

HPE Gen10 服务器 S100i 阵列卡 Windows 系统下 SSA 配置阵列

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一. 适用范围与注意事项

- 本文档旨在说明 HPE Gen10 服务器 S100i 阵列卡 Window 系统下使用 Smart Storage Administrator 工具配置阵列的方法，并以 DL380 Gen10 服务器为例进行配置步骤说明。
- 实际情况是否适用本文档，请通过下面导航链接进行确认：
<https://zhiliao.h3c.com/Theme/details/218271>
- 提示：
本文档中的信息（包括产品，软件版本和设置参数）仅作参考示例，具体操作与目标需求设置请以

实际为准。

本文档不定期更新维护，请以发布的最新版本为准。

二. 配置准备

1. 下载 Smart Storage Administrator 工具

下载链接：

[适用于 Windows 64 位的 HPE 智能存储管理员 \(HPE SSA\) | HPE Support](#)

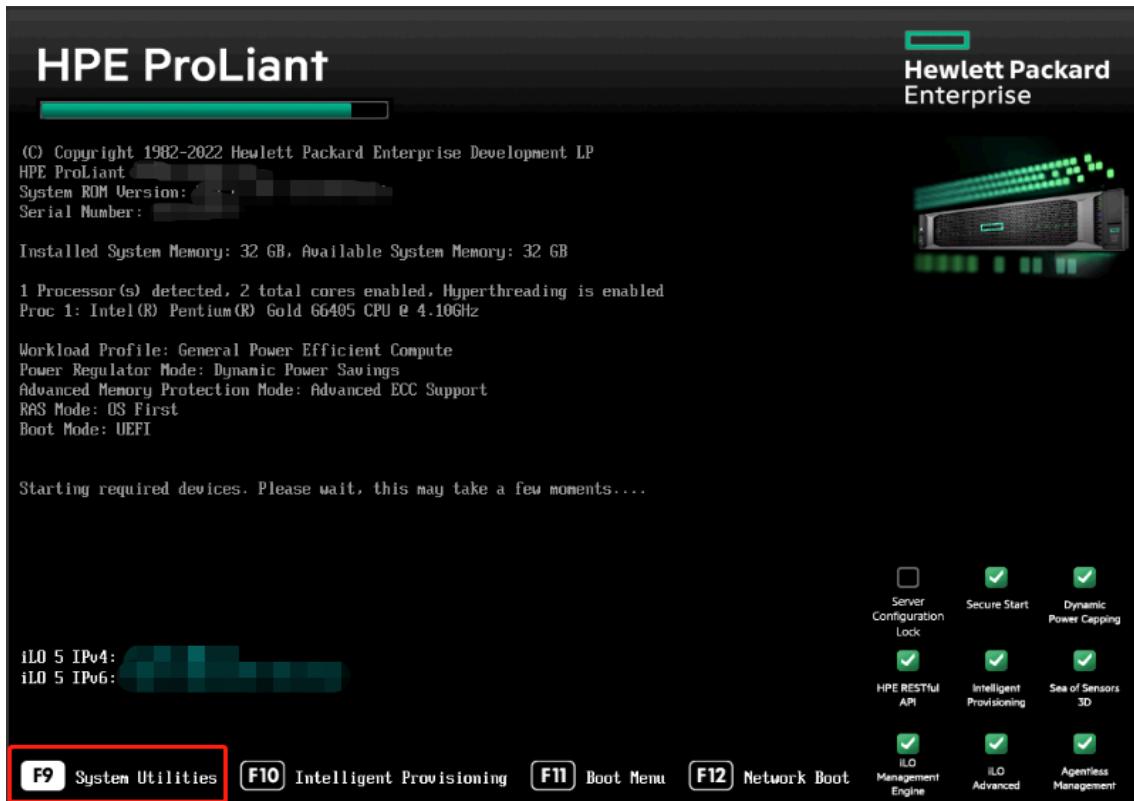
2. 连接 iLO 与启用远程控制台

具体方法请参考：<https://zhiliao.h3c.com/Theme/details/216337>

三. 配置步骤

1. 进入 BIOS 开启阵列卡 RAID 功能

- 1) 自检界面按 F9 进入 BIOS。



- 2) 确认当前引导模式。

选择 System Configuration -> BIOS/Platform Configuration(RBSU) -> Boot Option，确认当前启动模式为 UEFI 启动模式（此阵列卡 RAID 功能仅支持 UEFI 模式）。

System Utilities

System Configuration

One-Time Boot Menu
Embedded Applications
System Information
System Health

Exit and resume system boot
Reboot the System

Select Language: English
Setup Browser Selection: Auto

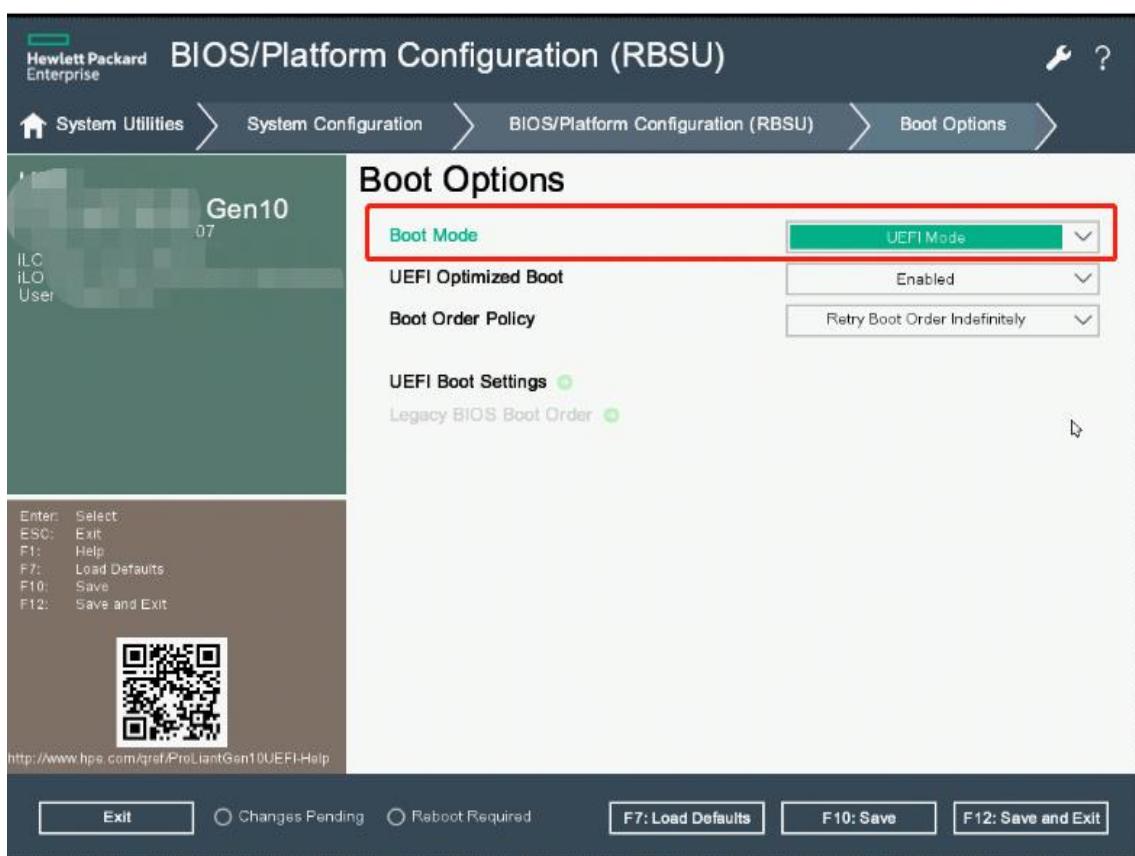
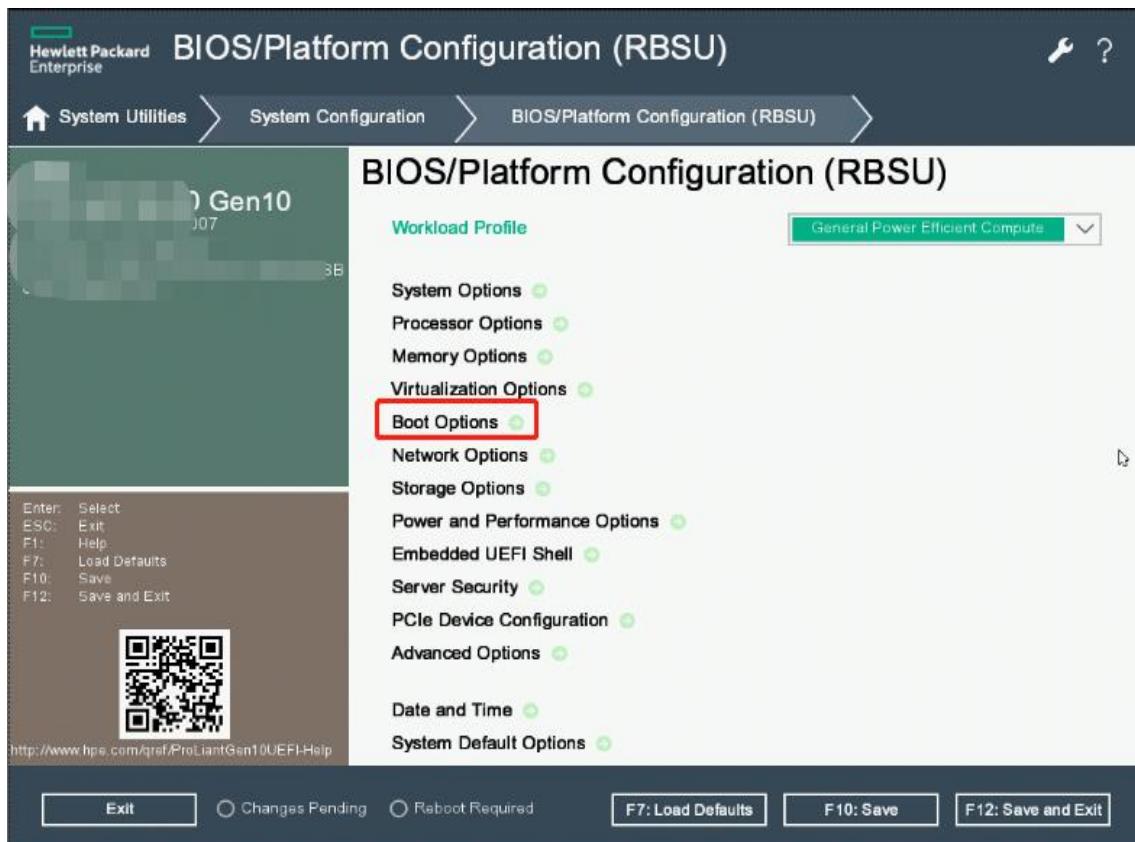
Enter: Select
ESC: Exit
F1: Help
F7: Load Defaults
F10: Save
F12: Save and Exit

