

HPE Gen10 服务器 S100i 阵列卡 Windows 系统下 SSACLI 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 Windows 系统下使用 Smart Storage Administrator (SSA) CLI 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 (SSA) CLI 工具

- Windows 下载链接：[Smart Storage Administrator \(SSA\) CLI for Windows 64-bit for Gen9/Gen10/Gen10 Plus Controllers | HPE Support](#)

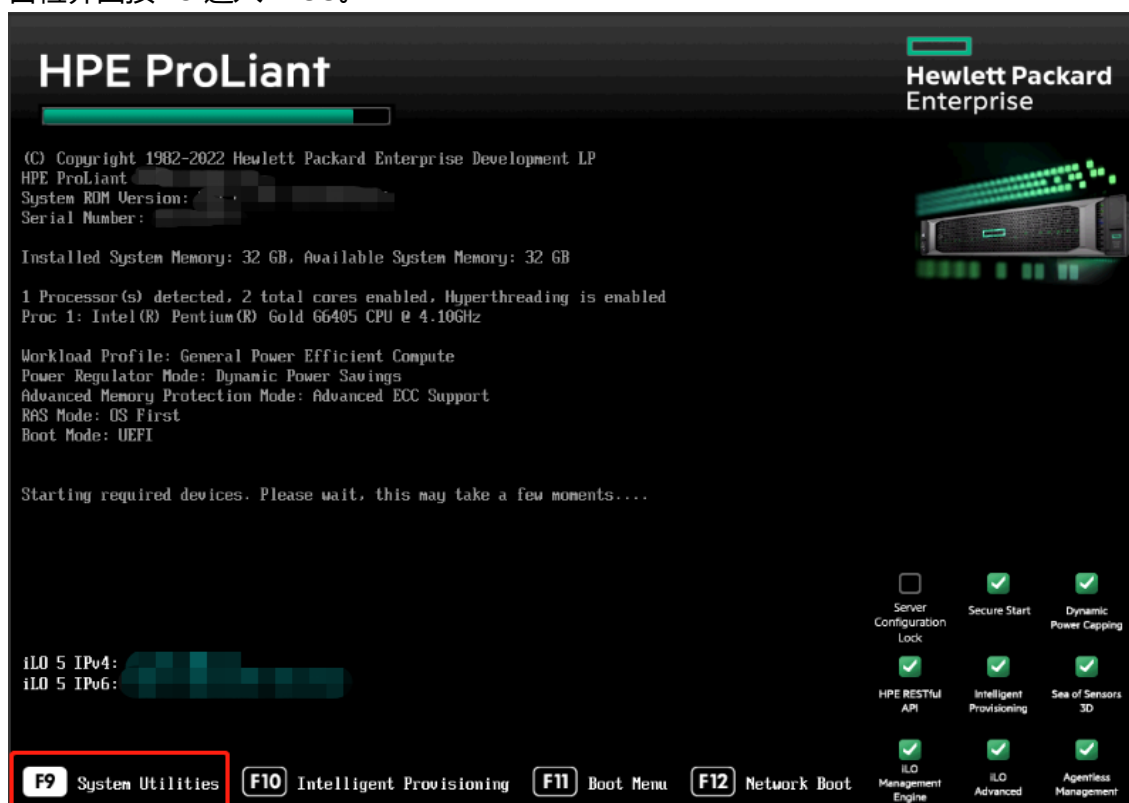
2. 连接 iLO 与启用远程控制台

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

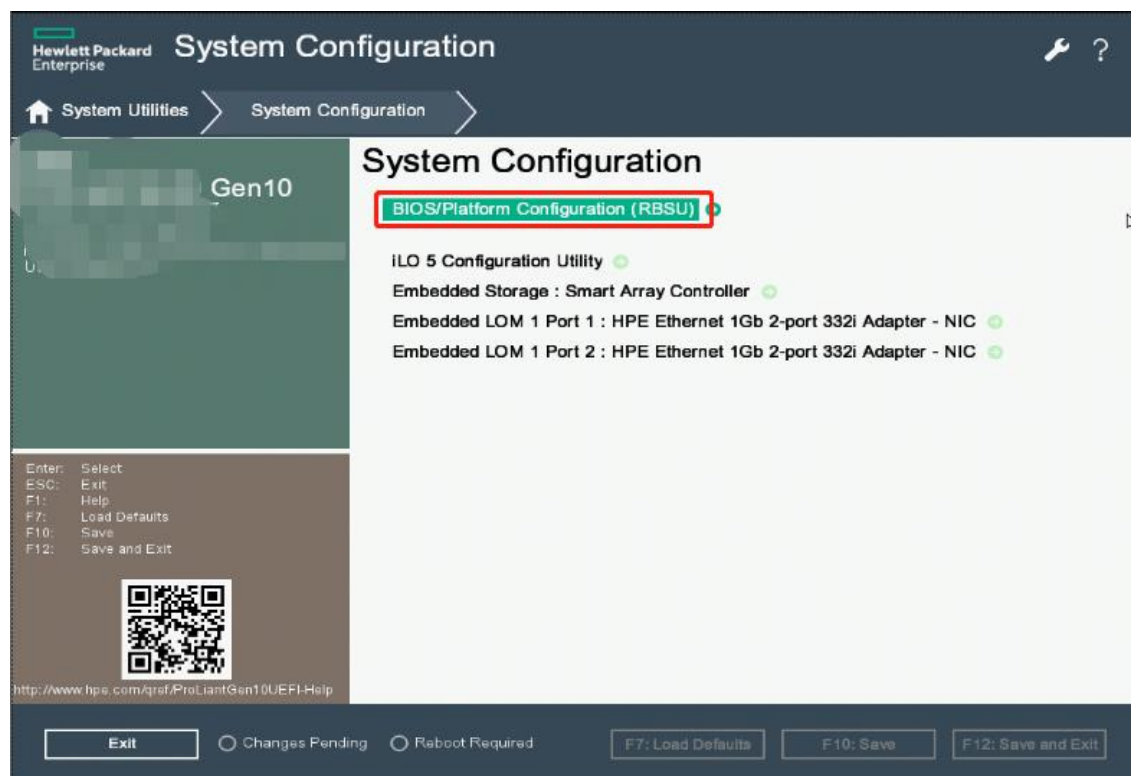
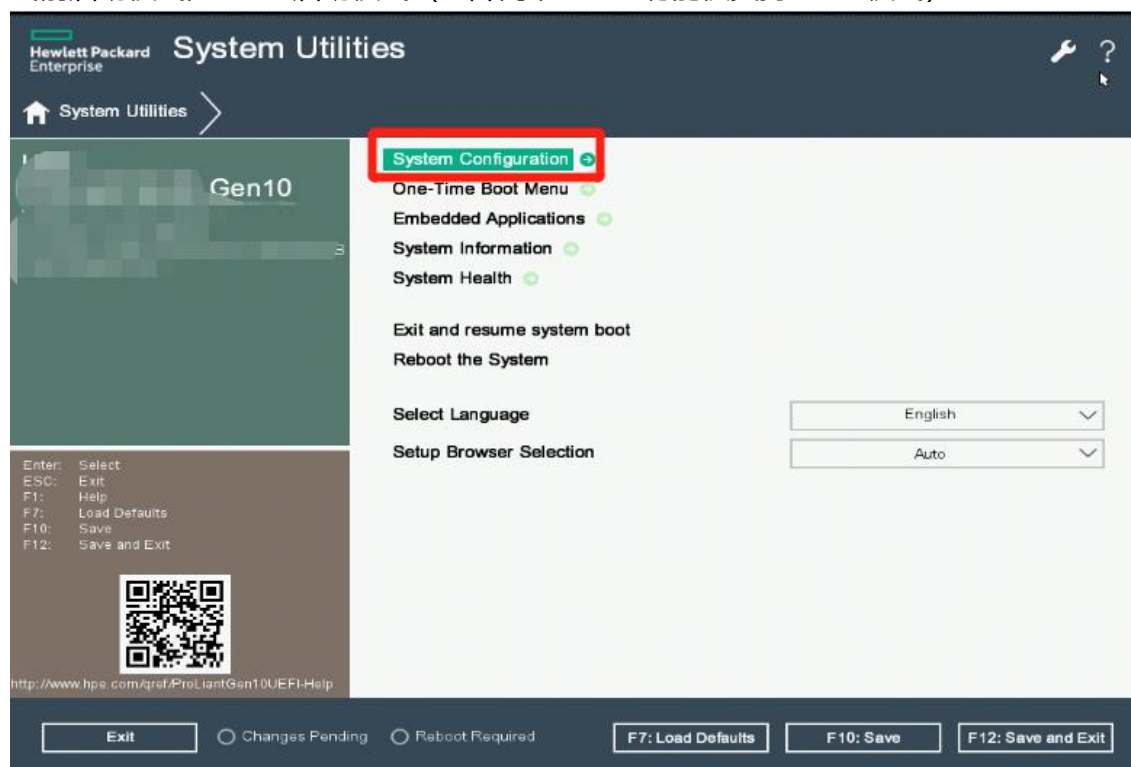
- 1) 自检界面按 **F9** 进入 BIOS。

