multiple functions: real-time device status monitor, cluster hardware software summary, benchmark results reader and system report generation.

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Current version

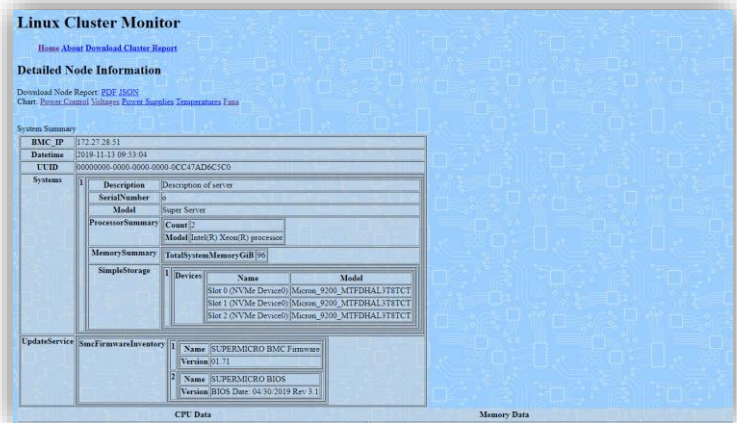
By the end of March 2021

New features:

1. Column can be sorted by contents.
2. Set maximum rows for each page.
3. Column visibility setting
4. Search box to locate important message.

Better Faster Greener™ © 2021 Supermicro

Remake: Details Page

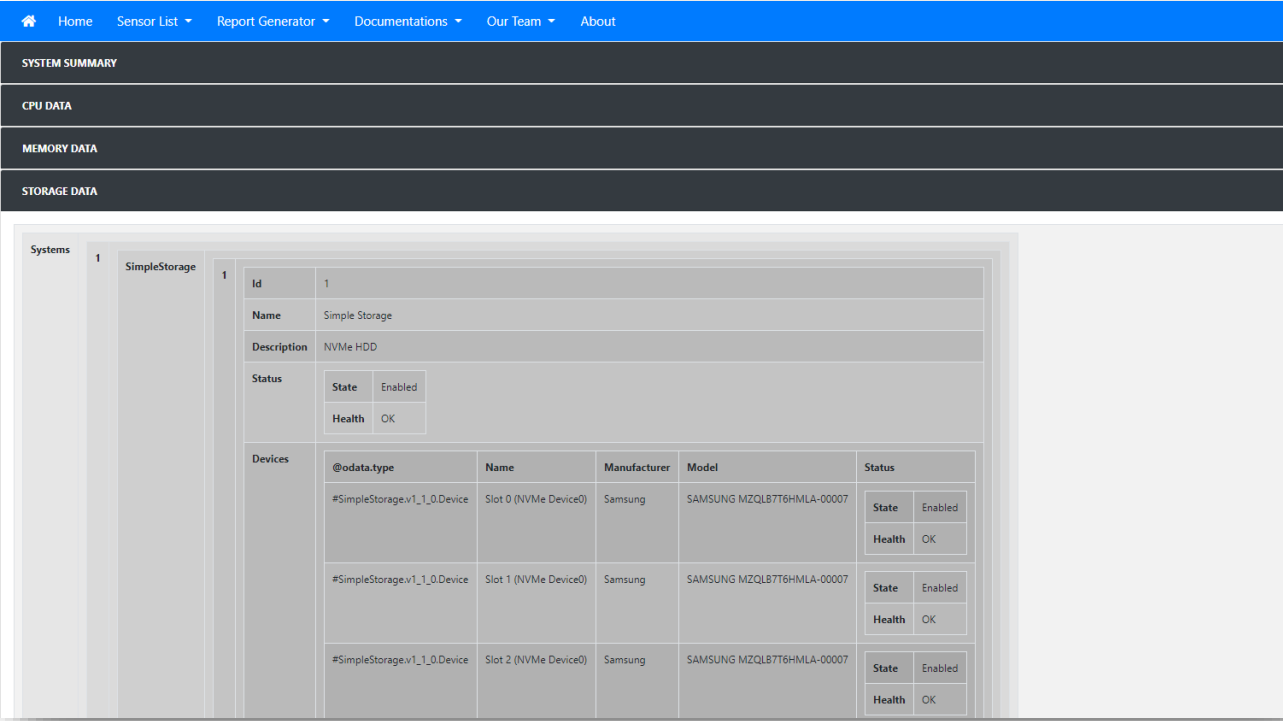


Before

By the end of Feb. 2020

New contents:

- Sensor list with Min/Max reading
- New report generator.
- More diagrams.
- Foot notes.