System Configuration

BIOS/Platform Configuration (RBSU)

ILO 5 Configuration Utility
Embedded Storage : Smart Array Controller
Embedded LOM 1 Port 1 : HPE Ethernet 1Gb 2-port 332i Adapter - NIC
Embedded LOM 1 Port 2 : HPE Ethernet 1Gb 2-port 332i Adapter - NIC

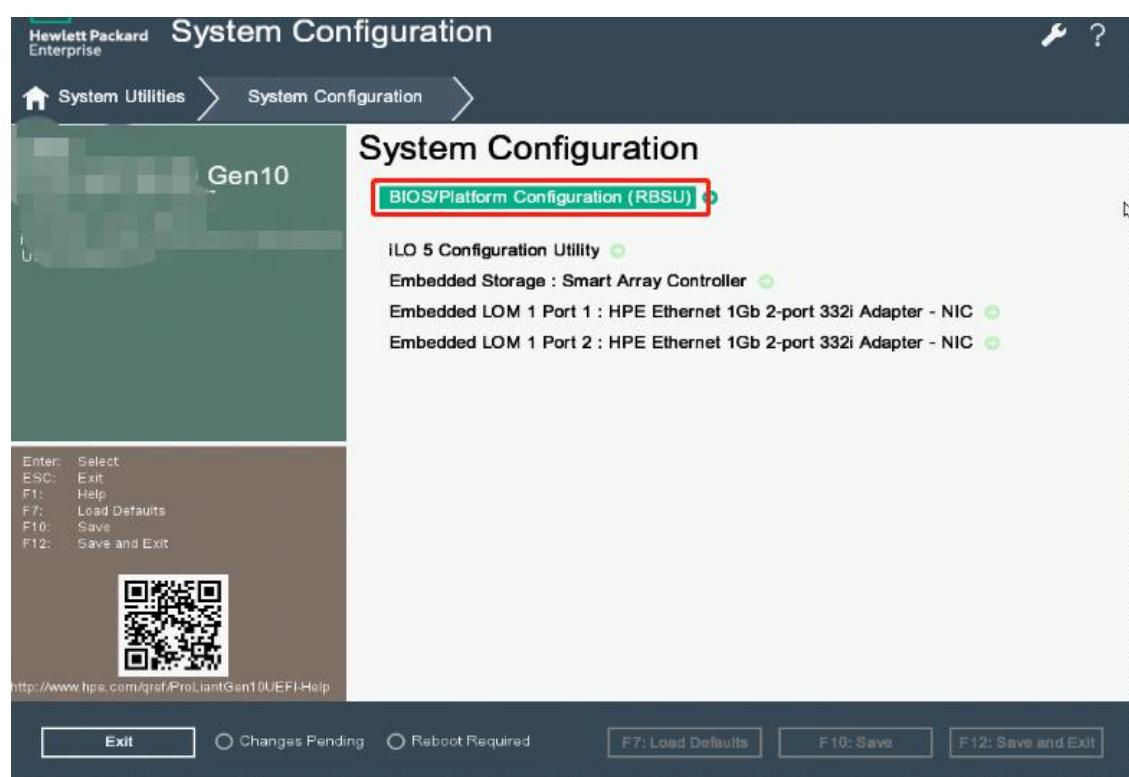
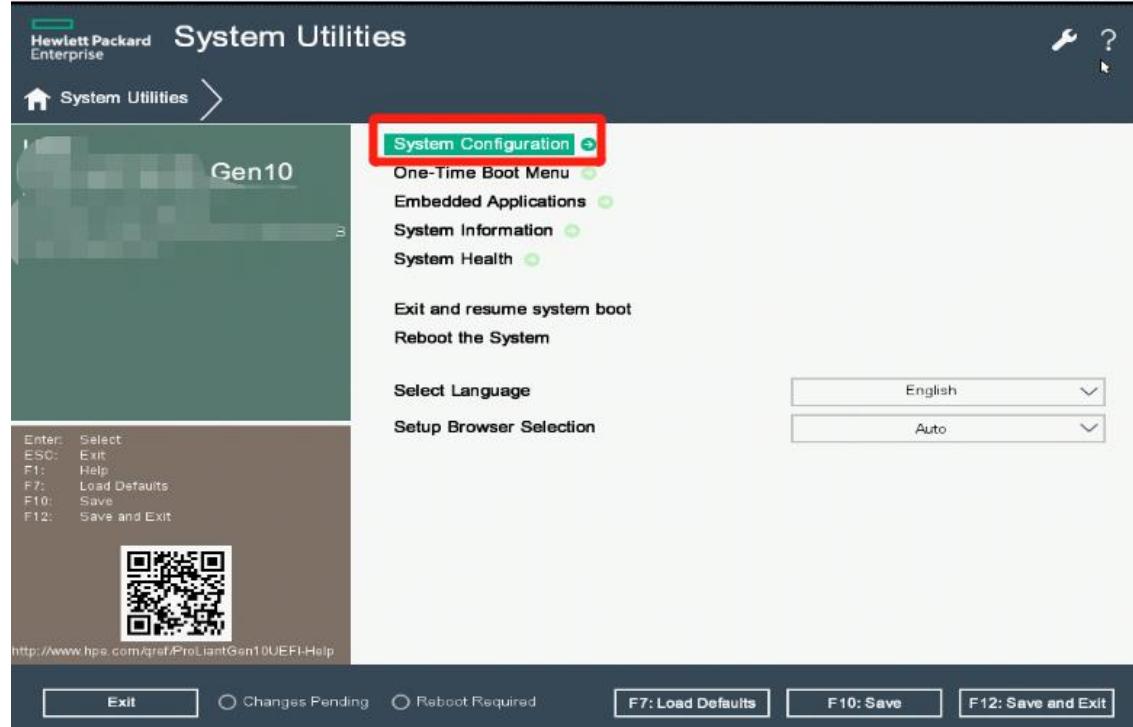
Enter: Select
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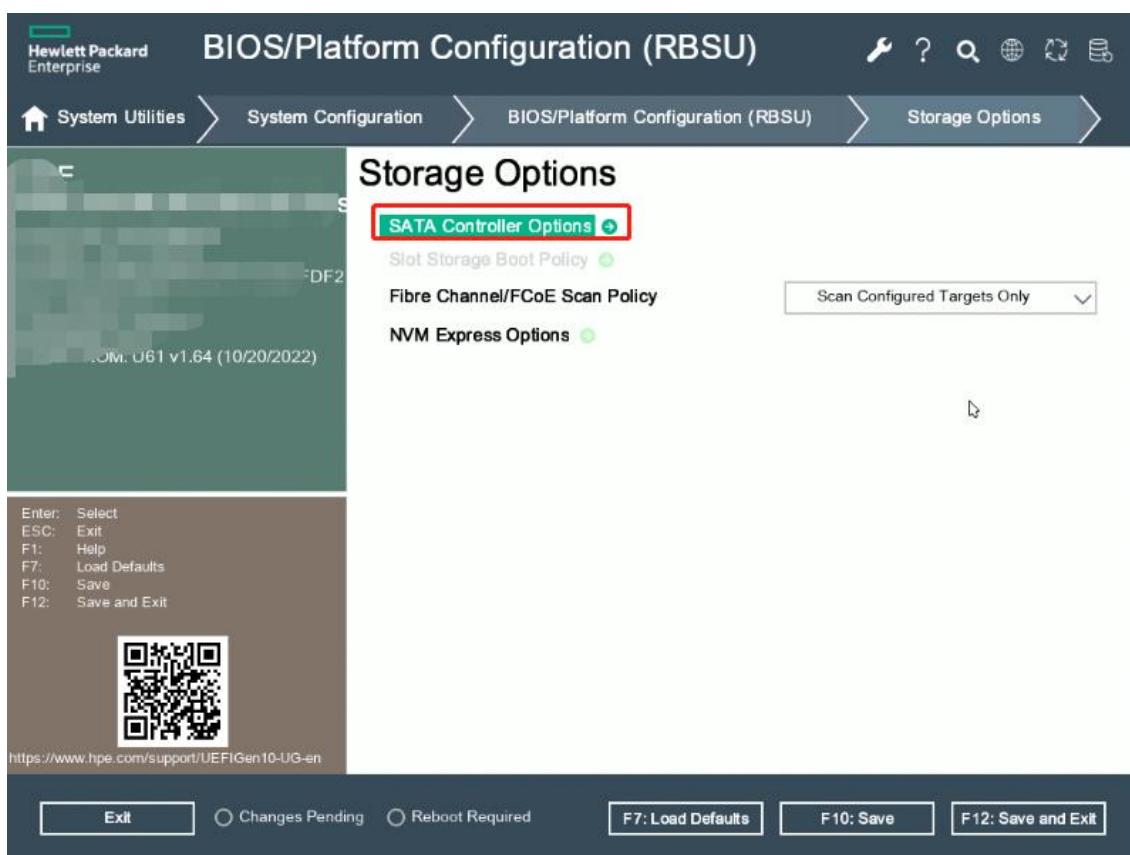
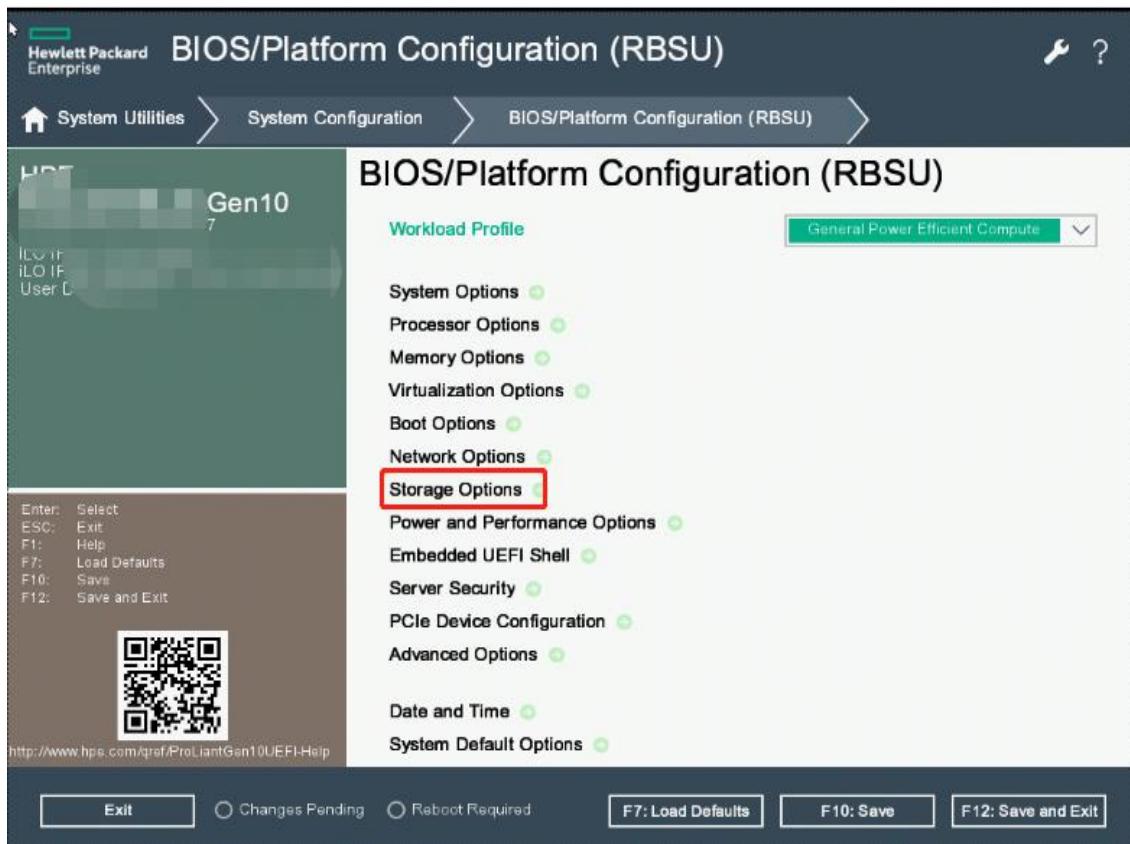