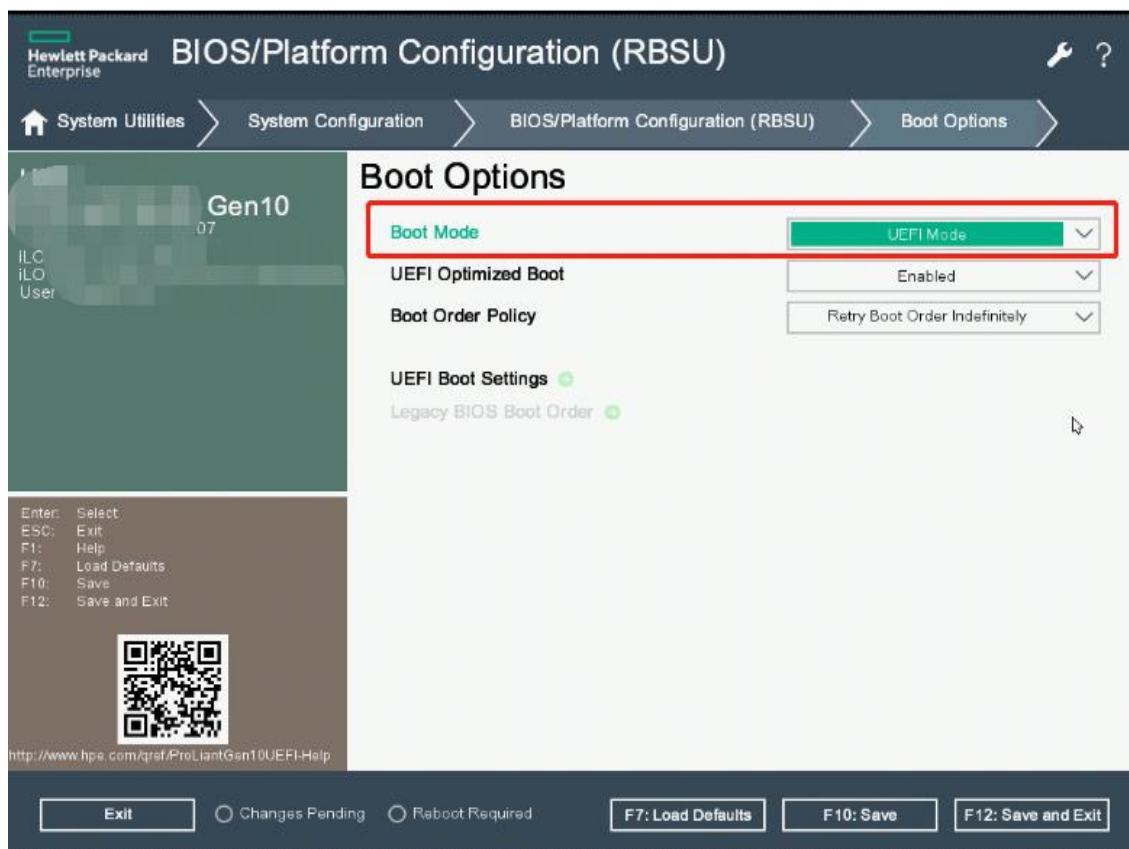
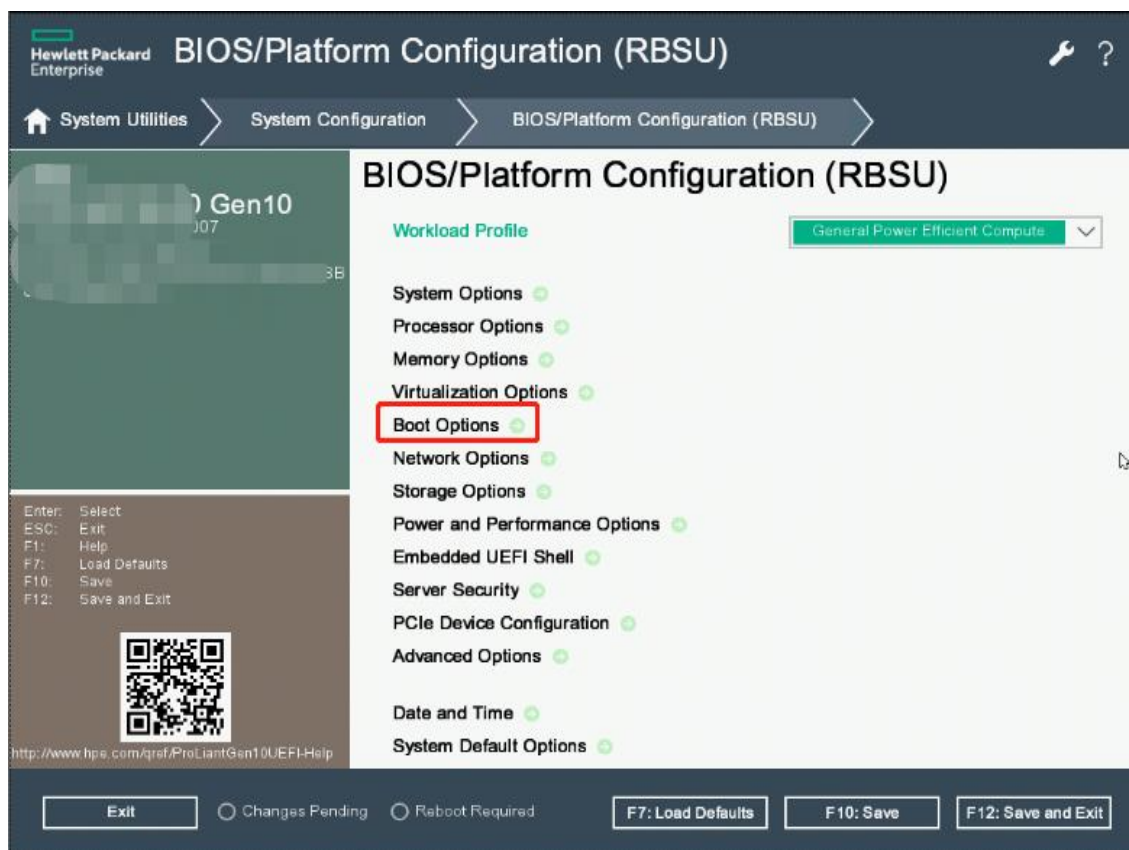


