SUPERMICRO® SuperStorage SSG-136R-N32JBF Quick Reference Guide
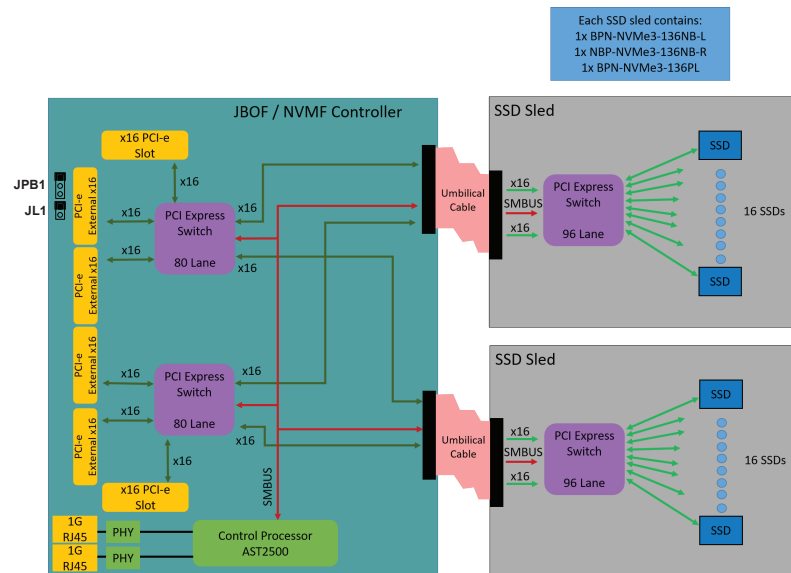
Power On

Powering On the System
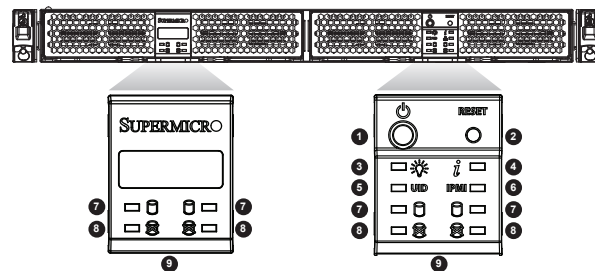Any time you power on the SSG-136R-N32JBF system, first perform the following precautions:

1. Verify that all hosts that will use the SSG-136R-N32JBF are powered off.
2. Connect PCI-e cabling from the hosts to the SSG-136R-N32JBF.
3. Connect a power cable from a grounded AC outlet to the SSG-136R-N32JBF. Do not power on the system.
4. Wait two minutes for the BMC service to power on.
5. Press the power button on the SSG-136R-N32JBF, or power on the system using the IPMI command interface.
6. Wait three minutes, then power on the hosts that are connected to the system.

Board Layout

Each SSD sled contains:
1x BPN-NVMe3-136NB-L
1x NBP-NVMe3-136NB-R
1x BPN-NVMe3-136PL

Jumper	Description	Default Setting
JPB1	BMC Enable	Pins 1-2 (Enabled)
JL1	Chassis Intrusion	Open

Drive Installation

Your system may or may not have come with drives installed. Up to thirty-two hot-swappable 2.5" NVMe SSDs are supported by the chassis (16 drives in each sled). The drives are mounted in drive carriers to simplify their installation and removal from the chassis. (Both procedures may be done without removing power from the system.)

Extending a Sled
1. For one sled, swing both sled latches fully out.
2. Grasp the sled latches and use them to extend the sled out of the chassis.

Mounting a Drive in a Drive Carrier
1. Release and swing open the locking latches on the side of the drive carrier.
2. Insert a drive into the carrier with the PCB side facing down and the connector end toward the rear of the carrier. Insert the drive at an angle. Verify that the mounting holes on the drive align with the mounting holes on the carrier.
3. Swing both locking latches shut. An audible click indicates that the drive is locked in place.
4. Insert the drive and drive carrier into its bay. When the drive is fully inserted, push the release tab until it clicks shut.

Front View & Interface

No.	Description
1	Power Button
2	Reset Button
3	Power LED
4	Information LED
5	UID LED
6	IPMI LED
7	Sled Activity LEDs
8	Sled Status LEDs
9	Service Tags

Rear View
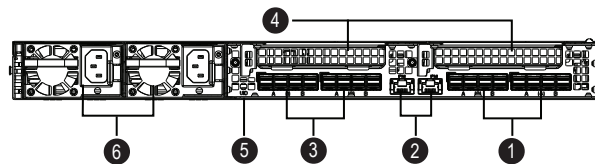
| No.	Description
1	2 x16 mini-SAS HD can be split to 4 x8 for 4 hosts
2	2 IPMI LAN Ports
3	2 x16 mini-SAS HD can be split to 4 x8 for 4 hosts
4	2 PCI-E 3.0 (FH) x16
5	UID Button
6	Redundant Titanium Level Power Supplies

Drive Assignment

1. Overview
After installing the SSG-136R-N32JBF system, you must assign drives to hosts. This appendix provides information about drive mappings and procedures for reassigning drives to different hosts. Refer to the Web GUI or command line interface sections in this appendix for your preferred procedure.