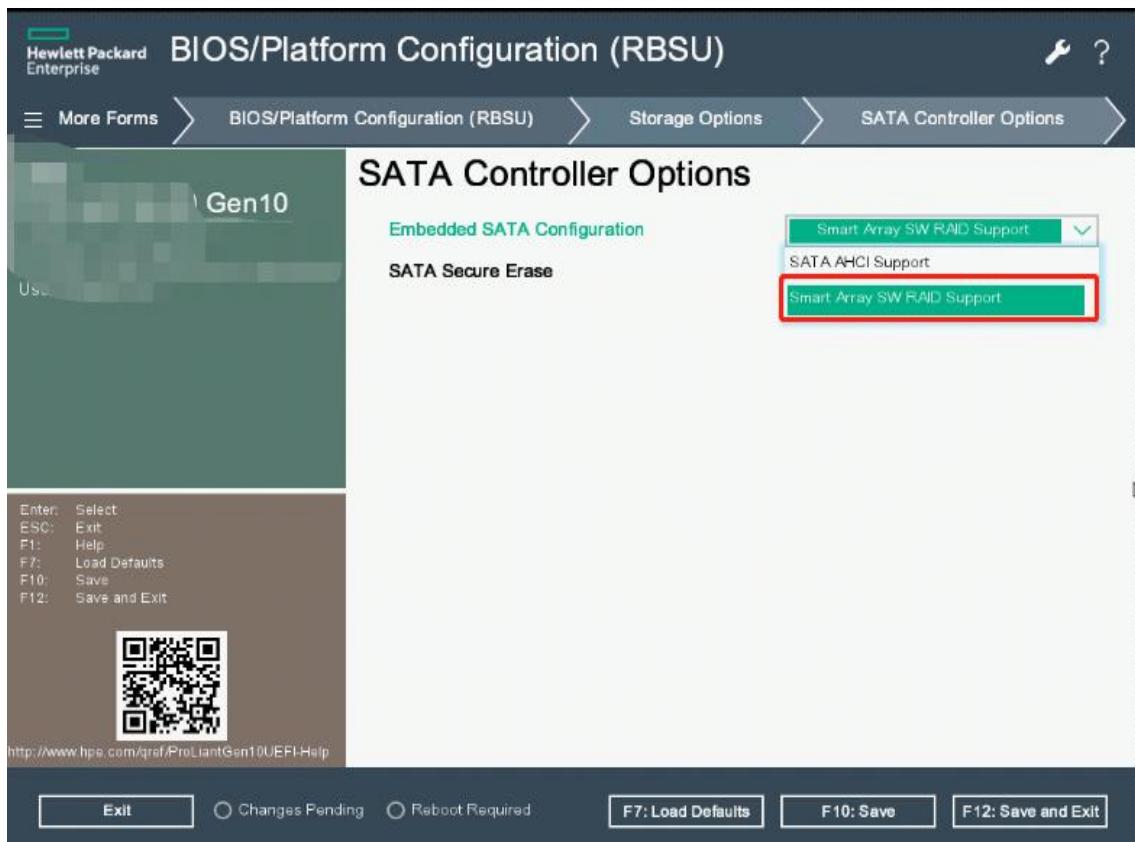
3) 开启 S100i 的阵列功能。

将 S100i 控制器的模式修改成 Smart Array SW RAID Support, 然后按 **F12** 保存并退出。

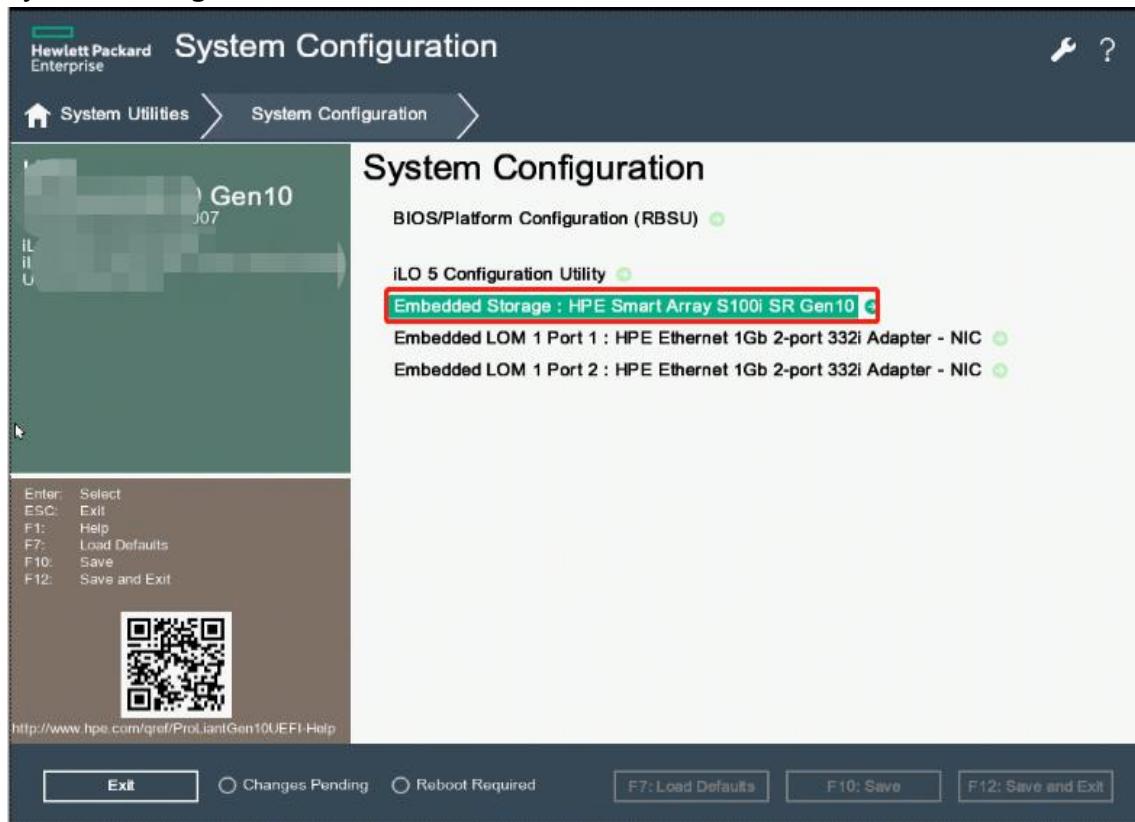
System Configuration -> BIOS/Platform Configuration(RBSU) -> Storage Option
-> SATA Controller Options -> Embedded SATA Configuration







4) System Configuration 下显示出阵列卡。



2. 访问系统

2.1 通过 iLO 启用远程控制台访问系统

iLO 5 页面 Information -> Overview 的 Remote Console 选项，或页面左下方 Remote Console 选区可直接启用远程控制台；也可在 Remote Console & Media - iLO Integrated Remote Console 页面进行选择。本文以.NET 远程控制台为例。

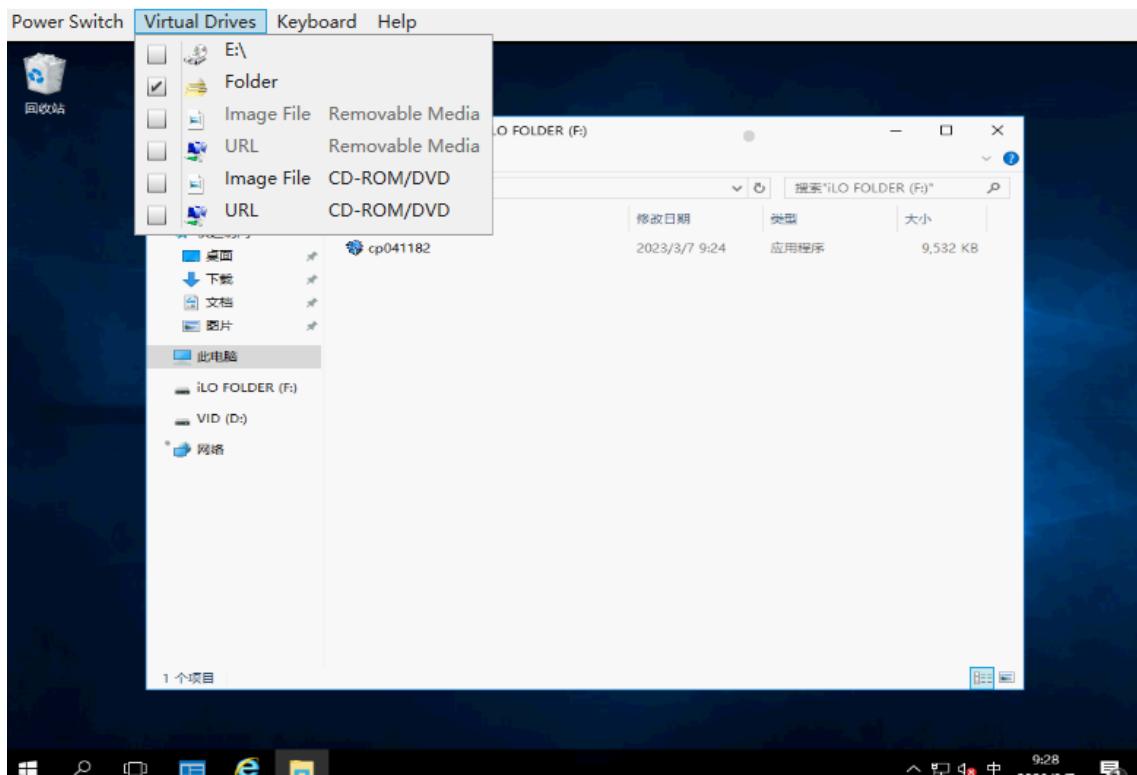
The screenshot shows the iLO 5 Management interface. On the left, the navigation menu includes 'Information', 'Firmware & OS Software', 'iLO Federation', 'Remote Console & Media' (which is selected and highlighted with a red box), 'Power & Thermal', 'Performance', 'iLO Dedicated Network Port', 'iLO Shared Network Port', 'Remote Support', 'Administration', 'Security', 'Management', and 'Lifecycle Management'. The main content area is titled 'Information - iLO Overview' and contains three sections: 'Server', 'iLO', and 'Status'. In the 'Server' section, there are fields for Product Name, Server Name, System ROM, System ROM Date, Redundant System ROM, Server Serial Number, Product ID, and UUID. Below these is a 'Remote Console' section with 'HTML5' and '.NET' options, both of which are highlighted with a red box. The 'iLO' section shows IP Address, Link-Local IPv6 Address, ILO Hostname, ILO Dedicated Network Port (Enabled), ILO Shared Network Port (Disabled), ILO Virtual NIC (Disabled), License Type, ILO Firmware Version (2.90 May 11 2023), and ILO Date/Time. The 'Status' section displays various server health metrics with corresponding icons and status indicators.