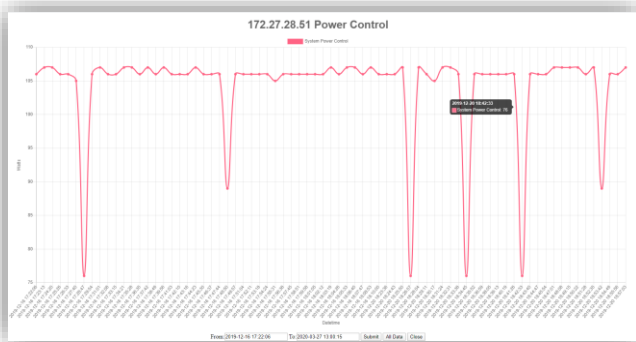
Current version

By the end of March 2021

New features:

1. Navigation bar with dropdown menu.
2. Collapsible table with hardware information.

Remake: Sensor Reading

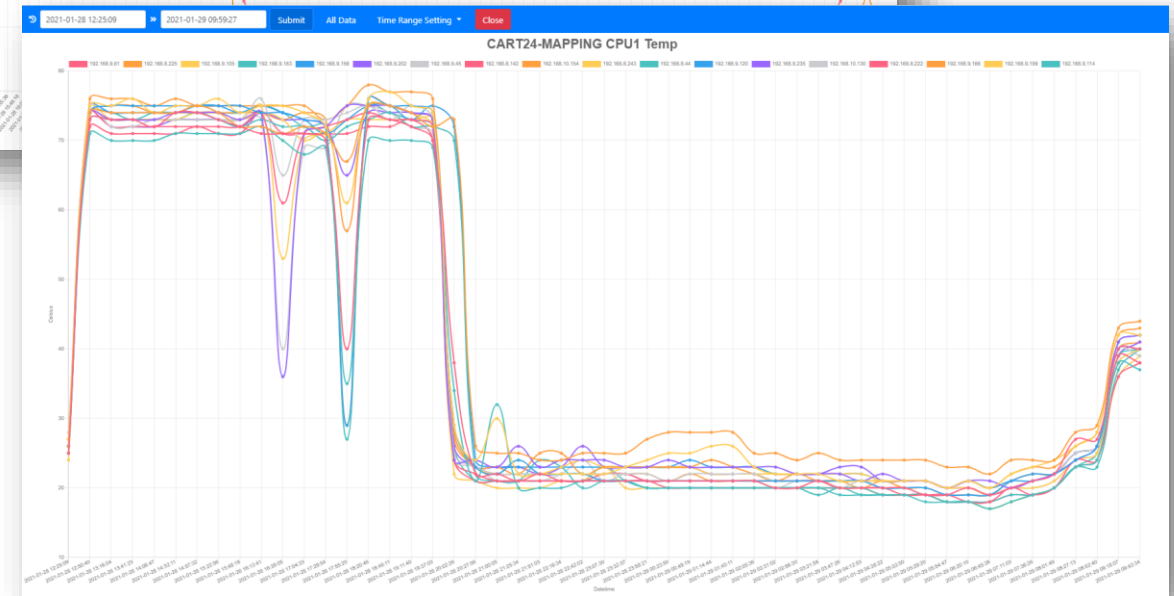


Before

By the end of Feb. 2020

New contents & features:

- More sensors included.
- Group by node and by cluster.
- Adjustable time range.
- Quick jump to other sensors.
- Performance has been optimized.



Current version

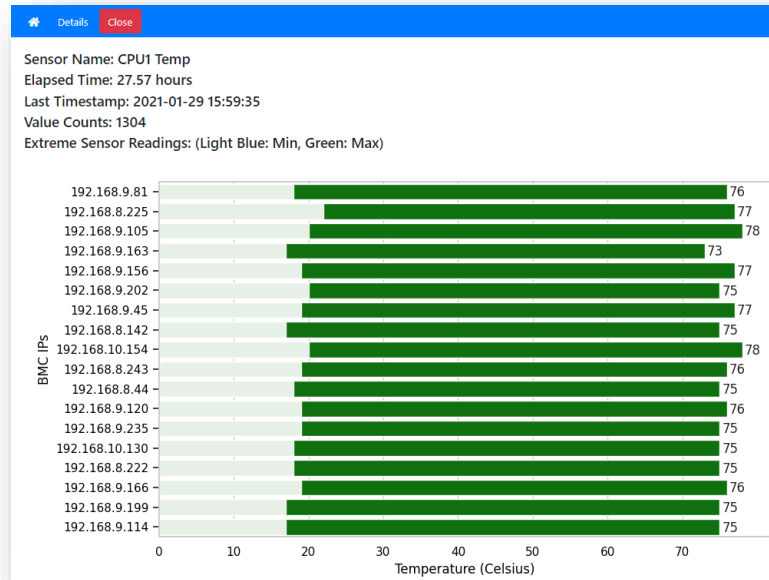
By the end of March 2021

New: Min/Max Reading



About this page:

- Locate the peak readings.
- Locate the abnormal node.
- Timestamp of peak readings.
- Bar-plot and table.
- Group by node and by cluster.
- Average readings.
- Count N/A readings.
- Temperature, Fan speed, Voltage and Power are all included.



Sensor Name	Min Reading	Max Reading	Min Reading	Max Reading	Min Reading	Max Reading	Value Count	N/A Count
CPU1 Temp	45	2021-04-01 11:41:57	78		2021-04-01 10:51:55	53.6424	590	0
CPU2 Temp	45	2021-04-01 11:41:30	84		2021-04-01 10:42:18	53.7969	590	0
Inlet Temp	21	2021-04-01 10:06:47	23		2021-04-01 10:44:39	23.1894	590	0
PCH Temp	54	2021-04-01 10:38:41	61		2021-04-01 11:39:49	56.4525	590	0
System Temp	32	2021-04-01 11:41:30	37		2021-04-01 10:39:35	34.3153	590	0
Peripheral Temp	52	2021-04-01 11:43:09	60		2021-04-01 10:53:44	54.2402	590	0
VRMCpu1 Temp	45	2021-04-01 13:05:47	67		2021-04-01 10:56:00	50.2034	590	0
VRMCpu2 Temp	28	2021-04-01 11:40:09	40		2021-04-01 10:38:13	31.5576	590	0
VRMP1ABC Temp	47	2021-04-01 10:37:46	49		2021-04-01 10:58:47	48.0719	590	0
VRMP1DEF Temp	47	2021-04-01 10:38:13	49		2021-04-01 11:06:57	48.0153	590	0
VRMP2ABC Temp	33	2021-04-01 11:38:47	35		2021-04-01 10:37:46	34.1983	590	0
VRMP2DEF Temp	33	2021-04-01 11:39:14	35		2021-04-01 10:37:46	34.2034	590	0
P1-DIMM1A1 Temp	38	2021-04-01 10:06:47	45		2021-04-01 10:53:18	39.8963	590	0
P1-DIMM1A2 Temp	37	2021-04-01 10:06:47	41		2021-04-01 10:40:57	38.3814	590	0
P1-DIMM1C1 Temp	37	2021-04-01 10:06:47	39		2021-04-01 10:42:45	37.8475	590	0
P1-DIMM1C2 Temp	34	2021-04-01 11:41:57	38		2021-04-01 10:40:02	35.5644	590	0
P1-DIMM1E1 Temp	33	2021-04-01 10:06:47	35		2021-04-01 14:29:11	33.8	590	0
P1-DIMM1E2 Temp	32	2021-04-01 10:38:41	34		2021-04-01 10:37:19	32.9729	590	0
P2-DIMM1A1 Temp	31	2021-04-01 10:06:47	32		2021-04-01 10:37:19	31.6237	590	0
P2-DIMM1A2 Temp	30	2021-04-01 10:06:47	32		2021-04-01 14:27:49	30.801	590	0
P2-DIMM1C1 Temp	29	2021-04-01 10:06:47	30		2021-04-01 10:10:00	29.7500	590	0
P2-DIMM1C2 Temp	33	2021-04-01 11:41:30	35		2021-04-01 10:39:35	34.1647	590	0
P2-DIMM1E1 Temp	32	2021-04-01 11:41:30	34		2021-04-01 10:37:19	33.0915	590	0
P2-DIMM1E2 Temp	33	2021-04-01 11:37:25	35		2021-04-01 14:27:49	33.8678	590	0
AOC_NIC_Temp	49	2021-04-01 10:39:35	55		2021-04-01 11:06:00	53.0542	590	0
NVMe_SSD Temp	32	2021-04-01 10:40:55	42		2021-04-01 10:32:42	39.5814	590	0
BPN_ART Temp	37	2021-04-01 10:40:57	42		2021-04-01 10:19:30	40.8458	590	0

New: SUM Tool Box

About this page:

- Update BIOS.
- Update BMC firmware.
- Get BIOS settings for all nodes.
- Compare BIOS settings.
- Change BIOS settings
- Download boot order.
- Get DMI information.
- Show SUM running status.