- 2) 确认当前引导模式。

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）。

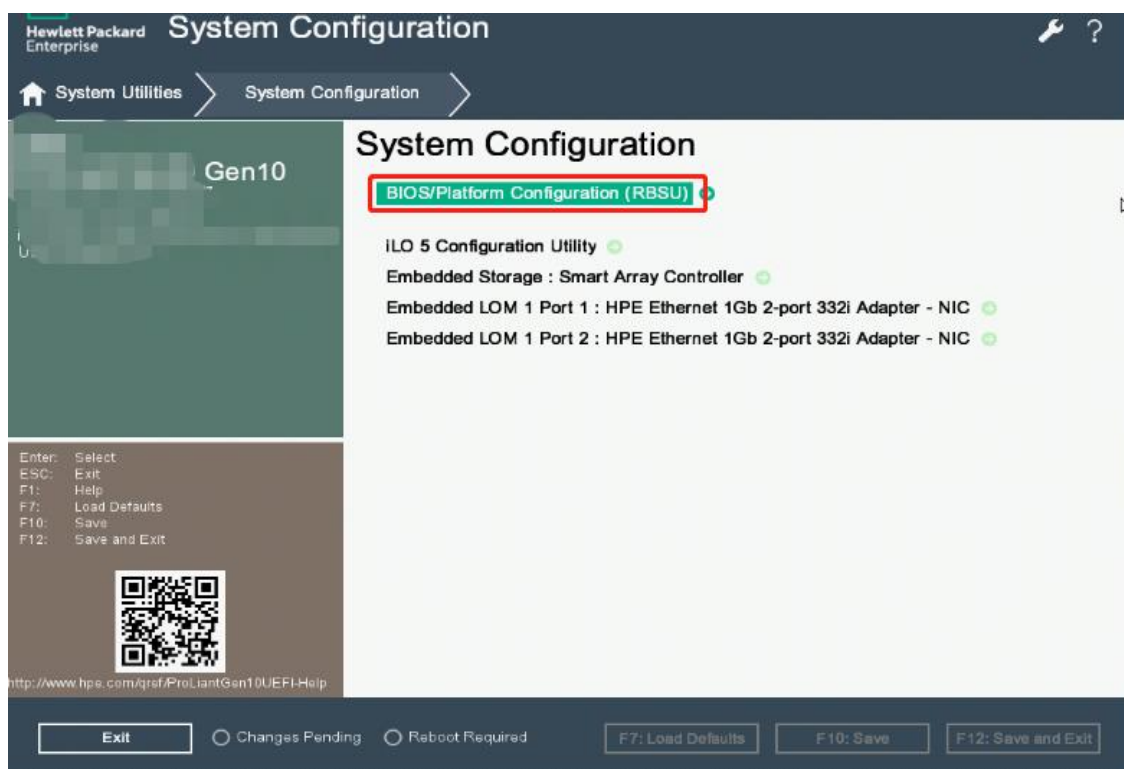
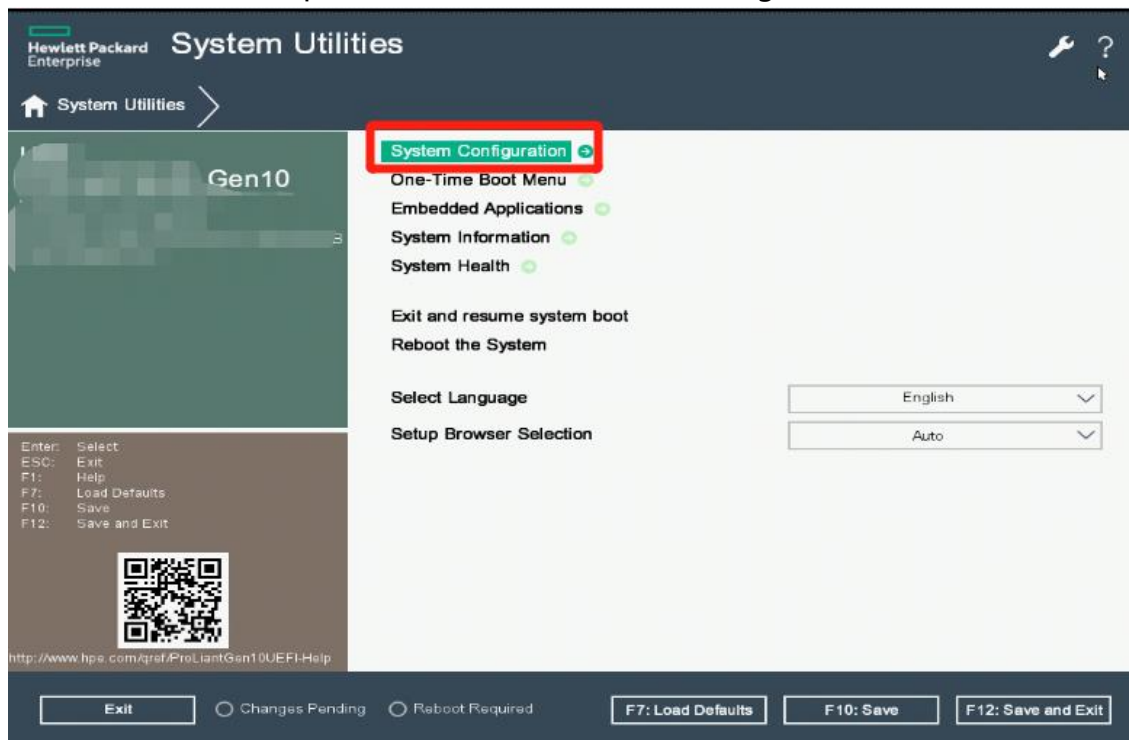