2.2 通过远程桌面或第三方 RDP 工具访问系统

The screenshot shows a remote desktop session using a third-party RDP tool. The desktop environment is a Windows 10 desktop with a blue theme. The taskbar at the bottom includes icons for File Explorer, Task View, Start, and other system utilities. The top of the screen features a toolbar with various icons for session management, including 'Session', 'Servers', 'Tools', 'Games', 'Sessions', 'View', 'Split', 'MultiExec', 'Tunneling', 'Packages', 'Settings', and 'Help'. A 'Quick connect...' search bar is also present. The main window shows a single session labeled 'Bios'.

3. 将 Smart Storage Administrator 工具保存到系统下

3.1 通过 iLO 远程控制台将工具挂载到系统下

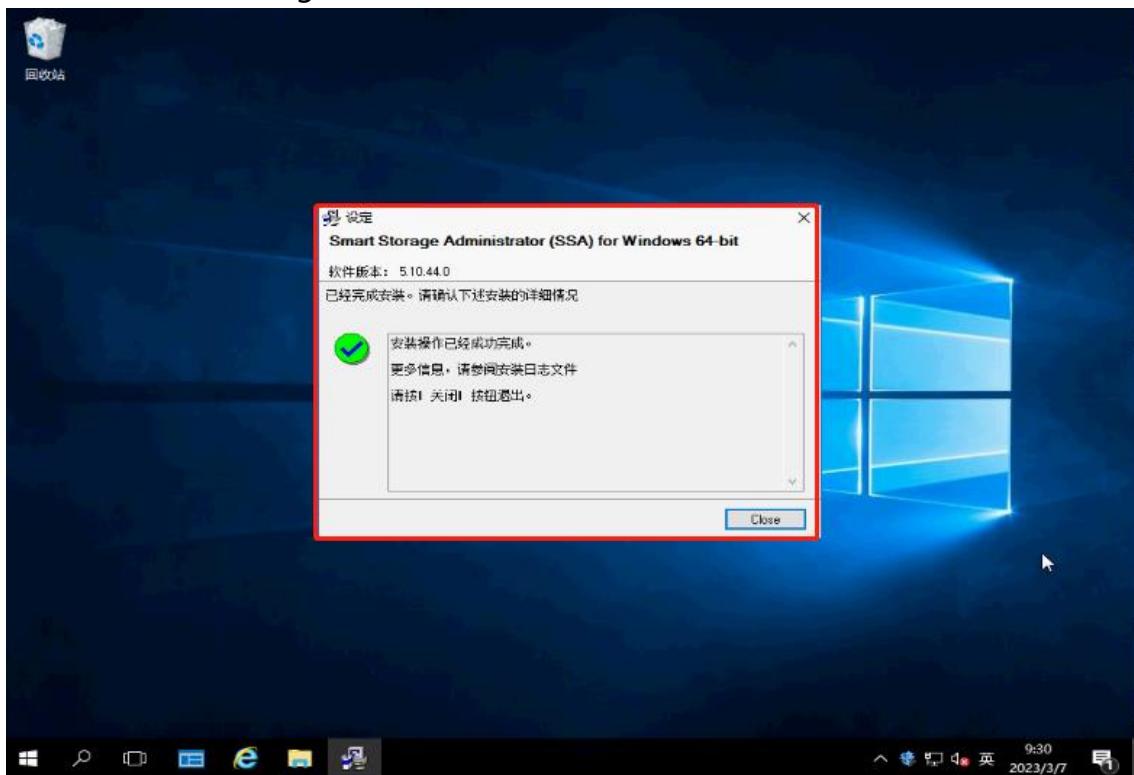


3.2 通过 U 盘将工具挂载到系统下

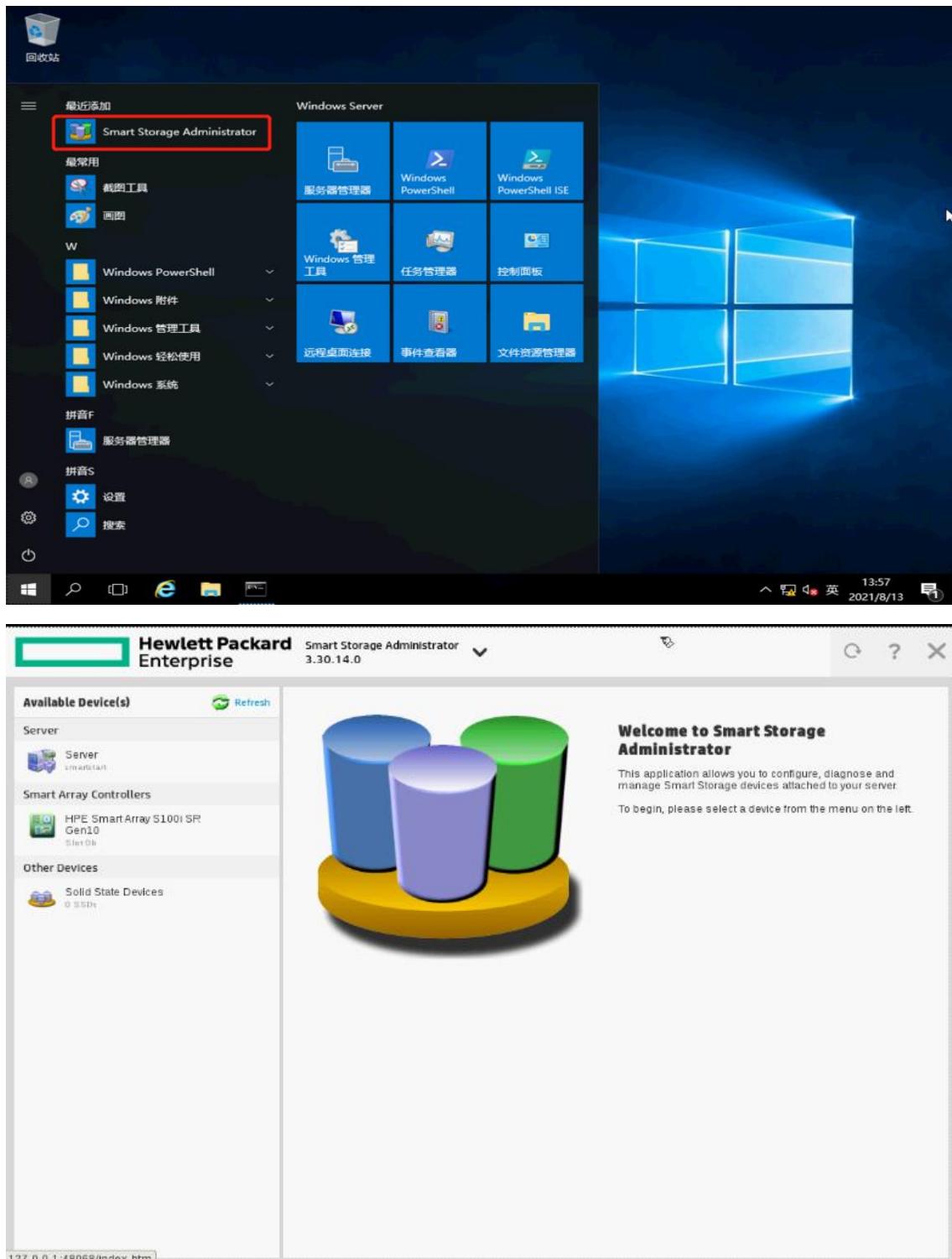
U 盘接入服务器后，在系统下直接访问挂载点。

4. 安装并启用 Smart Storage Administrator

- 1) 双击打开 Smart Storage Administrator 安装包。



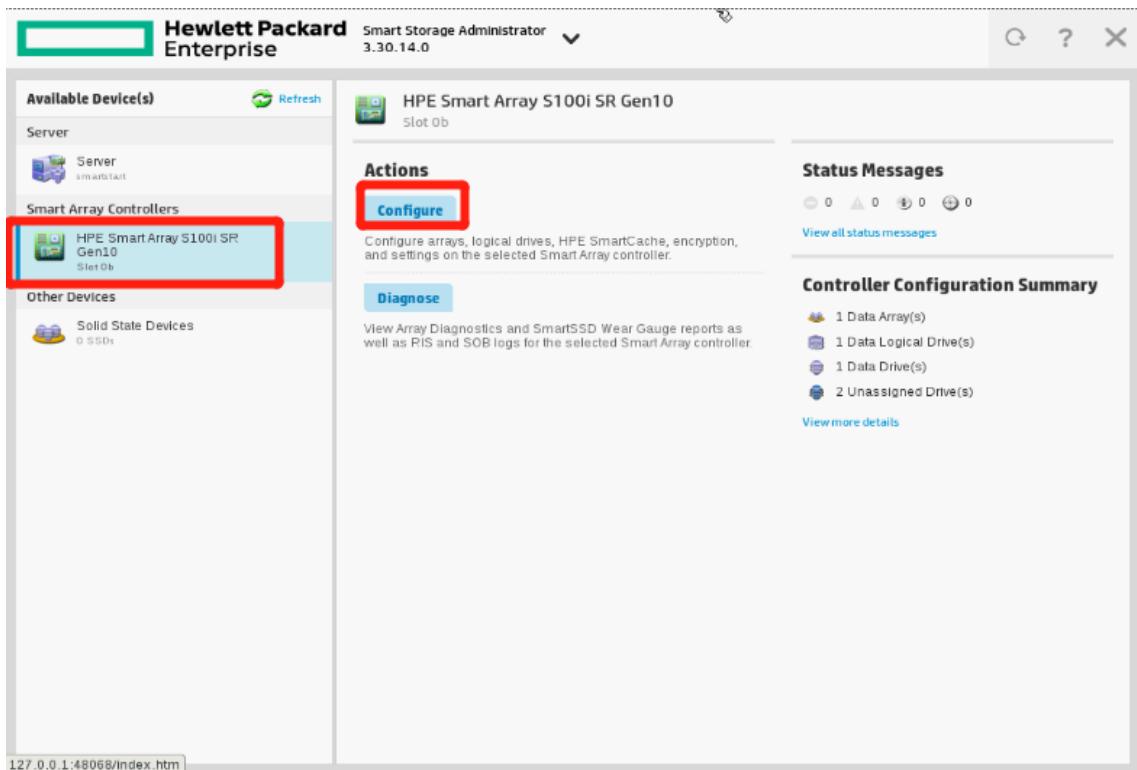
2) 应用中找到 SSA 工具打开。



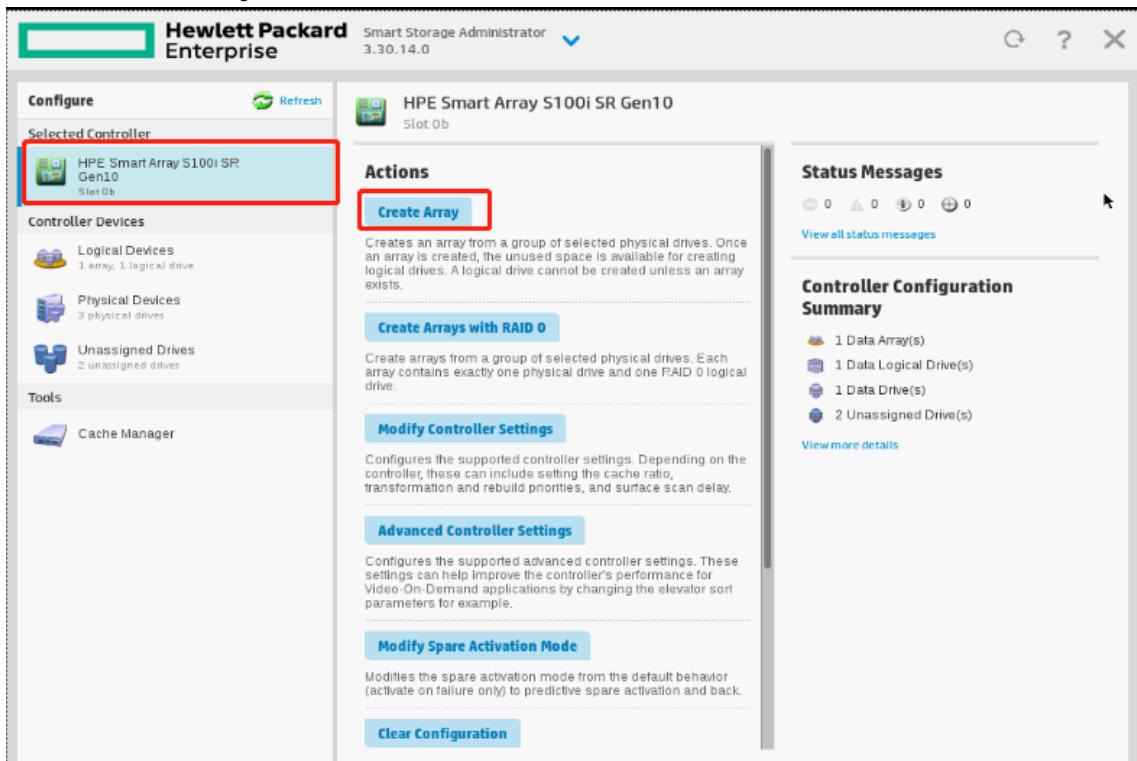
5. 创建与删除阵列

5.1 创建阵列

