



BMC and BlueField Logs

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BlueField Console Log

The BMC and NVIDIA® BlueField® logs can be collected using Redfish commands.

Two types of dumps are supported:

- BMC dump, which is a collection of logs from BMC
- System dump, which is a collection of logs from BlueField. To create a system dump, users must provide the BlueField credentials and IP address of the `tmfifo_net0` network interface.

BMC Dump Operations

The following subsections list BMC dump operations.

Creating BMC Dump Task

Create a BMC dump task and gets the task ID.

Info

This is important for the next stages.

```
sudo curl -k -u root:'<password>' -d '{"DiagnosticDataType":  
"Manager"}' -X POST  
https://<ip_address>/redfish/v1/Managers/Bluefield_BMC/LogServices,
```

Where:

- `<ip-address>` – BMC IP address
- `<password>` – BMC password

(i) Note

This command triggers an attempt to enable the RShim on the BMC.

(i) Note

Notes about the size of a single BMC dump and the BMC dumps container:

- The total size of all BMC dumps cannot exceed 8MB
- A single BMC dump cannot take up more than 4MB. If it is larger, it is truncated to 4MB.
- For the proper creation of a BMC dump, 4MB of free memory are required regardless of its actual size (can be smaller than 4MB). This memory is ensured by deleting existing BMC dumps, from oldest to newest, until 4MB are free.

Getting Dump Task State

Get dump task state. When `TaskState` is `Completed`, then the dump is ready for download.

```
sudo curl -k -u root:'<password>' -H 'Content-Type: application/json' -X GET https://<ip_address>/redfish/v1/TaskService/Tasks/<task_id>
```

Where:

- `<ip-address>` – BMC IP address
- `<password>` – BMC password
- `<task_id>` – task ID received from the first command

Downloading BMC Dump

Download BMC dump after `TaskState` is `Completed`. Dump is saved in the path given to `--output`.

```
sudo curl -k -u root:'<password>' -H 'Content-Type: application/json' -X GET https://<ip_address>/redfish/v1/Managers/Bluefield_BMC/LogServices, --output </path/to/tar/log_dump.tar.xz>
```

Where:

- `<ip-address>` – BMC IP address
- `<password>` – BMC password
- `<entry_id>` – entry ID of the dump in `redfish/v1/Managers/Bluefield_BMC/LogServices/Dump/Entries/`
- `</path/to/tar/log_dump.tar.xz>` – path to download the log dump `log_dump.tar.xz`

Info

After downloading, untar the file to view the logs.

Log list:

- `journal-pretty.log`
- `sensor-readings.log`
- `host-state.log`
- `hostnamectl.log`
- `fw-version.log`
- `fru-info.log`
- `nicDeviceDebugInfo.log (mstdump)`
 - CRspace and Scartchpad address spaces
 - Dumps are lists of 32-bit addresses and the 32-bit values stored at these addresses
 - Only works if NIC is working
 - Only on BlueField-3
- `chassis-state.log`
- `bmc-state.log`
- `rshim.log`
- `uptime.log`
- `cpuinfo`
- `fw-printenv.log`
- `varfilelist.log`
- `tmpfilelist.log`

- `softIRQs.log`
- `sensorinfo.log`
- `selinfo.log`
- `pslist.log`
- `routeinfo.log`
- `network.log`
- `network`
 - `00-bmc-eth0.network`
 - `00-tmfifo_net0.network`
 - `00-bmc-vlan4040.network`
 - `vlan4040.netdev`
- `netstat.log`
- `mntinfo.log`
- `kernalcmdline.log`
- `kernalRingBuff.log`
- `iproute.log`
- `dpulogs`
 - `dpu_console`
 - `obmc-console.log`
- `iplink.log`

- `ipaddr.log`
- `interrupts.log`
- `freemem.log`
- `channelconfig.log`
- `channelaccess.log`
- `arptable.log`
- `inventory.log`
- `elogall.log`
- `os-release`
- `top.log`
- `meminfo`
- `failed-services.log`
- `hwmon.log`
- `tmpfilelist.log`
- `slabinfo.log`
- `settings.log`
- `dmesg.log`
- `em-system.json`
- `dmesg.log`
- `bios.log`

- `timedate.log`
- `procfld.log`
- `dreport.log`
- `disk-usage.log`
- `summary.log`

Note

To access logs under `bflogs`, BlueField would have to operate in DPU mode.

