



## **Storage Health Monitoring**

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The BMC system provides real-time monitoring of read-write (RW) flash usage. You can query free storage space, receive notifications when usage crosses defined thresholds, and rely on automatic cleanup when limits are exceeded.

## Retrieving Free Storage Space

To check the current free RW flash space:

```
curl -k -H "X-Auth-Token: $token" -X GET
https://${bmc}/redfish/v1/Managers/Bluefield_BMC/ManagerDiagnosticData
```

Example output:

```
{
  "@odata.id":
  "/redfish/v1/Managers/Bluefield_BMC/ManagerDiagnosticData",
  "@odata.type":
  "#ManagerDiagnosticData.v1_2_0.ManagerDiagnosticData",
  "FreeStorageSpaceKiB": 1488,
  "Id": "ManagerDiagnosticData",
  "MemoryStatistics": {
    "AvailableBytes": 725983232,
    "BuffersAndCacheBytes": 170594304,
    "FreeBytes": 605347840,
    "SharedBytes": 60747776,
    "TotalBytes": 917188608
  },
  "Name": "Manager Diagnostic Data",
  "ProcessorStatistics": {
    "KernelPercent": 0.6058,
    "UserPercent": 0.5048
  },
  "ServiceRootUptimeSeconds": 1282378.351
}
```

```
}
```

## Storage Cleanup Notifications

When RW flash usage exceeds 90%, a Redfish event log entry is generated to alert that manual cleanup is required.

For example:

```
{
  "@odata.id":
  "/redfish/v1/Systems/Bluefield/LogServices/EventLog/Entries/7",
  "@odata.type": "#LogEntry.v1_15_0.LogEntry",
  "Created": "2025-09-15T13:30:43+00:00",
  "EntryType": "Event",
  "Id": "7",
  "Message": "Processes consuming HIGH Resource Storage_RW are
91%",
  "MessageArgs": [
    "Storage_RW",
    "91%"
  ],
  "MessageId": "OpenBMC.0.4.BMCSysResourceInfo",
  "Name": "System Event Log Entry",
  "Resolution": "None.",
  "Resolved": false,
  "Severity": "OK"
}
```

## Automatic Cleanup

When RW flash usage exceeds 95%, the BMC automatically purges space by deleting:

- All dump files

- All event logs
- Files in temporary directories
- Files in user directories
- Files in system log directories

After automatic cleanup, a Redfish event log entry is generated.

For example:

```
{
  "@odata.id":
  "/redfish/v1/Systems/Bluefield/LogServices/EventLog/Entries/3",
  "@odata.type": "#LogEntry.v1_15_0.LogEntry",
  "Created": "2025-09-24T10:40:34+00:00",
  "EntryType": "Event",
  "Id": "3",
  "Message": "RWFS cleanup completed.",
  "Modified": "2025-09-22T10:40:34+00:00",
  "Name": "System Event Log Entry",
  "Resolved": false,
  "Severity": "OK"
}
```

### **Note**

Exceeding 99% RW flash usage can make BMC functionality unstable and impede automatic cleanup.

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