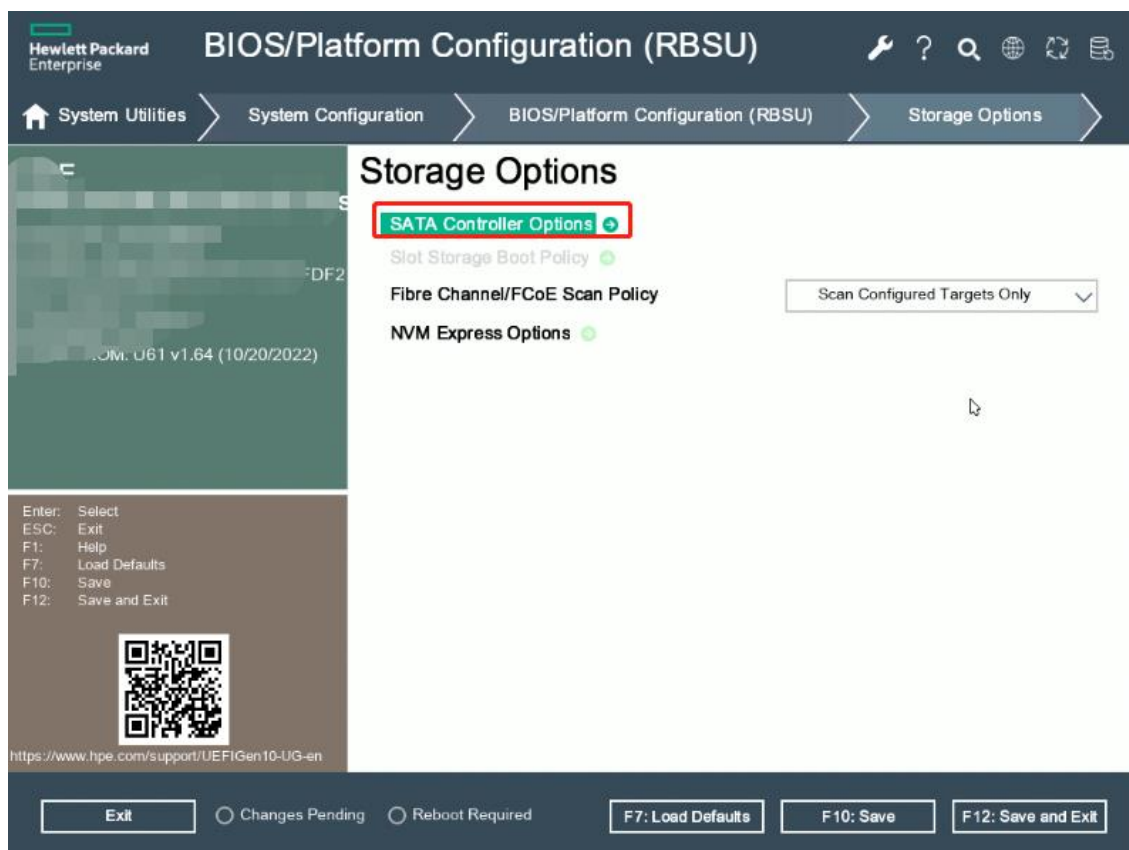
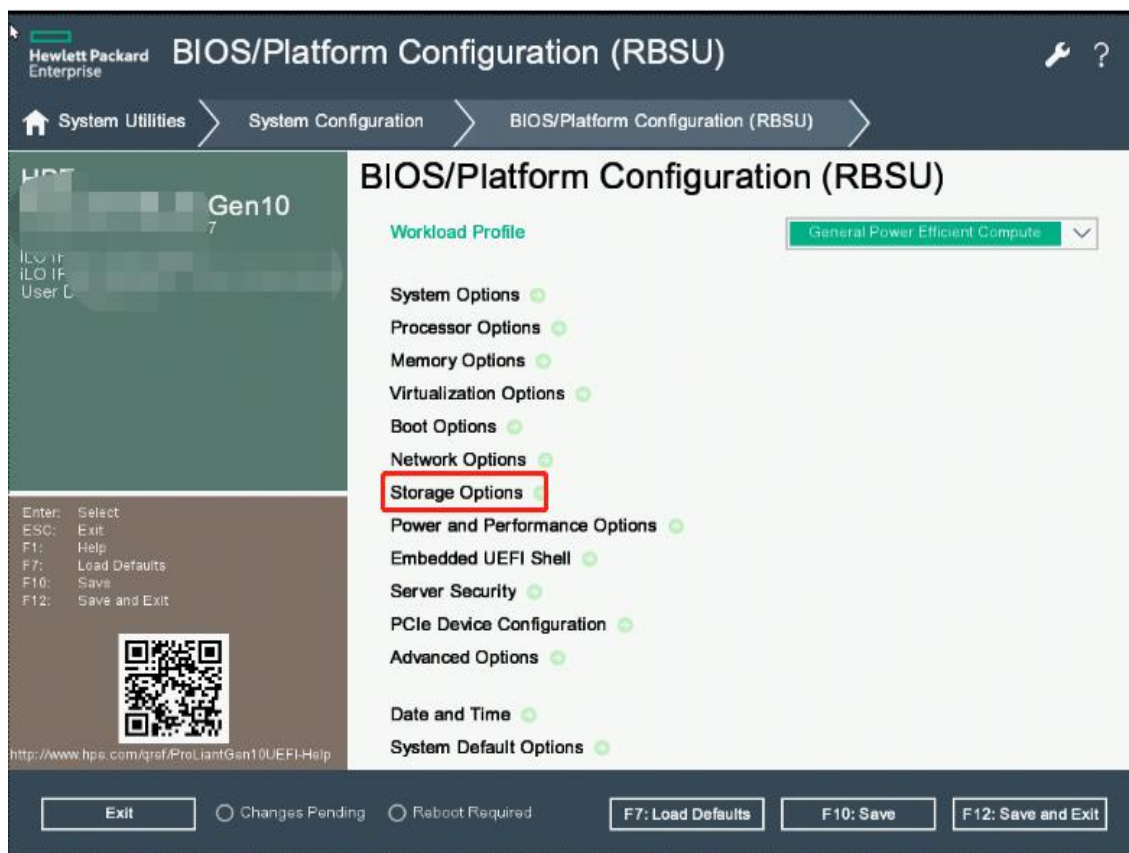