SUM TOOL BOX
Current Selected IPs
Documentations
Our Team
About

STEP 1: Config Input IPs

Option 1: Upload a text file of the BMC IPs

Choose your text file

Choose File No file chosen

Please upload a text file of VALID BMC IP, USER NAME and PASSWORD separated by space.

UPLOAD FILE

File will be uploaded into local server.

Option 2: Input IPs

Input IP range

IP starts from (Included) IP ends (Not included)

CREATE FILE

Input file will be created.

STEP 2: Run SUM Processes

Option 1: BIOS Settings Comparison

`/sum -i InputFile --c GetCurrentBiosCfg --file htmlBios --overwrite`

Commands above will be sent to target systems and comparison will be made.

COMPARE

Option 2: Boot Order Download

`/sum -i InputFile --c GetCurrentBiosCfg --file htmlBios --overwrite`

Commands above will be sent to target systems and boot order table will be sent.

DOWNLOAD

Option 3: BIOS Update

Choose File No file chosen

Please upload a bios image

`/sum -i InputFile --c UpdateBios --file BiosImage`

Please upload the BIOS image before start updating.

UPLOAD IMAGE UPDATE

Option 4: BMC Update

Choose File No file chosen

Please upload a bios image

`/sum -i InputFile --c UpdateBmc --file BMCImage`

Please upload the BMC image before submit.

UPLOAD IMAGE UPDATE

Option 5: Get BIOS Settings

`/sum -i InputFile --c GetCurrentBiosCfg --file BiosSettings RackName/html --overwrite`

The BIOS settings are downloaded as tar file.

DOWNLOAD

Option 6: Change BIOS Settings

Choose File No file chosen

Please upload BIOS settings file

`/sum -i InputFile --c ChangeBiosCfg --file BiosSettings --skip unknown`

Please upload BIOS settings before start changing.

UPLOAD SETTINGS CHANGE

Option 7: Get DMI Information

`/sum -i InputFile --c GetDmiInfo --file DMI RackName/txt --overwrite`

The DMI files are downloaded as tar file.

DOWNLOAD

STEP 3: Show SUM Running Status

Need scrolling the with the current running process pid.

SUM STATUS

INTRODUCTION

LINUX CLUSTER MONITOR TESTING MODULE is currently under construction.

New: Benchmark Control Center



About this page:

- Running benchmarks for multiple nodes remotely.
- Initialize the nodes' clients in needed.
- Check connection between LCM server and nodes.
- Each benchmark need a config file and an input file (optional).
- Currently support 5 kinds of benchmarks, more is coming.

The screenshot displays the Benchmark Control Center web interface. At the top is a navigation bar with links: UDP SERVER, UDP Benchmark Results, Current Selected OS IPs, Documentations, Our Team, and About. The main content area is divided into several sections:

- STEP 1: Config Input IPs**
 - Option 1: Upload a text file of the BMC IPs**
 - Choose your text file
 - Choose File (No file chosen)
 - Please upload a text file of VALID OS IPs.
 - UPLOAD FILE button
 - File will be uploaded into local server.
 - Option 2: Input IPs**
 - Input IP range
 - IP starts from (Included) [text input]
 - IP ends (Not included) [text input]
 - CREATE FILE button
 - Input file will be created.
- STEP 2: Initialize Target Clients**
 - Request target clients to send h back.
 - SEND REQUEST button
- STEP 3 Optional: Upload Benchmark Input**
 - Input File Upload
 - Choose File (No file chosen)
 - Please upload the necessary input files before running benchmark.
 - UPLOAD button
- STEP 3: Run Benchmarks**
 - Config File Upload
 - Choose File (No file chosen)
 - Please upload the configs for running benchmarks.
 - RUN BENCHMARK button
- STEP X: Check Connections**
 - Check connections between server and client.
 - CHECK CONNECTIONS button

At the bottom, there is an **INTRODUCTION** section stating: "LINUX CLUSTER MONITOR TESTING MODULE is currently under construction." The footer contains the copyright notice: "Copyright © 2021 Super Micro Computer Inc. All Rights Reserved".