Physical hosts are represented by "zones" and physical drives are represented by "endpoints." Familiarity with zones and endpoints is necessary to properly assign drives to hosts. Refer to the following diagrams for zone-to-host labeling.
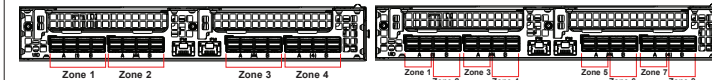
You can assign a drive to a new host by mapping the drive's endpoint to a different zone. You can do this from the Web GUI or the command line interface.

2. Drive Slots Endpoint Mapping
Each physical drive is assigned an "endpoint" number that is different from the physical slot number. The following tables provide an overview of endpoint mapping for drive slots in a four-host and eight-host configuration. When assigning drives to hosts, start with the drives located closest to the front of the system and work your way back. Also, alternate between sleds so that the drives used by each host are spread between both sleds. The "Slot #" column refers to the physical slot number of an NVMe SSD. The "Endpoint" column refers to the endpoint number assigned to the drive. The "Load Order" column is the recommended sequence in which drives should be assigned to hosts (i.e. assign Load Order 1 first, Load Order 2 second, etc.).

Drive Slots to Endpoint Mapping (Four Hosts)						Drive Slots to Endpoint Mapping (Eight Hosts)					
Tray 1			Tray 2			Tray 1			Tray 2		
Slot #	Endpoint	Load Order	Slot #	Endpoint	Load Order	Slot #	Endpoint	Load Order	Slot #	Endpoint	Load Order
0	30	25	16	14	26	0	34	25	16	18	26
1	29	27	17	13	28	1	33	27	17	17	28
2	32	17	18	16	18	2	36	17	18	20	18
3	31	19	19	15	20	3	35	19	19	19	20
4	34	9	20	18	10	4	38	9	20	22	10
5	33	11	21	17	12	5	37	11	21	21	12
6	36	1	22	20	2	6	40	1	22	24	2
7	35	3	23	19	4	7	39	3	23	23	4
8	28	5	24	12	6	8	32	5	24	16	6
9	27	7	25	11	8	9	31	7	25	15	8
10	26	13	26	10	14	10	30	13	26	14	14
11	25	15	27	9	16	11	29	15	27	13	16
12	24	21	28	8	22	12	28	21	28	12	22
13	23	23	29	7	24	13	27	23	29	11	24
14	22	29	30	6	30	14	26	29	30	10	30
15	21	31	31	5	32	15	25	31	31	9	32

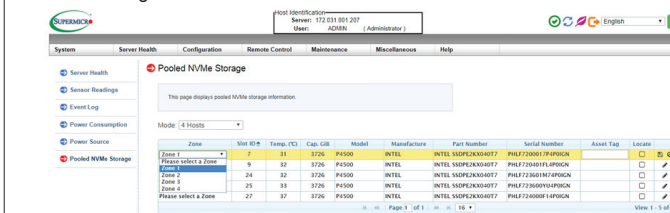### 3. Assigning a Drive from the GUI
Drive assignment from the Web GUI requires a computer with access to the network that contains your SSG-136R-N32JBF system. When assigning drives to hosts, start with the drives located closest to the front of the system and work your way back. Also, alternate between sleds so that the drives used by each host are spread between both sleds.

Assigning a Drive
1. Access the Web GUI by opening a Web browser and directing it to the IP address of the SSG-136R-N32JBF system.
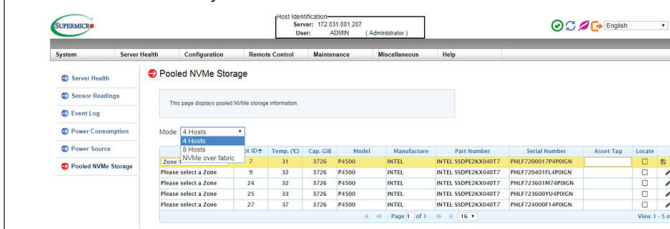
2. Log in and click on the Pooled NVMe Storage tab.
3. In the Mode field, click the drop-down bar and select "4 Hosts" or "8 Hosts" depending on your configuration.
4. On the displayed table, find a specified drive by looking at the Slot ID column.
5. Click the drop-down bar in the Zone column, then select the zone to which you want to assign this drive.

6. When finished, click the disk icon on the far right of the row to save changes, or click the cancel icon to discard changes.

4. Assigning a Drive from the CLI
Drive assignment from the CLI requires Curl and Python with the json.tools module installed in a Linux environment. (Recommended versions: Curl 7.35.0 or later, Python 2.7.6 or later). When assigning drives to hosts, start with the drives located closest to the front of the system and work your way back. Also, alternate between sleds so that the drives used by each host are spread between both sleds.

Getting Drive Information
1. Access a command line interface connected to the SSG-136R-N32JBF system.
2. To get drive information for a given zone, run the following command:

```
$ curl -k --user ADMIN:ADMIN -X GET https://<IP Address>/redfish/
v1/Fabrics/1/Zones/1 | python -m json.tool
```

For <IP Address> use the IP address of the system. For "Zones/1" replace "1" with the zone number corresponding to the host for which you are getting drive information. In the output, the first item listed under "Endpoints" is the zone number, and subsequent items are drive endpoint numbers.

