

【MSA】MSA Gen6阵列系统存在LEFTOVR硬盘影响对等固件更新(PFU)示例

硬件相关 孙清雷 2024-10-16 发表

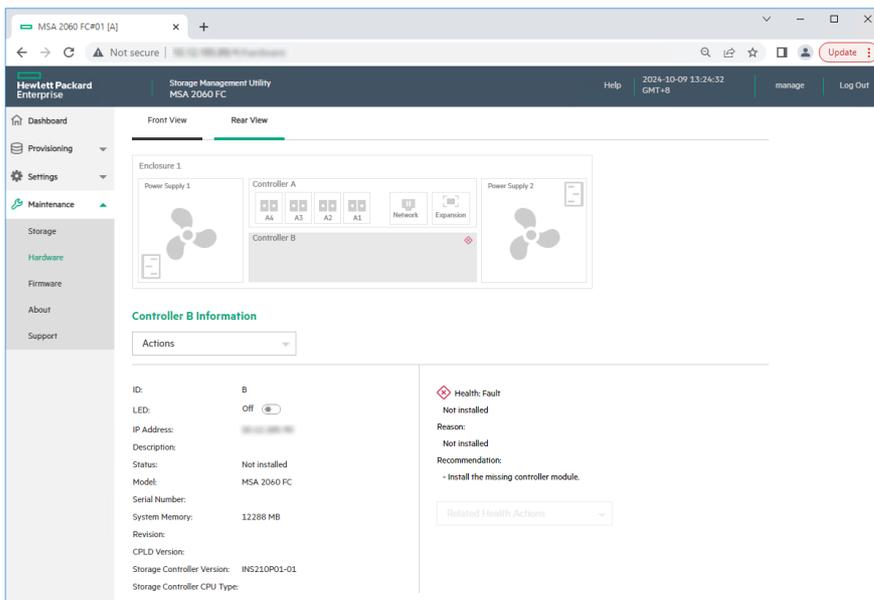
组网及说明

- ✦ 适用产品 - MSA2060、MSA2062、MSA1060
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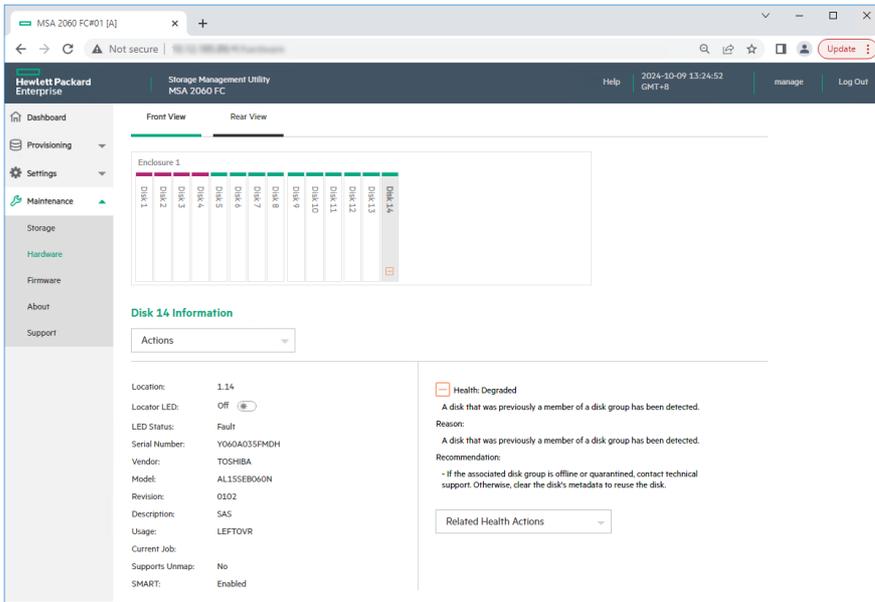
配置步骤