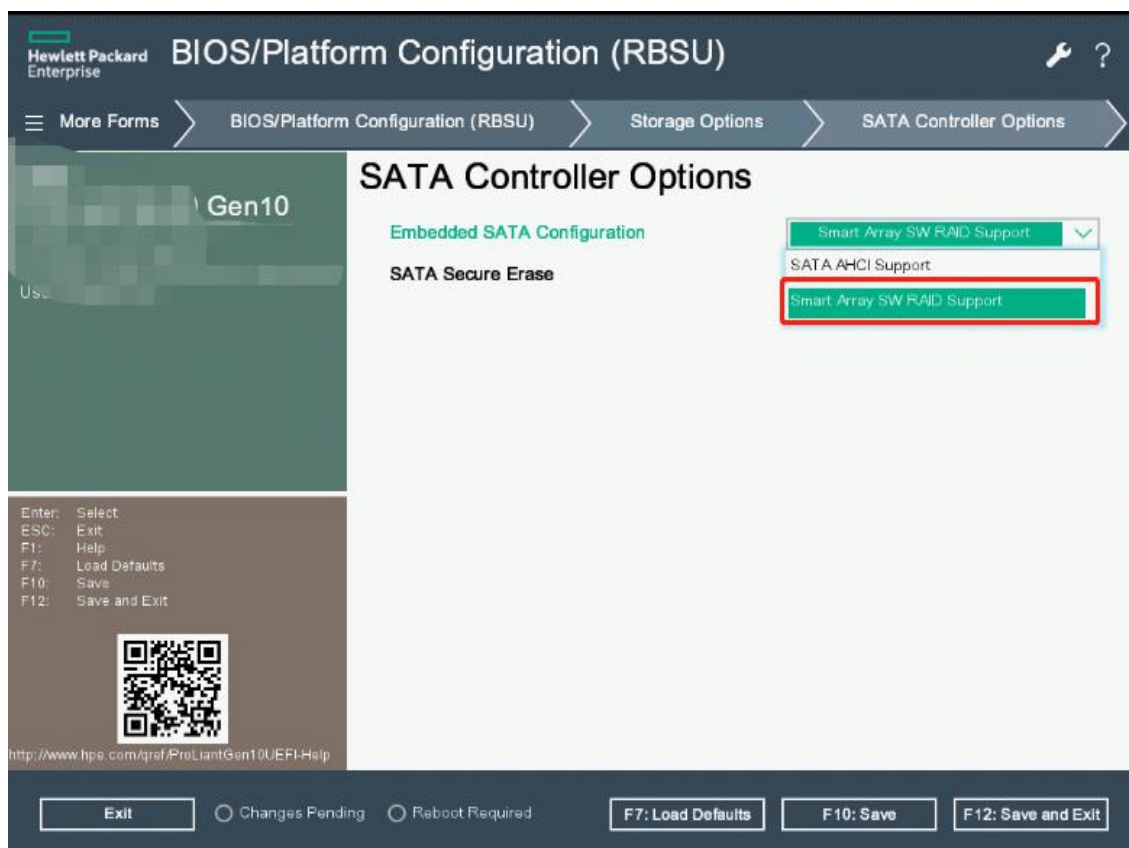
3) 开启 S100i 的阵列功能。

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。

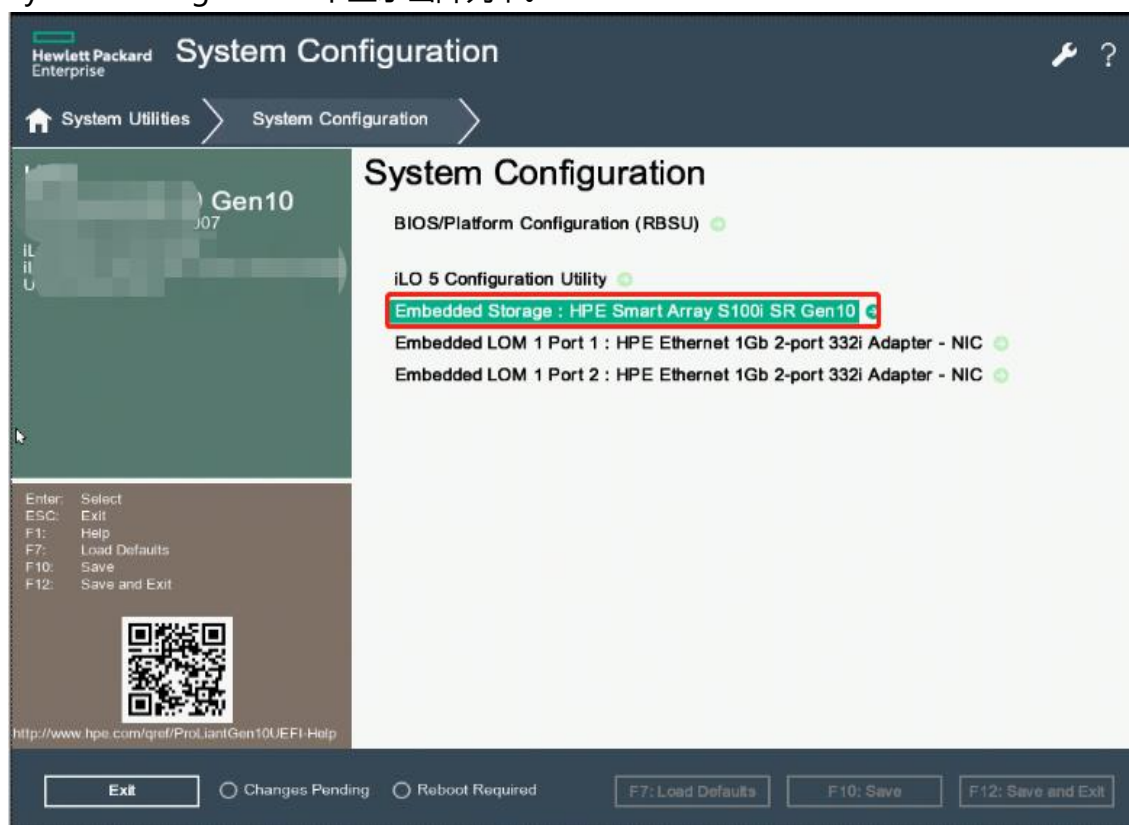
System Configuration -> BIOS/Platform Configuration(RBSU) -> Storage Option
-> SATA Controller Options -> Embedded SATA Configuration