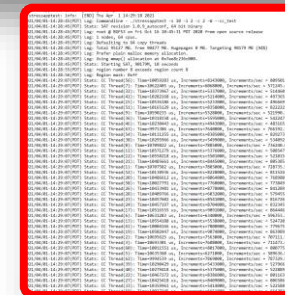
New: Benchmark Results Display



About this page:

- Benchmark results are stored in database.
- Automatically fetch key results from output file.
- Automatically verify the performance.
- Start and end time of the benchmark.
- Benchmark type and runtime command.
- Cluster report generator.

UDP SERVER CLUSTER REPORT AUTO-SELECT UNSELECT 2021-04-01 15:09:26										
Column visibility Search:										
STARTED	OS IP	START TIME	END TIME	COMMAND	BENCHMARK	FILE SIZE (bytes)	RESULT	DOWNLOAD LOG FILE	CONCLUSION	DELETE
★	172.27.28.17	2021-04-01 14:27:22	2021-04-01 14:27:52	stress-ng --matrix 0 -t 30s --metrics-brief --tz	stress-ng	645	206553.52 ops/s	alltestservers-172.27.28.17-stress-ng.log	PASS	
★	172.27.28.14	2021-04-01 14:27:22	2021-04-01 14:27:53	stress-ng --matrix 0 -t 30s --metrics-brief --tz	stress-ng	657	204290.54 ops/s	alltestservers-172.27.28.14-stress-ng.log	FAILED	
★	172.27.28.11	2021-04-01 14:27:22	2021-04-01 14:27:52	stress-ng --matrix 0 -t 30s --metrics-brief --tz	stress-ng	651	207002.49 ops/s	alltestservers-172.27.28.11-stress-ng.log	PASS	
★	172.27.28.13	2021-04-01 14:24:59	2021-04-01 14:25:29	stress-ng --matrix 0 -t 30s --metrics-brief --tz	stress-ng	657	206586.58 ops/s	alltestservers-172.27.28.13-stress-ng.log	PASS	
★	172.27.28.16	2021-04-01 14:27:23	2021-04-01 14:27:53	stress-ng --matrix 0 -t 30s --metrics-brief --tz	stress-ng	651	211412.79 ops/s	alltestservers-172.27.28.16-stress-ng.log	PASS	
★	172.27.28.18	2021-04-01 14:27:23	2021-04-01 14:27:53	stress-ng --matrix 0 -t 30s --metrics-brief --tz	stress-ng	657	216223.07 ops/s	alltestservers-172.27.28.18-stress-ng.log	PASS	
★	172.27.28.12	2021-04-01 14:27:23	2021-04-01 14:27:53	stress-ng --matrix 0 -t 30s --metrics-brief --tz	stress-ng	657	204440.13 ops/s	alltestservers-172.27.28.12-stress-ng.log	FAILED	
★	172.27.28.12	2021-04-01 14:28:44	2021-04-01 14:29:05	./stressapptest -s 10 -i 2 -c 2 -W --cc_test	./stressapptest	9046	51491.36 MB/s 5280.29 KB/s 1010.72 TB/s	alltestservers-172.27.28.12-stressapptest.log	FAILED	
★	172.27.28.14	2021-04-01 14:28:45	2021-04-01 14:29:05	./stressapptest -s 10 -i 2 -c 2 -W --cc_test	./stressapptest	9085	52979.34 MB/s 4955.56 KB/s 779.23 TB/s	alltestservers-172.27.28.14-stressapptest.log	FAILED	
★	172.27.28.18	2021-04-01 14:28:45	2021-04-01 14:29:05	./stressapptest -s 10 -i 2 -c 2 -W --cc_test	./stressapptest	9051	55862.84 MB/s 5074.62 KB/s 775.99 TB/s	alltestservers-172.27.28.18-stressapptest.log	FAILED	
★	172.27.28.16	2021-04-01 14:28:45	2021-04-01 14:29:05	./stressapptest -s 10 -i 2 -c 2 -W --cc_test	./stressapptest	9053	54379.9 MB/s 4959.62 KB/s 748.75 TB/s	alltestservers-172.27.28.16-stressapptest.log	FAILED	
★	172.27.28.11	2021-04-01 14:28:45	2021-04-01 14:29:06	./stressapptest -s 10 -i 2 -c 2 -W --cc_test	./stressapptest	9066	55682.32 MB/s 4684.78 KB/s 801.96 TB/s	alltestservers-172.27.28.11-stressapptest.log	PASS	
★	172.27.28.13	2021-04-01 14:26:21	2021-04-01 14:26:44	./stressapptest -s 10 -i 2 -c 2 -W --cc_test	./stressapptest	9059	32201.47 MB/s 4262.98 KB/s 618.29 TB/s	alltestservers-172.27.28.13-stressapptest.log	FAILED	
★	172.27.28.17	2021-04-01 14:28:45	2021-04-01 14:29:18	./stressapptest -s 10 -i 2 -c 2 -W --cc_test	./stressapptest	9057	34715.73 MB/s 3656.95 KB/s 652.13 TB/s	alltestservers-172.27.28.17-stressapptest.log	FAILED	
★	172.27.28.17	2021-04-01 14:50:16	2021-04-01 14:50:17	mpirun -n 32 --allow-run-as-root xhpl ~/client/HPL.dat	xhpl	508704	0.013141 Gflops	alltestservers-172.27.28.17-xhpl.log	FAILED	
★	172.27.28.14	2021-04-01 14:50:17	2021-04-01 15:04:54	mpirun -n 32 --allow-run-as-root xhpl ~/client/HPL.dat	xhpl	33990	33.258 Gflops	alltestservers-172.27.28.14-xhpl.log	PASS	
★	172.27.28.12	2021-04-01 14:50:17	2021-04-01 15:05:14	mpirun -n 32 --allow-run-as-root xhpl ~/client/HPL.dat	xhpl	33990	31.159 Gflops	alltestservers-172.27.28.12-xhpl.log	PASS	
★	172.27.28.13	2021-04-01 14:47:53	2021-04-01 15:03:04	mpirun -n 32 --allow-run-as-root xhpl ~/client/HPL.dat	xhpl	33990	28.355 Gflops	alltestservers-172.27.28.13-xhpl.log	PASS	
★	172.27.28.18	2021-04-01 14:50:17	2021-04-01 15:08:48	mpirun -n 32 --allow-run-as-root xhpl ~/client/HPL.dat	xhpl	33990	27.851 Gflops	alltestservers-172.27.28.18-xhpl.log	PASS	
Show 20 entries Previous Next										