- 对于MSA阵列系统，新更换的控制器备件自带的固件版本与阵列系统内原有的另一控制器不同，那么新控制器备件将通过对等固件更新(Partner Firmware Update,PFU)升级或降级其固件版本与阵列系统内原有的另一控制器相同。
- 对等固件更新同样满足固件升级健康检查要求(check firmware-upgrade-health)，如果阵列系统内有除了故障控制器之外的其他不健康组件导致固件升级健康检查未通过，那么，更换控制器后的对等固件更新操作将被阻止，影响控制器更换。
- MSA Gen6阵列系统的固件升级健康检查要求更严格，阵列系统内存在故障PSU、LEFTOVR硬盘等均不满足固件升级健康检查要求。

受测阵列为MSA2060 FC，固件版本为IN210P001。目前，B控呈故障状态。

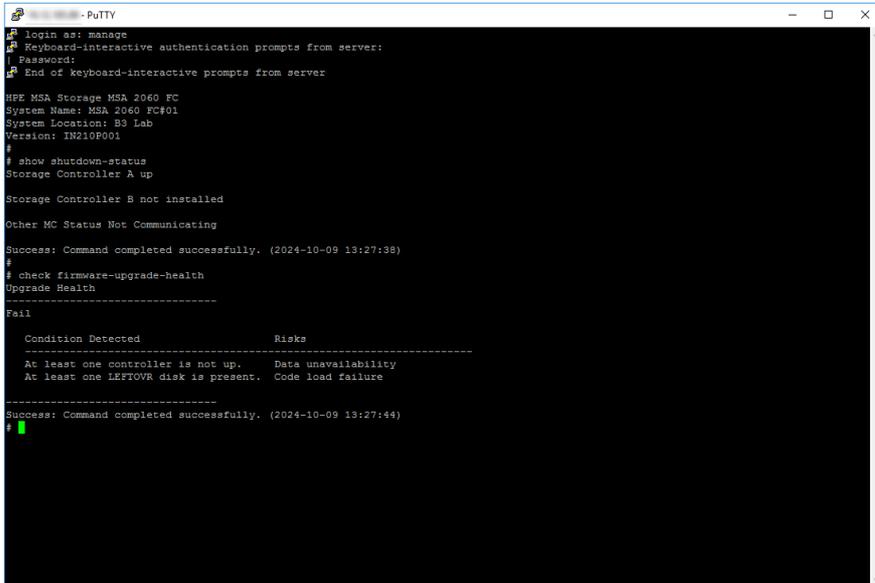


同时，阵列系统内14号硬盘为LEFTOVR硬盘，未及时更换或清除元数据。

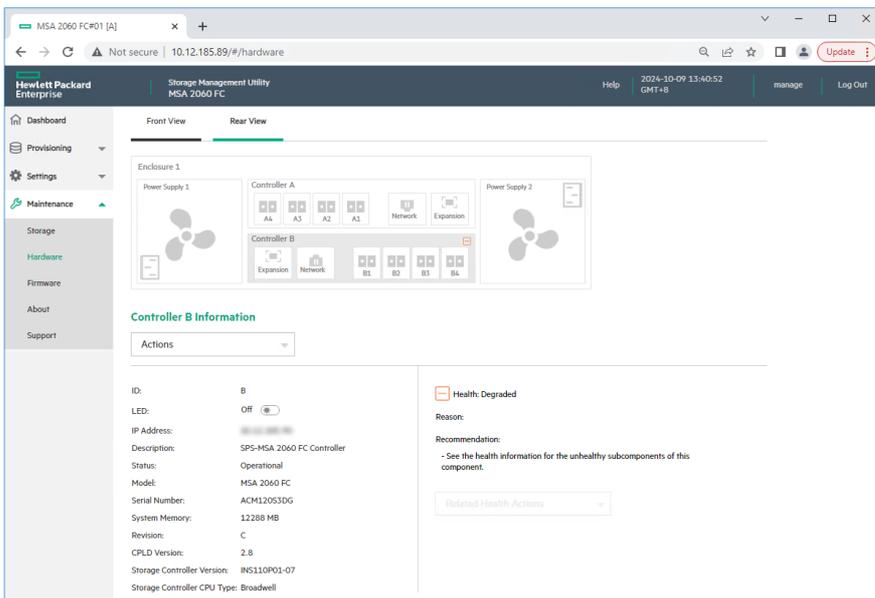


固件升级健康检查会提示有控制器未启动而存在数据不可用风险，此情况不会影响更换控制器后的对等固件同步。

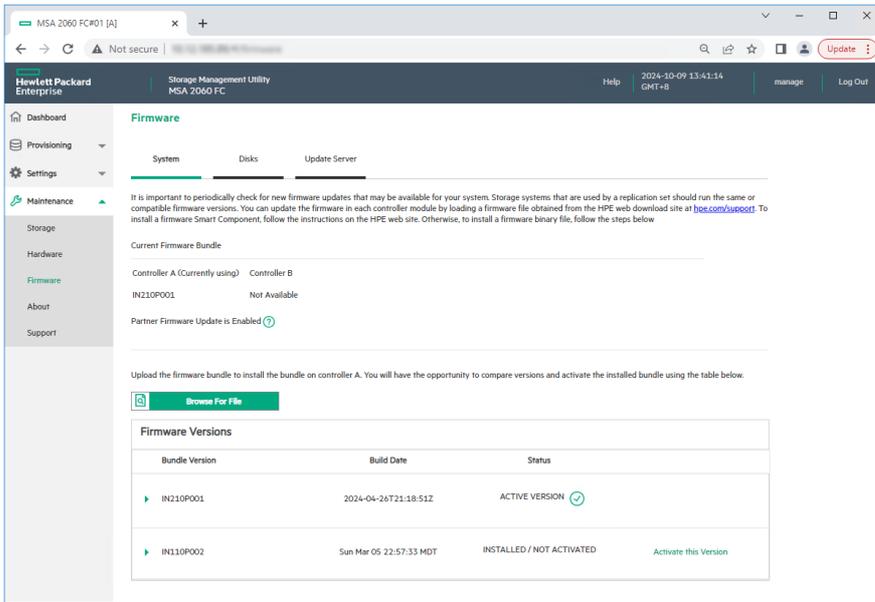
同时，会提示存在LEFTOVR硬盘。



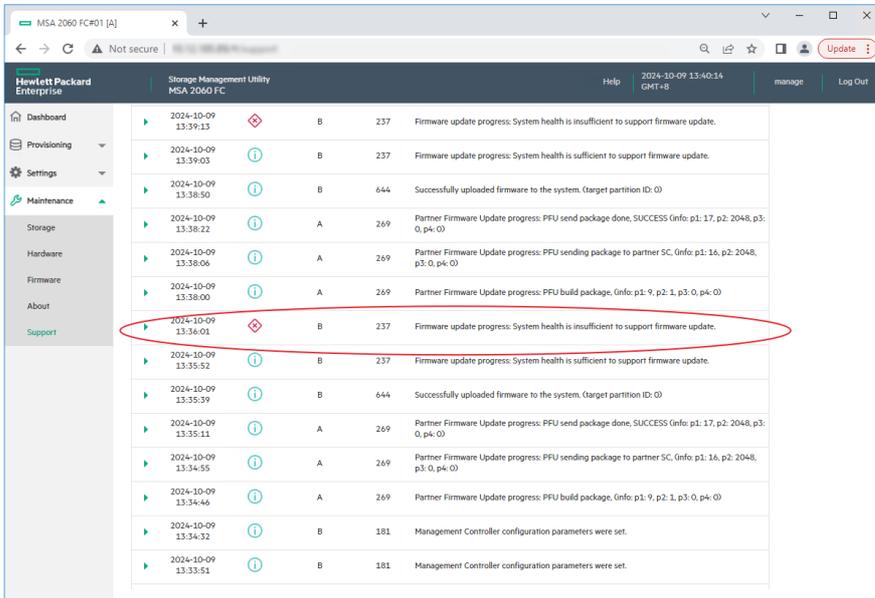
向B控槽位安装带有固件IN110P002的控制器备件，等待几分钟后，阵列系统已识别到新B控。