Deleting All Dump Entries

Clear all log dump entries.

```
sudo curl -k -u root:'<password>' -H 'Content-Type: application/json' -X POST https://<ip_address>/redfish/v1/Managers/Bluefield_BMC/LogServices,
```

Where:

- `<ip-address>` – BMC IP address
- `<password>` – BMC password

Specific log dump entry deletion can be done by using 'curl's DELETE instead of GET in the previous command.

System Dump Operations

The following subsections list system dump operations.

Creating System Dump

Create a system dump and get task ID.

```
sudo curl -k -u root:'<password>' -d '{"DiagnosticDataType":  
"OEM", "OEMDiagnosticDataType": "bf_ip=<bf_ip>;bf_username=  
<bf_username>;bf_password=<bf_password>"}' -X POST  
https://<ip_address>/redfish/v1/Systems/Bluefield/LogServices/Dump,
```

Where:

- `<ip-address>` – BMC IP address
- `<password>` – BMC password
- `<bf_ip>` – BlueField IP address
- `<bf_username>` – BlueField username
- `<bf_password>` – BlueField password

Info

Note, this command triggers an attempt to enable the RShim on the BMC.

Getting Dump Task State

Get dump task state. The dump is ready for download when `TaskState` is `Completed`.

```
sudo curl -k -u root:'<password>' -H 'Content-Type:
application/json' -X GET
https://<ip_address>/redfish/v1/TaskService/Tasks/<task_id>
```

Where:

- `<ip-address>` – BMC IP address
- `<password>` – BMC password
- `<task_id>` – task ID received from the first command

Downloading System Dump

Download the user-specified system dump.

```
sudo curl -k -u root:'<password>' -H 'Content-Type:
application/json' -X GET
https://<ip_address>/redfish/v1/Systems/Bluefield/LogServices/Dump.
--output </path/to/tar/system_dump.tar.xz>
```

Where:

- `<ip-address>` – BMC IP address
- `<password>` – BMC password
- `<entry_id>` – The entry ID of the dump can be found in `redfish/v1/Managers/Bluefield_BMC/LogServices/Dump/Entries/`

- `</path/to/tar/system_dump.tar.xz>` – path to download the log dump
`system_dump.tar.xz`

i Info

After downloading, untar the file to view the logs.

Dump list:

- `bflogs/dmesg`
- `bflogs/lastlog`
- `bflogs/wtmp`

i Note

To access logs under `bflogs`, BlueField would have to operate in DPU mode.

- `rshim.log`
- `dreport.log`
- `summary.log`

Deleting All Dump Entries

Clear all log dump entries.

```
sudo curl -k -u root:'<password>' -H 'Content-Type: application/json' -X POST https://<ip_address>/redfish/v1/Systems/Bluefield/LogServices/Dump,
```

Where:

- `<ip-address>` – BMC IP address
- `<password>` – BMC password

Info

Specific log dump entry deletion can be done by using curl's DELETE instead of GET in the previous command.

The downloaded dump tar must be extracted to get the logs for BMC or BlueField.

Upon creating a dump, please allow the system ~5 mins to prepare the dump. The created dump will appear on the dump list when the system finishes dump creation. The created dump can be downloaded from the BMC using the `retrieve` command.

BlueField Console Log

BMC captures the BlueField console output and stores it in the System dump. Refer to section "[System Dump Operations](#)" for getting the log files in BMC dump.

Users may also check the log in `/run/log/dpu/logs/`. The log is rotated if it is larger than 1M or older than 24 hours. The oldest console output is overwritten as new data is added.

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