New: Cluster Report



About this report:

- Report has 4 sections:
 - Introduction
 - Cluster summary
 - Hardware information
 - Sensor readings
 - Benchmark report
- Report is based on one cluster.
- Benchmark report part is based on selected benchmark results.
- More contents are under development.

L12 Test Report for CART24-MAPPING

Supernova's HPC and AI team (part of Supernova Solution and Integration Center) is an elite team of software and hardware engineers. We generate and publish state-of-the-art benchmarks showcasing the performance of Supernova's wide array of Super Servers. We also work with the industry leading HPC and AI partners to generate the latest and greatest performance data.

Here are some examples of the benchmarks we have conducted:

Here is a list of other solutions that we offer:

For more information about our services please visit:
[Supernova Solution and Integration Center](#)

If you would like to see an in-depth view of our benchmarks please visit our blog:
[HPC & AI Benchmarks](#)

NOTE: Both pages require company network to access

Test Report Generated by HPC & AI Team
Report generated at: 2021-04-01 15:29:17

SSIC SUPERNOVA SOLUTION & INTEGRATION CENTER

Cluster Summary for CART24-MAPPING
Summary Table / Hardware Table / Sensor Readings / Benchmark Report

Serial Number	BMC MAC Address	Model Number	BMC IP	BIOS Version	BMC Version	Timestamp
S427567X0C22748	3CECE2E606C	SYS-9029 GP-TNVRT -0-FIO16	192.168.9.81	BIOS Date: 08/27/2020 Rev 3.22	01.10	2021-01-28 12:24:55
S427567X0C22739	3CECE2E6086	SYS-9029 GP-TNVRT -0-FIO16	192.168.8.225	BIOS Date: 08/27/2020 Rev 3.22	01.10	2021-01-28 12:24:56
S427567X0C22744	3CECE2E657A	SYS-9029 GP-TNVRT -0-FIO16	192.168.9.105	BIOS Date: 08/27/2020 Rev 3.22	01.10	2021-01-28 12:24:56
S427567X0C22726	3CECE2E6075	SYS-9029 GP-TNVRT -0-FIO16	192.168.9.163	BIOS Date: 08/27/2020 Rev 3.22	01.10	2021-01-28 12:24:57
		SYS-9029 GP-TNVRT		BIOS Date: 08/27/2020		2021-01-28

Benchmark Report
Summary Table / Hardware Table / Sensor Readings / Benchmark Report

Benchmarks includes but not limited to:

1. **STRESS-NGI**: designed to exercise various physical subsystems of a computer.
2. **STRESSAPPTEST**: memory test, maximize randomized traffic to memory from processor and I/O.
3. **HPCG**: intended to model the data access patterns of real-world applications.
4. **HPL**: High Performance Computing Linpack Benchmark.
5. **GPU-BURN**: Multi-GPU CUDA stress test

Benchmark Bar Plot are as shown below

Benchmark Numerical Results are as below

S264322X9707417	S264322X9707414	S264322X9707411	S264322X9707413	S264322X9707416	S264322X9707418
206553.52 ops/s	204290.54 ops/s	207002.49 ops/s	206586.58 ops/s	211412.79 ops/s	216223.07 ops/s

SSIC SUPERNOVA SOLUTION & INTEGRATION CENTER

Sensor Reading Report
Summary Table / Hardware Table / Sensor Readings / Benchmark Report

Min and Max Power Consumption

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New: IPMI Command Line Tool



About this page:

- Run IPMI command on multiple nodes remotely.
- Select desirable nodes by IPMI IP.
- Support pipe.
- Both standard and error outputs will be displayed.



IPMITOOL COMMAND LINE

Current Selected IPs

Documentations ▾

Our Team ▾

About

Step 1: Config Input IPs

Option 1: Upload a text file of the BMC IPs

Choose your text file

Choose File | No file chosen

Please upload a text file of VALID BMC IPs, one IP per line

UPLOAD FILE

File will be uploaded into local server.

Option 2: Input IPs

Input IP range

IP starts from (Included)

IP ends (Not included)

CREATE FILE

Input file will be created.

Step 2: Enter IPMITOOL commands

ipmitool -H **IPMIIP** -U ADMIN -P **PWD**

Please input valid ipmitool command

Example: [sdr list](#)

SUBMIT

INTRODUCTION

LINUX CLUSTER MONITOR TESTING MODULE is currently under construction.

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Outline



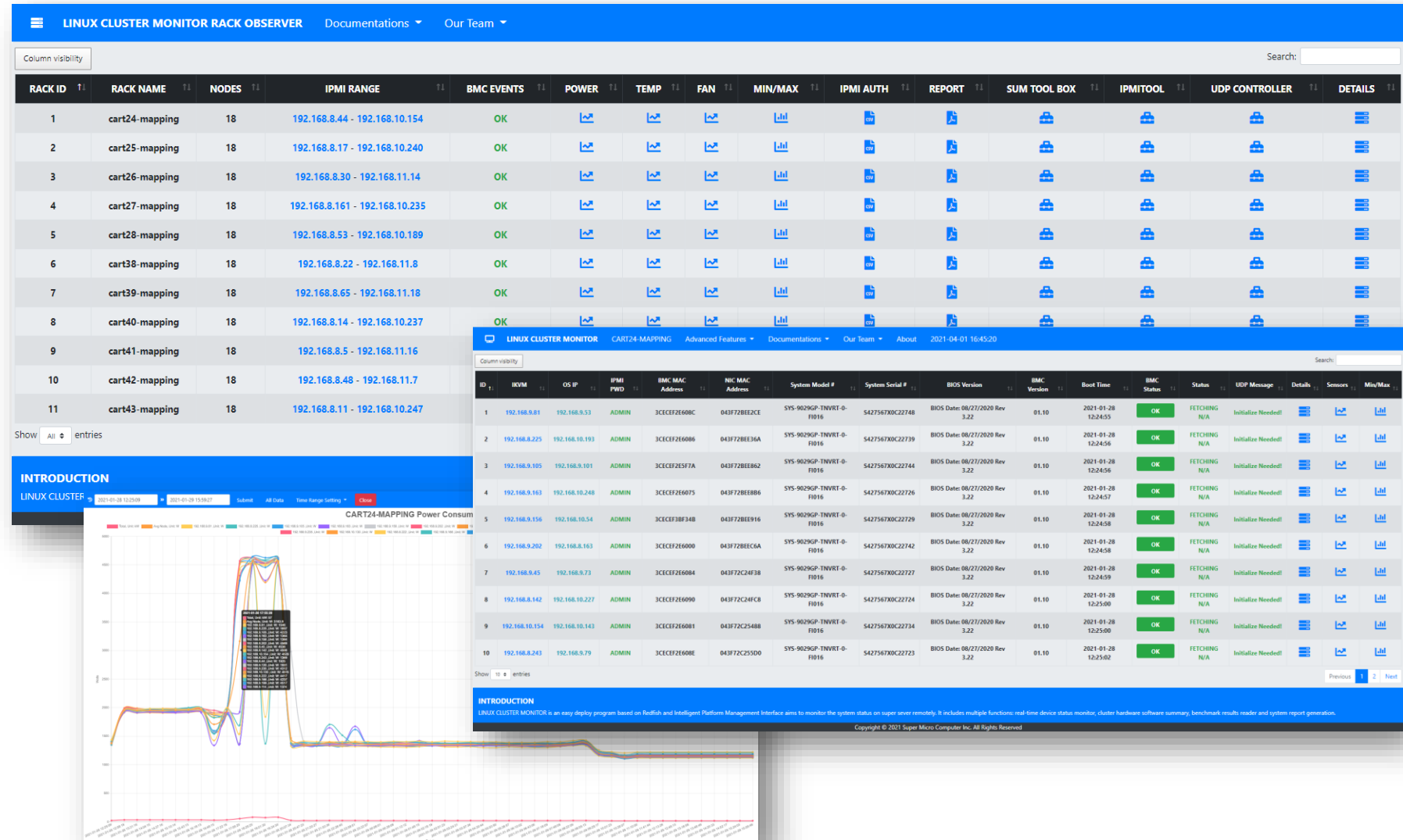
- ☐ System architecture
- ☐ Latest updates overview
- ☐ Page by page introduction
- ☐ L12 test archive: Facebook project
- ☐ Quick deployment steps