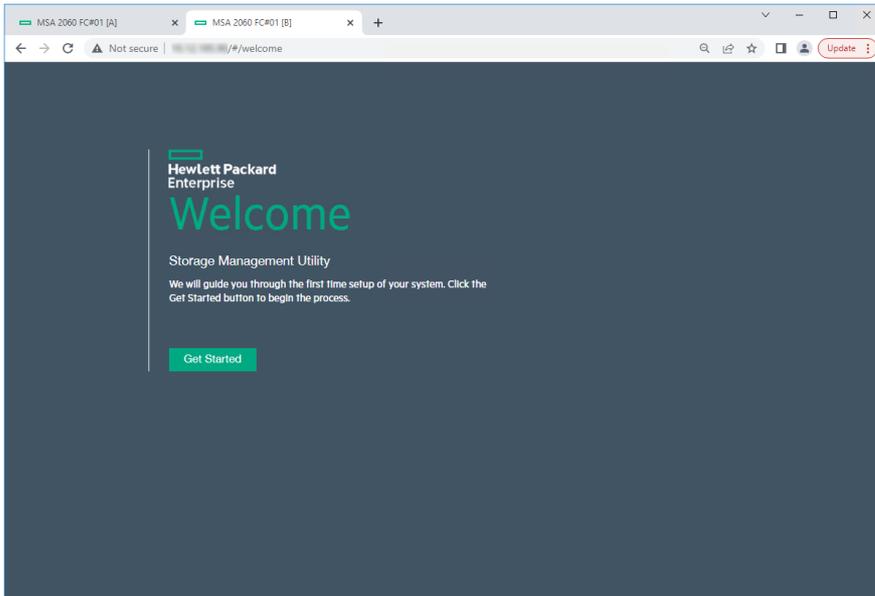
但固件视图中，新B控的固件信息为不可用。



查看事件记录，可见新B控无法与A控进行对等固件更新，提示“Firmware update progress: System health is insufficient to support firmware update.”



此时，通过B控的管理IP访问SMU，会提示系统需要进行首次配置。



如不修复影响固件更新的不健康组件，新B控会一直停止在这个阶段。

Date/Time	Severity	Controller	Event Code	Message
2024-10-09 13:58:16	Warning	B	237	Firmware update progress: System health is insufficient to support firmware update.
2024-10-09 13:58:06	Info	B	237	Firmware update progress: System health is sufficient to support firmware update.
2024-10-09 13:57:53	Info	B	644	Successfully uploaded firmware to the system. (target partition ID: 0)
2024-10-09 13:57:25	Info	A	269	Partner Firmware Update progress: PFU send package done, SUCCESS (info: p1: 17, p2: 2048, p3: 0, p4: 0)
2024-10-09 13:57:09	Info	A	269	Partner Firmware Update progress: PFU sending package to partner SC, (info: p1: 16, p2: 2048, p3: 0, p4: 0)
2024-10-09 13:57:07	Info	A	269	Partner Firmware Update progress: PFU build package, (info: p1: 9, p2: 1, p3: 0, p4: 0)
2024-10-09 13:55:10	Warning	B	237	Firmware update progress: System health is insufficient to support firmware update.
2024-10-09 13:55:00	Info	B	237	Firmware update progress: System health is sufficient to support firmware update.
2024-10-09 13:54:47	Info	B	644	Successfully uploaded firmware to the system. (target partition ID: 0)
2024-10-09 13:54:19	Info	A	269	Partner Firmware Update progress: PFU send package done, SUCCESS (info: p1: 17, p2: 2048, p3: 0, p4: 0)
2024-10-09 13:54:02	Info	A	269	Partner Firmware Update progress: PFU sending package to partner SC, (info: p1: 16, p2: 2048, p3: 0, p4: 0)
2024-10-09 13:54:00	Info	A	269	Partner Firmware Update progress: PFU build package, (info: p1: 9, p2: 1, p3: 0, p4: 0)
2024-10-09 13:52:02	Warning	B	237	Firmware update progress: System health is insufficient to support firmware update.