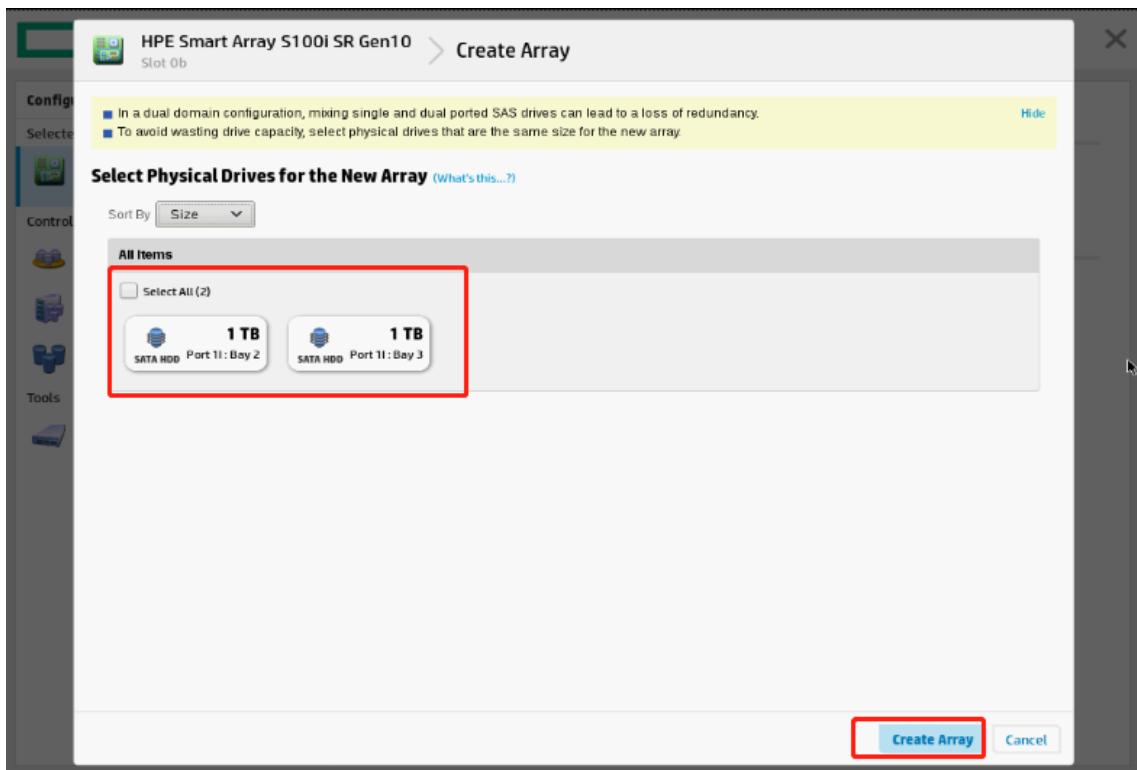
- 1) 选择阵列卡，点击 **Configure** 选项。



2) 点击 **Create Array** 创建阵列。

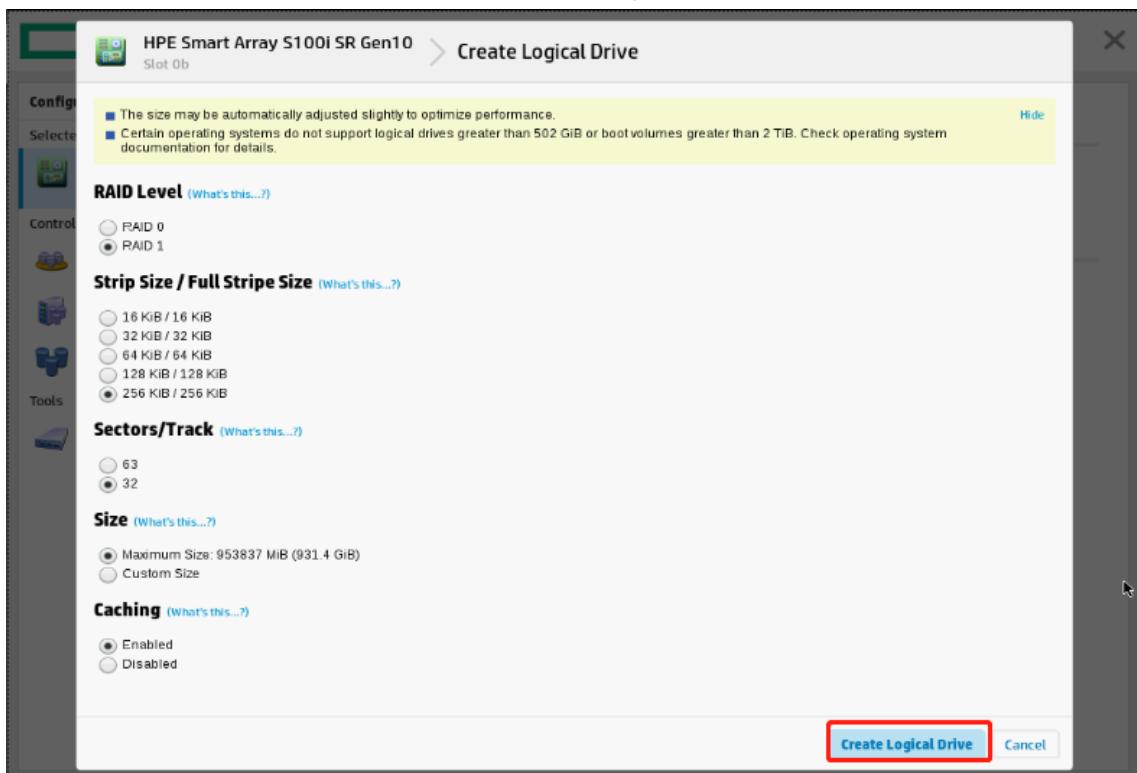


3) 选择硬盘，右上角有绿色对勾表示被选中，选择完成后点击 **Create Array**。

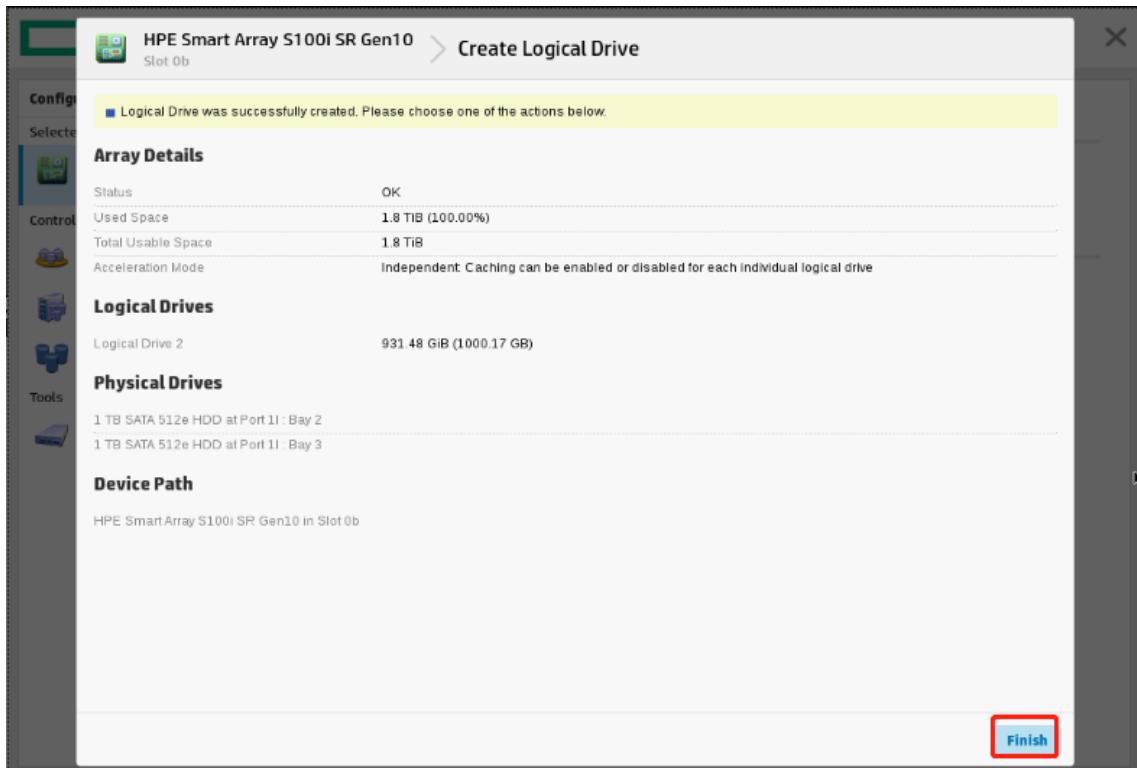


- 4) 选择 RAID Level (阵列级别)、Strip Size/Full Stripe Size (区块大小)、Sectors/Track (扇区大小)、Size (阵列大小) 后点击 **Create Logical Drive** 创建阵列。

通常只需要设置 RAID Level 及 Size，其他默认即可。



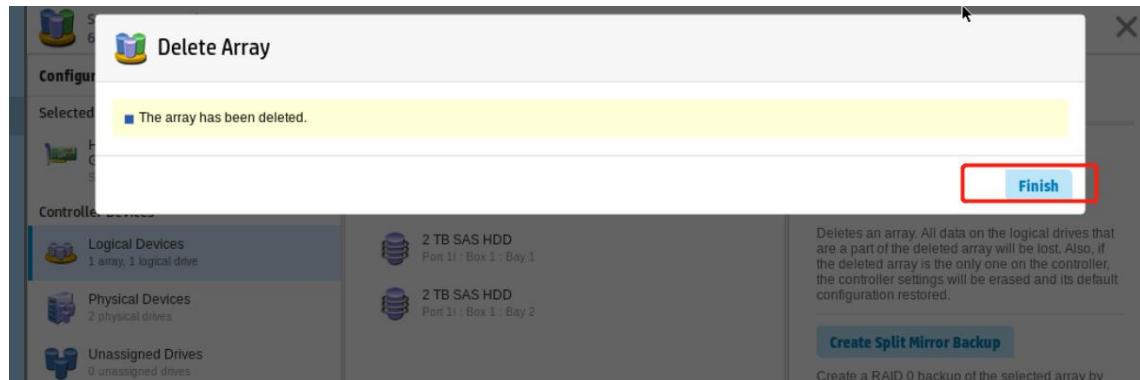
- 5) 阵列创建完毕，点击 **Finish**。



5.2 删 除阵列

1) 点击 **Logical Devices**, 选择需要删除的阵列, 点击 **Delete Array**。

2) 阵列删除成功, 点击 **Finish**。



6. 创建与删除热备

确认热备盘激活模式，故障时激活或预测故障时激活，其中 raid0 只能选择预测故障时激活。

Selected Controller

HPE Smart Array S100i SR Gen10 Slot 0b

Create Arrays with RAID 0

Creates arrays from a group of selected physical drives. Once an array is created, the unused space is available for creating logical drives. A logical drive cannot be created unless an array exists.

Modify Controller Settings

Configures the supported controller settings. Depending on the controller, these can include setting the cache ratio, transformation and rebuild priorities, and surface scan delay.