L12 Test Archive: Facebook Project



About this page:

- Archive L12 test for 2021 Q1.
- All the archive are about Facebook projects.
- Updated when finished L12 testing.
- All the information stored in database are accessible.
- Most advanced features are not able to use on archive, because all the machines are no longer alive.



Outline



- ❑ System architecture
- ❑ Latest updates overview
- ❑ Page by page introduction
- ❑ L12 test archive: Facebook project
- ❑ Quick deployment steps

Quick Deployment Steps



1. Install Docker, Docker-compose and ncat:

I. Docker: <https://docs.docker.com/engine/install/centos/>

II. Docker-compose: <https://docs.docker.com/compose/install/>

III. Ncat: `$ yum install nmap-ncat.x86_64`

IV. Build necessary images, for the source code please visit our git server:

<http://172.27.21.100:3000/ChenyangL/LinuxClusterMonitor>

2. Bash shell script for deployment:

<http://172.27.21.100:3000/ChenyangL/LinuxClusterMonitor>

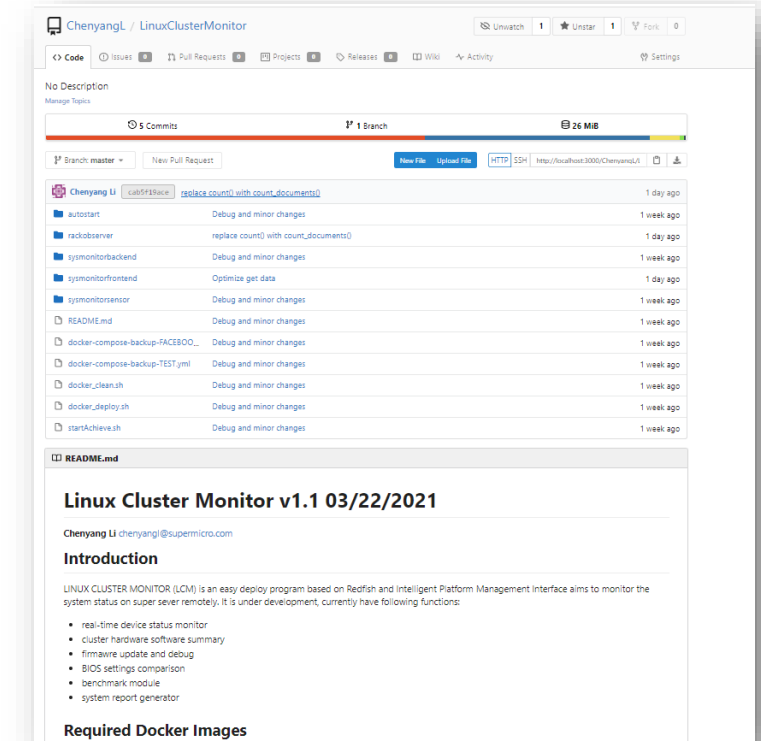
3. Create input files and start deployment:

I. Create a folder for input files.

II. Copy “.csv” files into folders.

III. Create an “auto.env” file, visit our git server for more details.

IV. Run: `$./docker_deploy.sh FOLDERNAME`



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