手动将14号硬盘清除元数据，使其变为可用状态。

Enclosure 1

Disk 1, Disk 2, Disk 3, Disk 4, Disk 5, Disk 6, Disk 7, Disk 8, Disk 9, Disk 10, Disk 11, Disk 12, Disk 13, Disk 14

Disk 14 Information

Actions

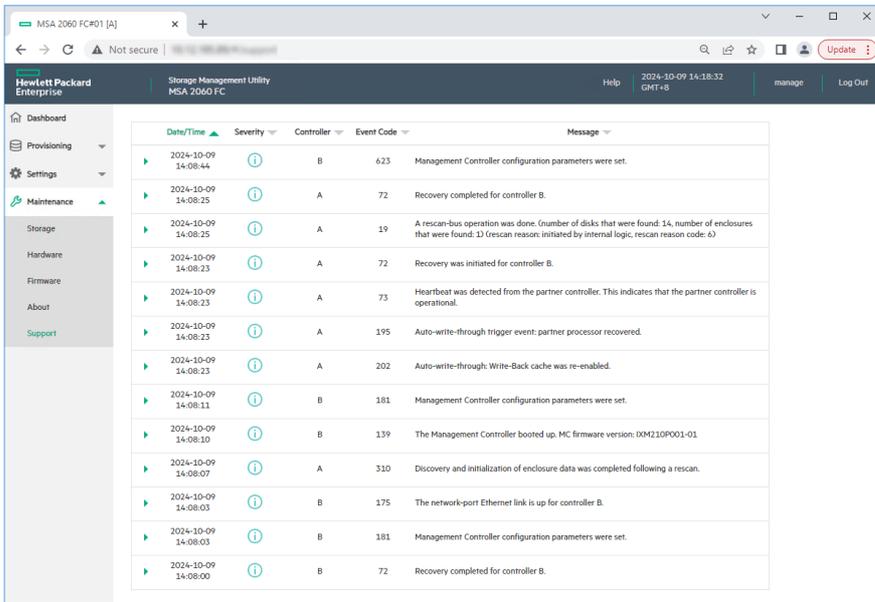
Location: 1.14
 Locator LED: Off
 LED Status: Fault
 Serial Number: Y060A035FMDH
 Vendor: TOSHIBA
 Model: AL155EB060N
 Revision: 0102
 Description: SAS
 Usage: AVAIL
 Current Job:
 Supports Unmap: No
 SMART: Enabled
 R/MIN: 10k

Health: OK
 Related Health Actions

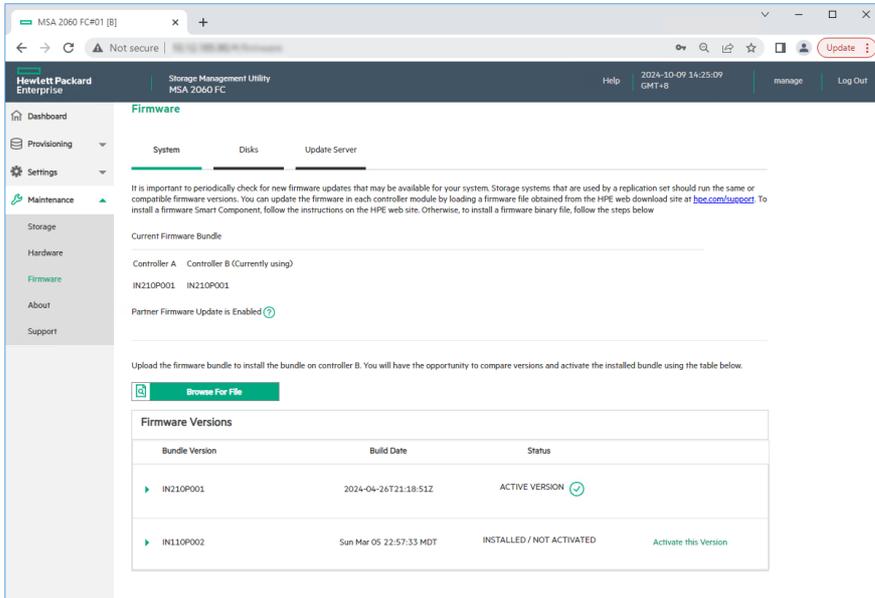
事件记录可见，在阵列系统内无LEFTOVR硬盘后，满足升级固件的健康要求，PFU正常进行。