Advanced Controller Settings

Configures the supported advanced controller settings. These settings can help improve the controller's performance for Video-On-Demand applications by changing the elevator sort parameters for example.

Modify Spare Activation Mode

Modifies the spare activation mode from the default behavior (activate on failure only) to predictive spare activation and back.

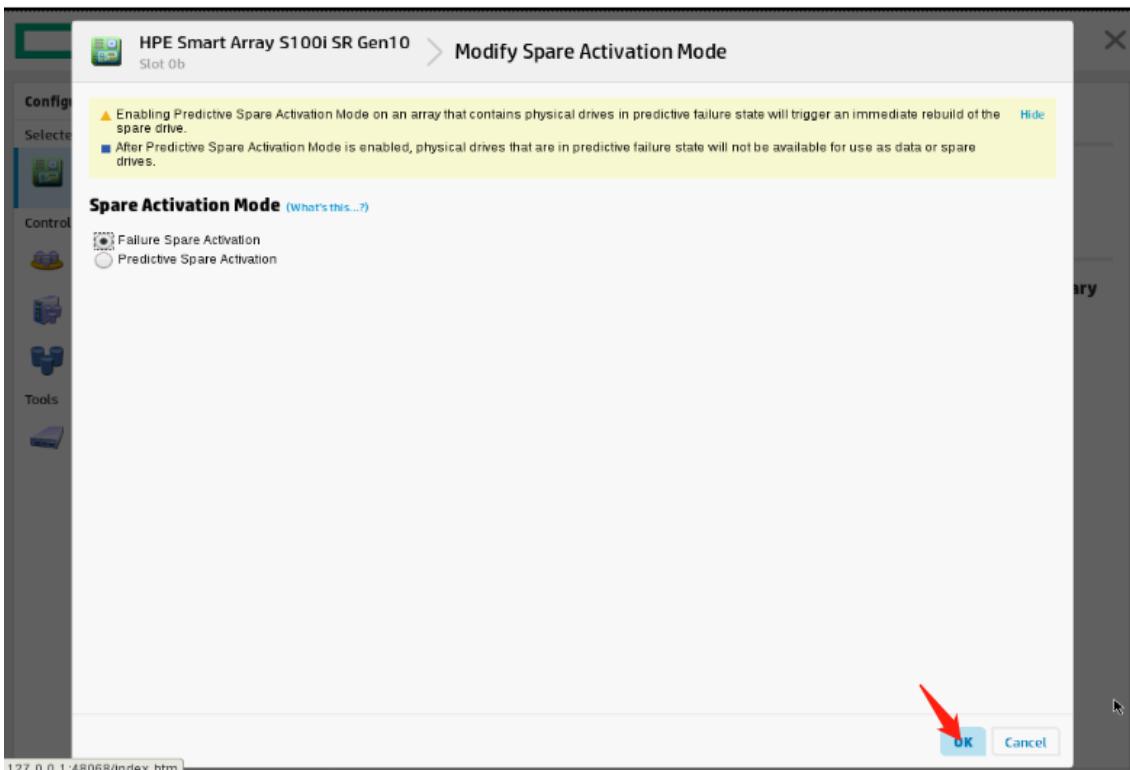
Clear Configuration

Resets the controller's configuration to its default state. Any existing arrays or logical drives will be deleted, and any data on the logical drives will be lost. Please confirm this is the desired action before proceeding.

Status Messages

Controller Configuration Summary

1 Data Array(s)
1 Data Logical Drive(s)
1 Data Drive(s)
2 Unassigned Drive(s)



两种模式热备盘区别：

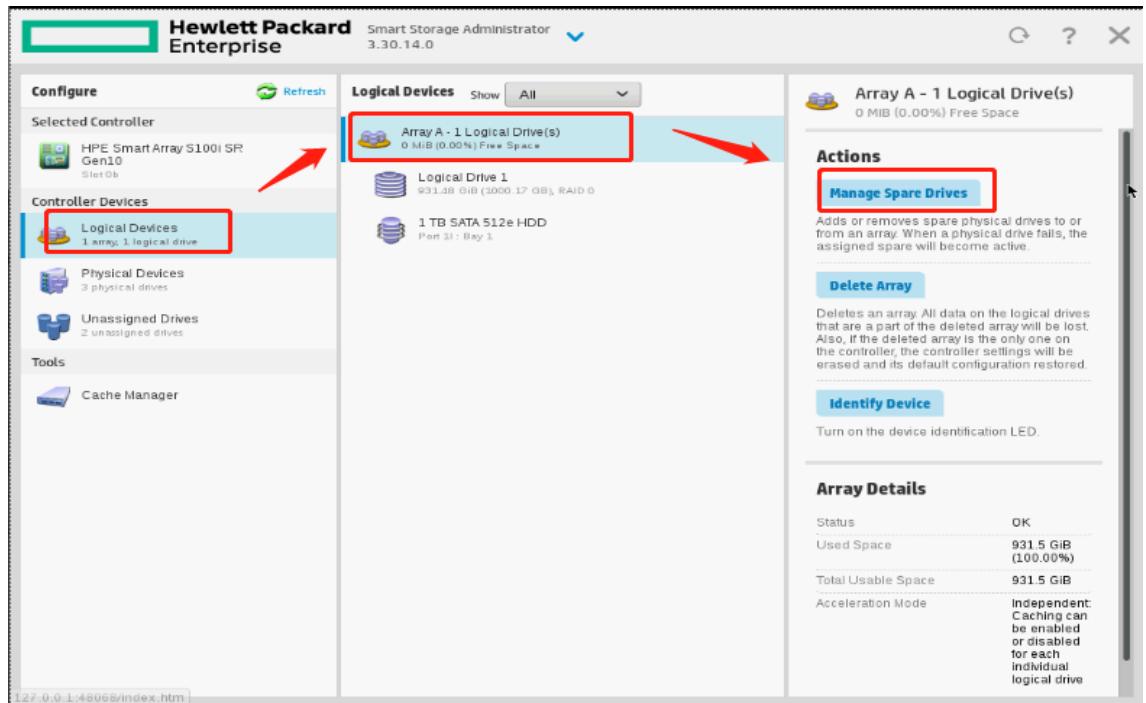
Dedicated (专用): 在更换发生故障的数据驱动器时，必须使用备用驱动器上的数据进行重建。在专用模式下，一个备用驱动器可以专用于多个阵列。