In the following example, endpoint 19 (drive 23) represents the only drive assigned to zone 1:

```
{
    "@odata.context": "/redfish/v1/$metadata#Zone.Zone",
    "@odata.id": "/redfish/v1/Fabrics/1/Zones/1",
    "@odata.type": "#Zone.Zone",
    "Description": "PCIe Zone 1",
    "Id": "1",
    "Links": {
        "Endpoints": [
            {
                "@odata.id": "/redfish/v1/Fabrics/1/Endpoints/1"
            },
            {
                "@odata.id": "/redfish/v1/Fabrics/1/Endpoints/19"
            }
        ],
        "InvolvedSwitches": [
            {
                "@odata.id": "/redfish/v1/Fabrics/1/Switches/1"
            }
        ]
    },
    "Name": "Zone",
    "Oem": {},
    "Status": {
        "Health": "OK",
        "State": "Disabled"
    }
}
```

Reassigning a Drive
1. To change drive assignment, you must first create a .txt file that includes your changes in JSON format. For example:

```
{
    "Endpoints": [
        {
            "@odata.id": "/redfish/v1/Fabrics/1/Endpoints/1"
        },
        {
            "@odata.id": "/redfish/v1/Fabrics/1/Endpoints/21"
        },
        {
            "@odata.id": "/redfish/v1/Fabrics/1/Endpoints/23"
        }
    ]
```

In the above example, drive 7 (endpoint 35) was removed from zone 1, and drives 29 and 31 (endpoints 7 and 5) were added to zone 1.

2. In the command line interface, run the following command:

```
$ curl -k --http1.0 --user ADMIN:ADMIN -X PATCH -d @<text.txt>
https://<IP Address>/redfish/v1/Fabrics/1/Zones/1
```

For <IP Address>, use the IP address of the system. For <text.txt>, use the file name of the text file you saved. For "Zones/1" replace "1" with the zone number corresponding to the host on which you are making drive assignment changes.

The following output indicates success:

```
{"Success":{"code":"Base.1.0.0.Success","Message":"Successfully
Completed Request."}}
```

3. To verify your changes, perform the "Getting Drive Information" procedure.

5. Obtaining the System IP Address
Drive reassignment requires the IP address of the SSG-136R-N32JBF system. Perform the following procedure to obtain the system IP address. If DHCP is detected, a dynamic IP address is assigned to the system. If DHCP is not detected, the default IP address is 192.168.1.99.
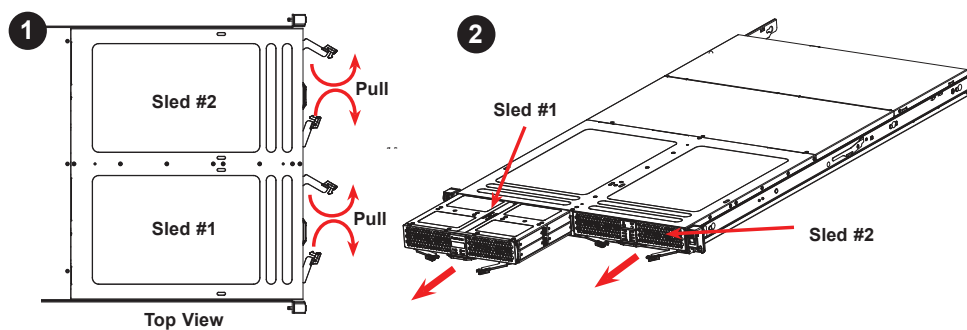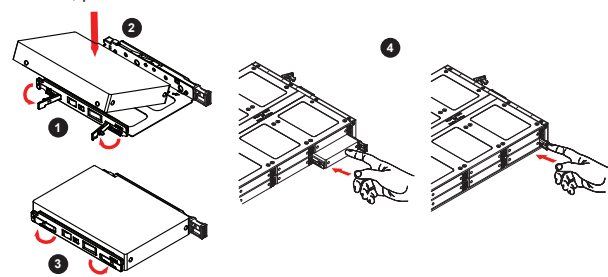
Obtaining System IP Address
1. Get the MAC address of the SSG-136R-N32JBF. The MAC address is printed on the service tags on the front end of the chassis under the control panels.
2. Consult your network administrator to determine IP address from a MAC address. This IP address is required to access the access the Web GUI and to run CLI commands.

Caution

⚠ **SAFETY INFORMATION**
IMPORTANT: See installation instructions and safety warning before connecting system to power supply. http://www.supermicro.com/about/policies/safety_information.cfm

⚠ **WARNING:**
To reduce risk of electric shock/damage to equipment, disconnect power from server by disconnecting all power cords from electrical outlets. If any CPU socket empty, install protective plastic CPU cap

⚠ **WARNING:**
Always be sure all power supplies for this system have the same power output. If mixed power supplies are installed, the system will not operate.

For more information go to : http://www.supermicro.com/support