Date/Time	Severity	Controller	Event Code	Message
2024-10-09 14:02:04	Info	B	237	Firmware update progress: The MC flash was updated.
2024-10-09 14:01:35	Info	B	644	Successfully uploaded firmware to the system. (target partition ID: 0)
2024-10-09 14:01:16	Info	B	237	Firmware update progress: System health is sufficient to support firmware update.
2024-10-09 14:01:03	Info	B	644	Successfully uploaded firmware to the system. (target partition ID: 0)
2024-10-09 14:00:35	Info	A	269	Partner Firmware Update progress: PFU send package done, SUCCESS (info: p1: 17, p2: 2048, p3: 0, p4: 0)
2024-10-09 14:00:18	Info	A	269	Partner Firmware Update progress: PFU sending package to partner SC, (info: p1: 16, p2: 2048, p3: 0, p4: 0)
2024-10-09 14:00:16	Info	A	269	Partner Firmware Update progress: PFU build package, (info: p1: 9, p2: 1, p3: 0, p4: 0)
2024-10-09 14:00:03	Info	B	19	A rescan-bus operation was done. (number of disks that were found: 14, number of enclosures that were found: 1) (rescan reason: initiated by internal logic, rescan reason code: 11)
2024-10-09 14:00:01	Info	A	49	A SCSI maintenance command completed successfully. (command: 11, disk: channel 0, ID: 13, SN: Y060A035FMDH, enclosure: 1, slot: 14)
2024-10-09 14:00:01	Info	A	19	A rescan-bus operation was done. (number of disks that were found: 14, number of enclosures that were found: 1) (rescan reason: initiated by internal logic, rescan reason code: 11)
2024-10-09 13:58:16	Warning	B	237	Firmware update progress: System health is insufficient to support firmware update.
2024-10-09 13:58:06	Info	B	237	Firmware update progress: System health is sufficient to support firmware update.
2024-10-09 13:57:53	Info	B	644	Successfully uploaded firmware to the system. (target partition ID: 0)

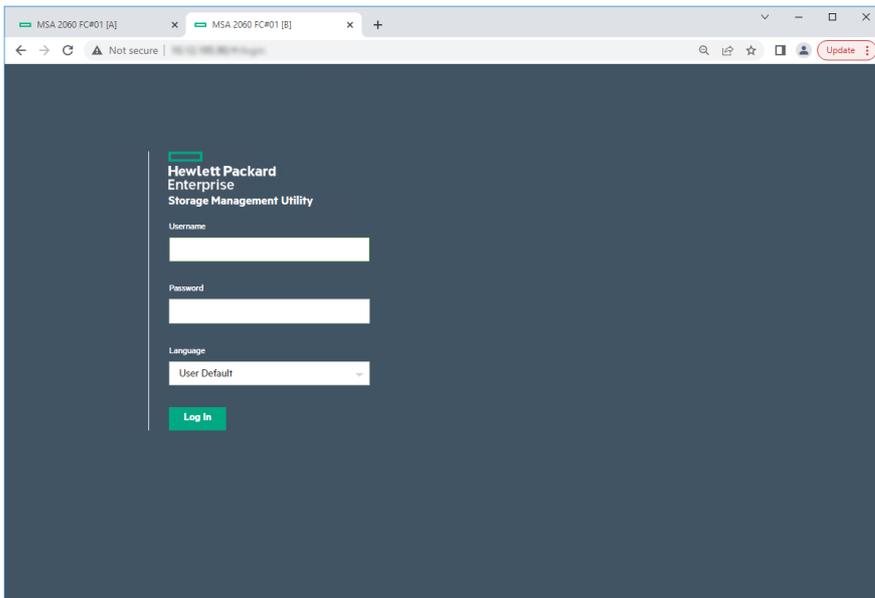
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新B控完成对等固件更新后，其固件版本已升级至IN210P001。



此时，通过B控的管理IP访问SMU，可正常登录，不再提示系统需要进行首次设置。



END.