Auto-Replace Drives (自动更换驱动器): 发生故障的数据驱动器的备用驱动器自动变为更换数据驱动器。当更换备用驱动器时，数据驱动器不需要重建。在自动更换模式下，备用驱动器无法在阵列之间共享。

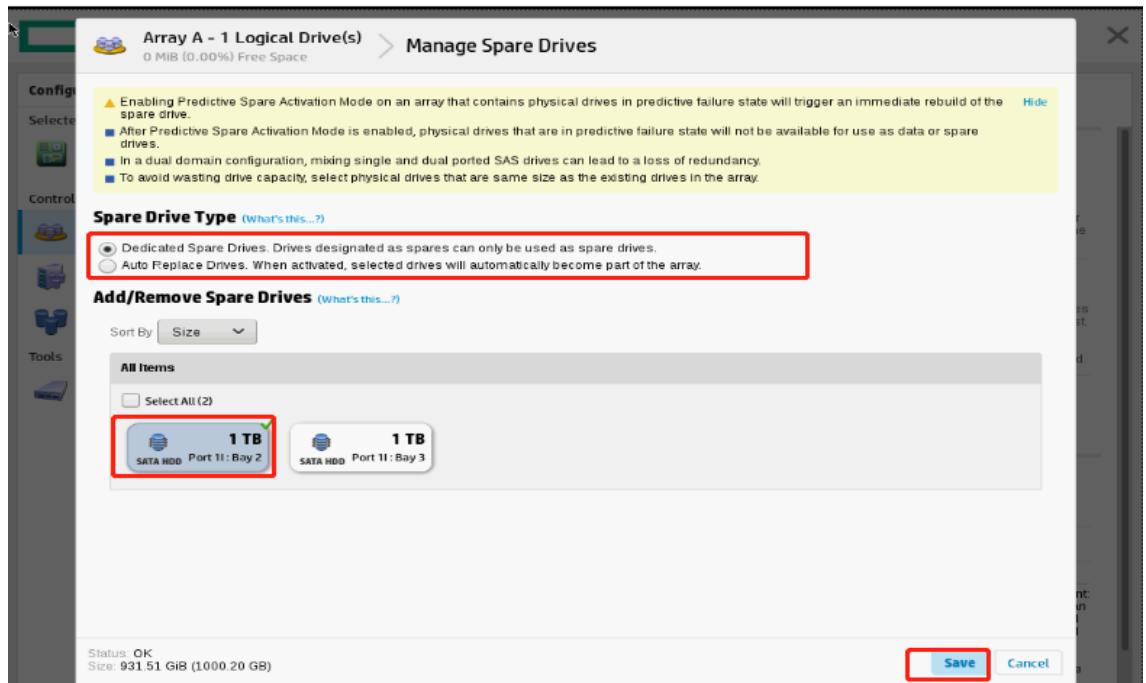
6.1 创建热备

6.1.1 创建专用热备

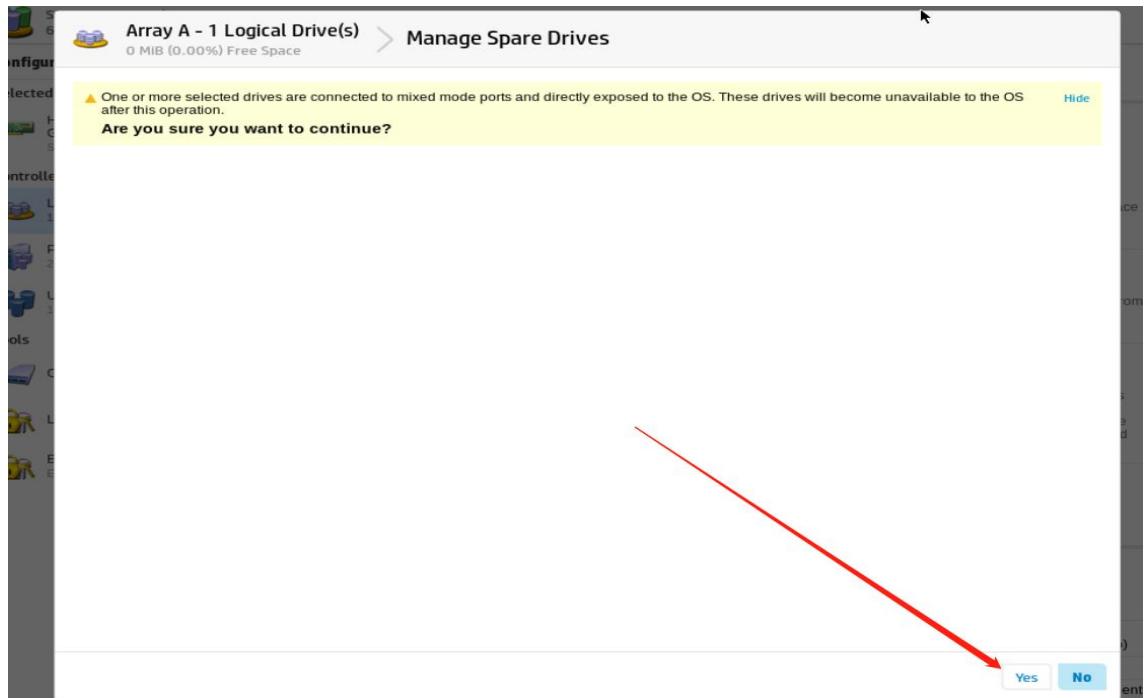
- 1) 点击 **Logical Devices**, 选择需要创建热备盘的阵列, 点击 **Manage Spare Drives**.



2) 勾选要配置成热备盘的磁盘，选择 Dedicated 热备模式，点击 Save 保存。



3) 点击 Yes 继续。



- 4) 点击 Finish 退出完成热备盘配置。

Array A with Spare - 1 Logical Drive(s) > Manage Spare Drives

Spare configuration saved.

Array Details

Status	OK
Used Space	1.8 TiB (100.00%)
Total Usable Space	1.8 TiB
Spare Drive Type	Dedicated Spare Drives. Drives designated as spares can only be used as spare drives.
Acceleration Mode	Independent: Caching can be enabled or disabled for each individual logical drive

Logical Drives

Logical Drive 1	1.82 TiB (2.00 TB)
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Physical Drives

2 TB SAS HDD at Port 11 : Box 1 : Bay 1

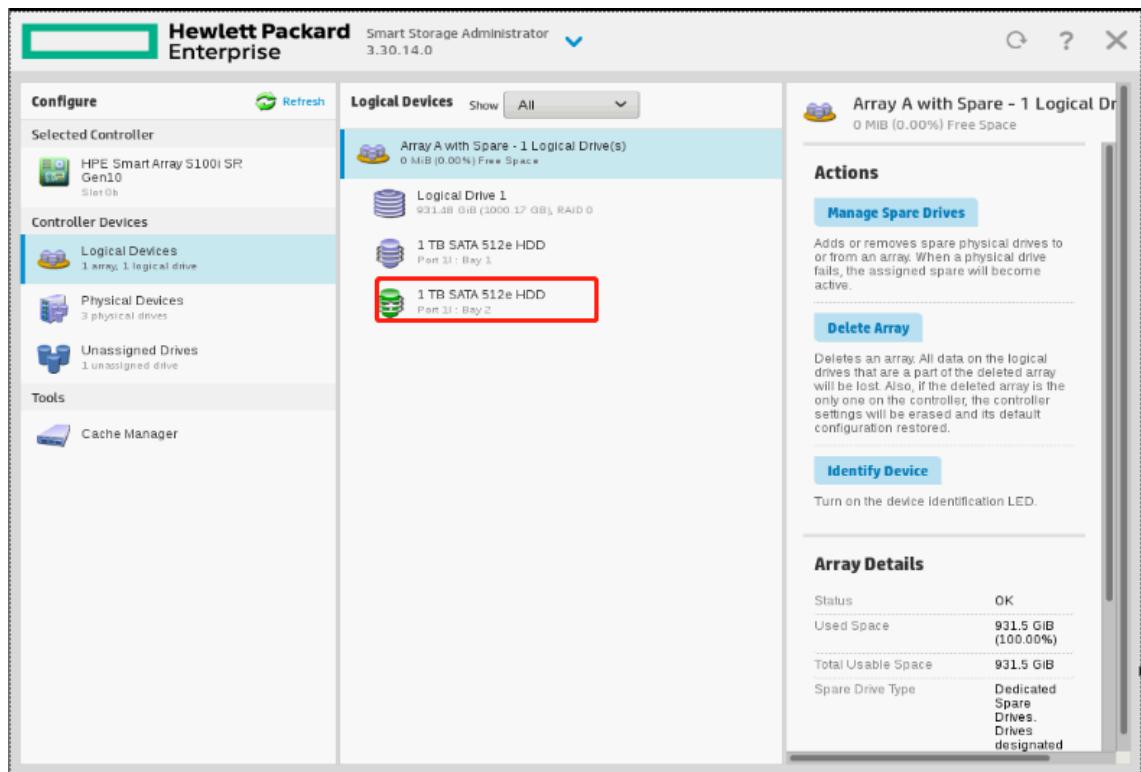
Spare Drives

2 TB SAS HDD at Port 11 : Box 1 : Bay 2

Device Path

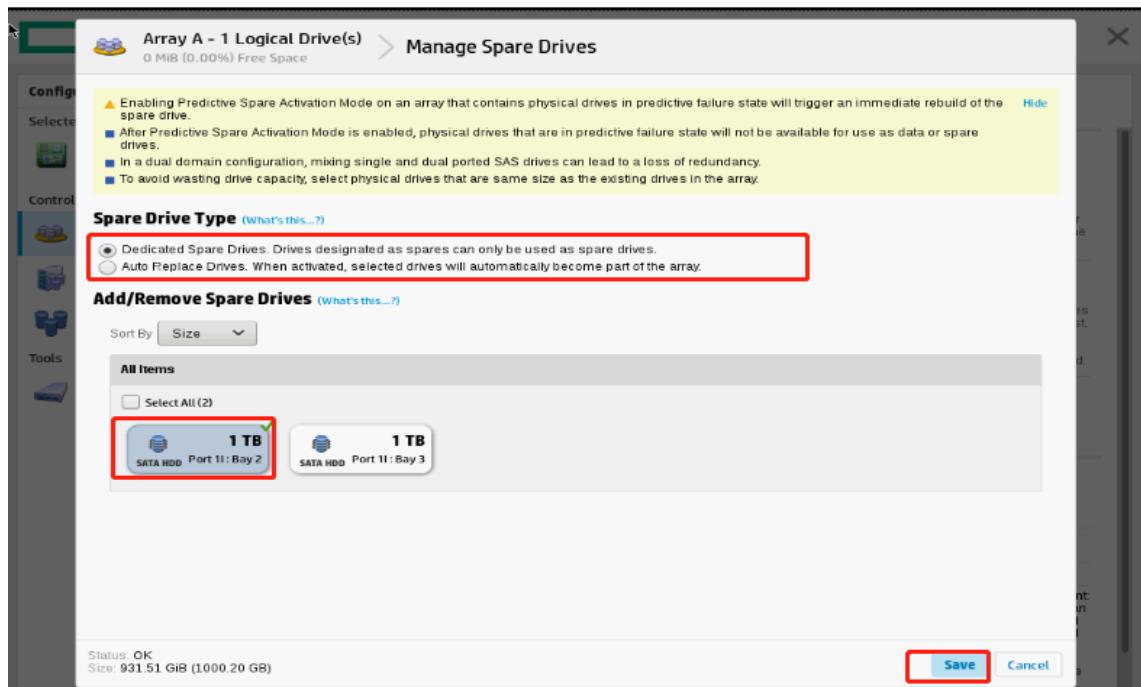
HPE Smart Array P408i-a SR Gen10 in Slot 12

Manage Spare Drives **Finish**



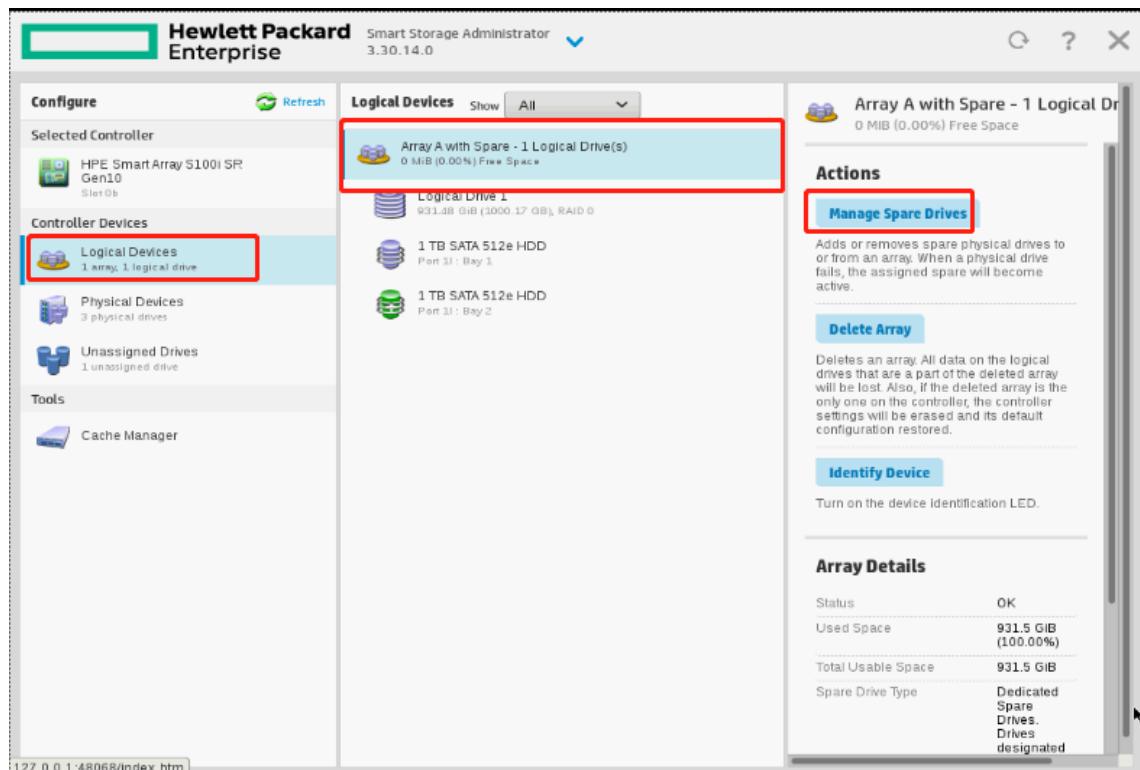
6.1.2 创建自动替换热备

勾选要配置成热备盘的磁盘，选择 Auto 热备模式。点击 Save 保存。

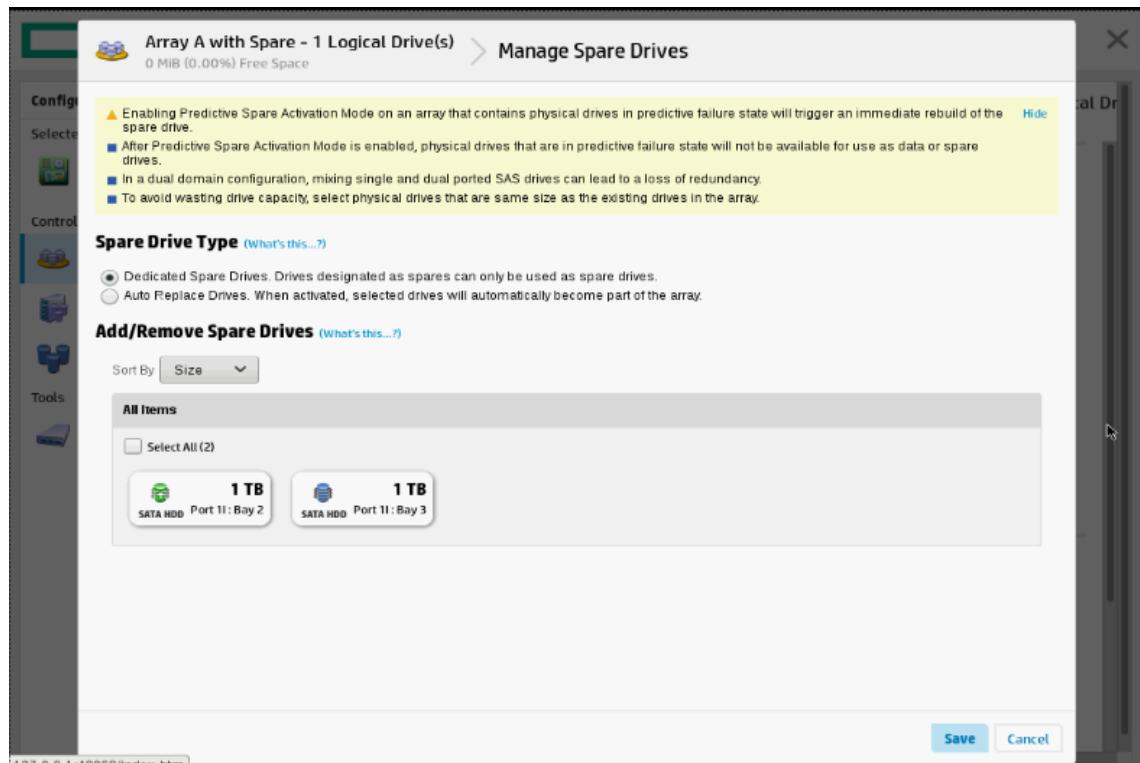


6.2 删热备

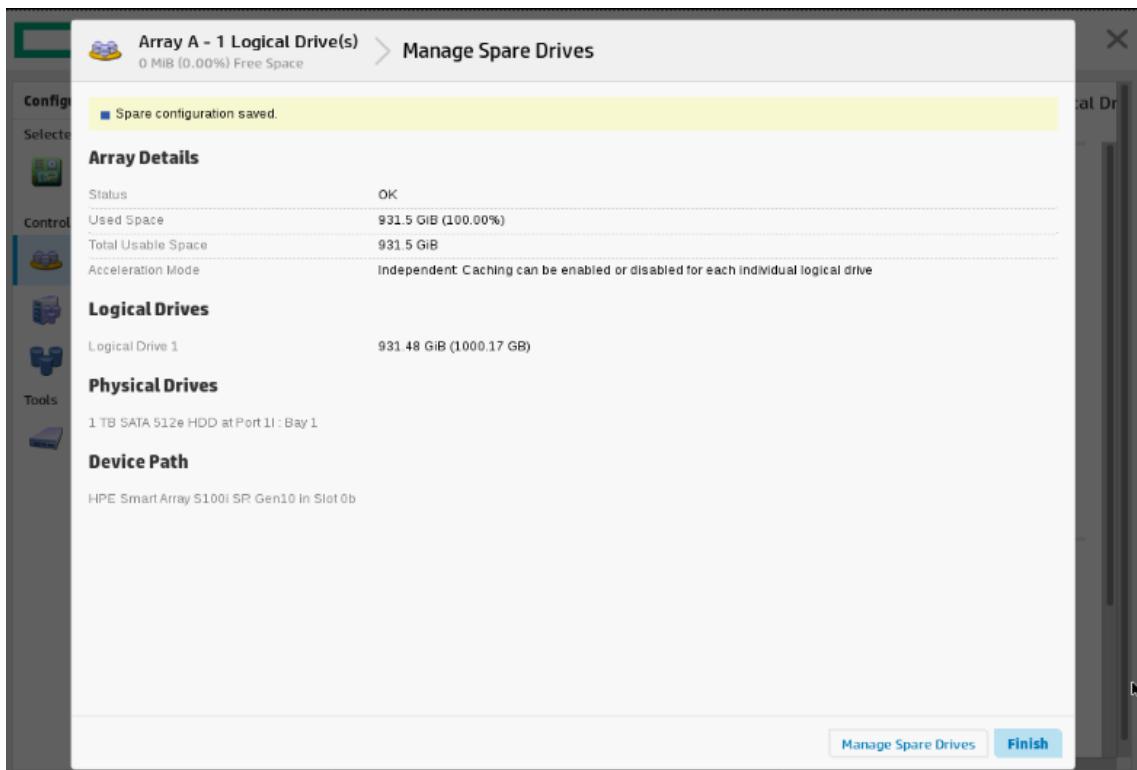
1) 选择需要删除热备盘的阵列，点击右侧的 **Manage Spare Drives** 选项。



2) 取消热备盘的勾选，点击 Save 保存。



3) 点击 Finish 完成删除。



4) 可看到已移除热备盘。

	Status	Used Space	Total Usable Space	Acceleration Mode
Array A - 1 Logical Drive(s)	OK	931.5 GiB (100.00%)	931.5 GiB	Independent Caching can be enabled or disabled for each individual logical drive