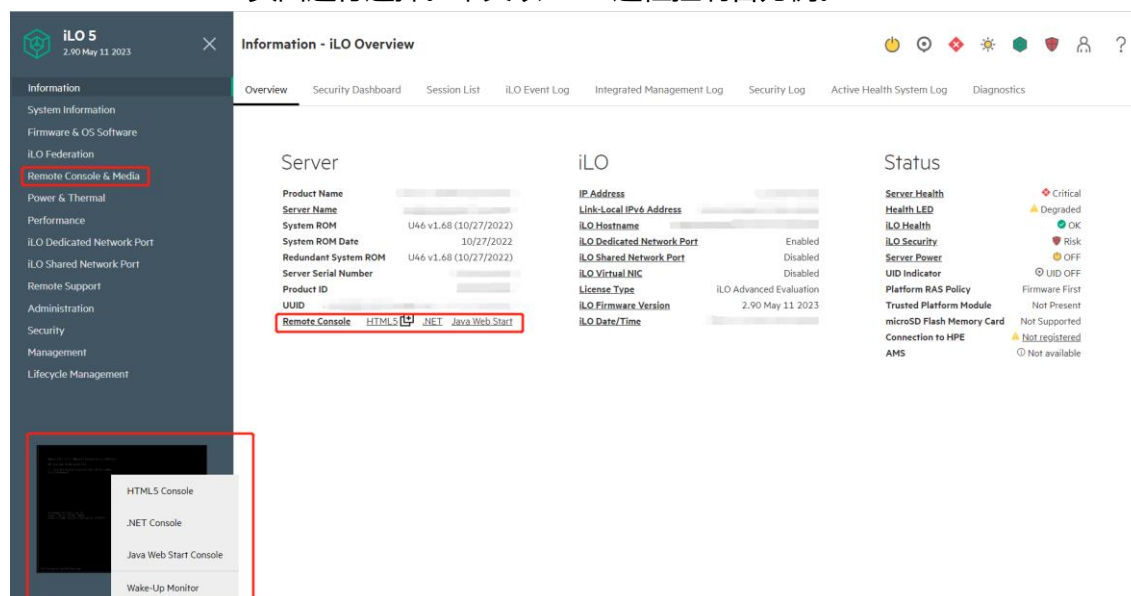
4) System Configuration 下显示出阵列卡。



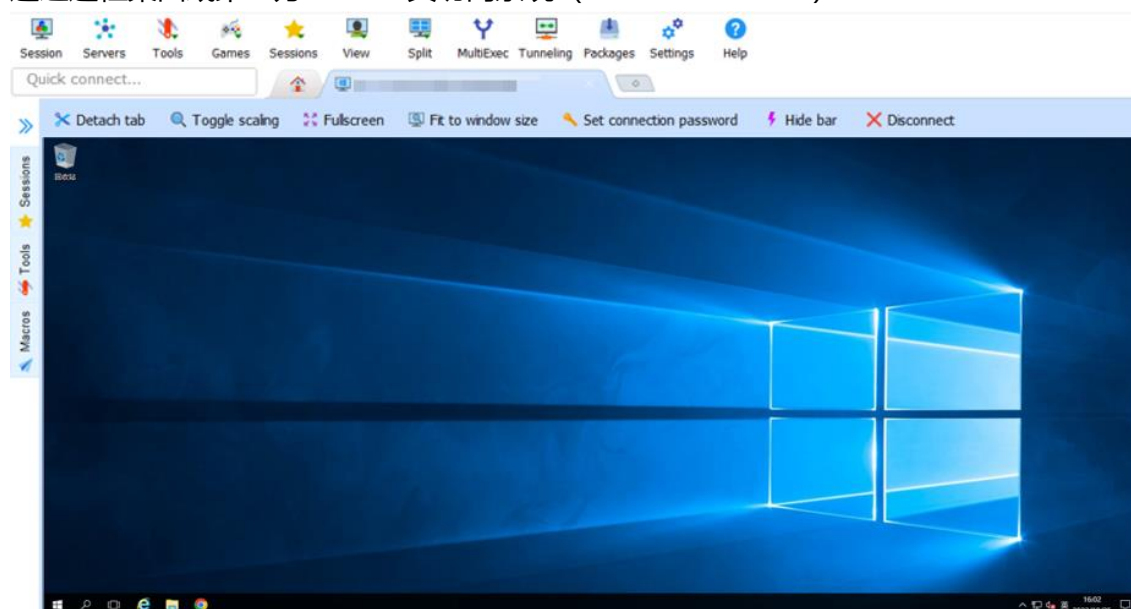
2. 访问系统

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。



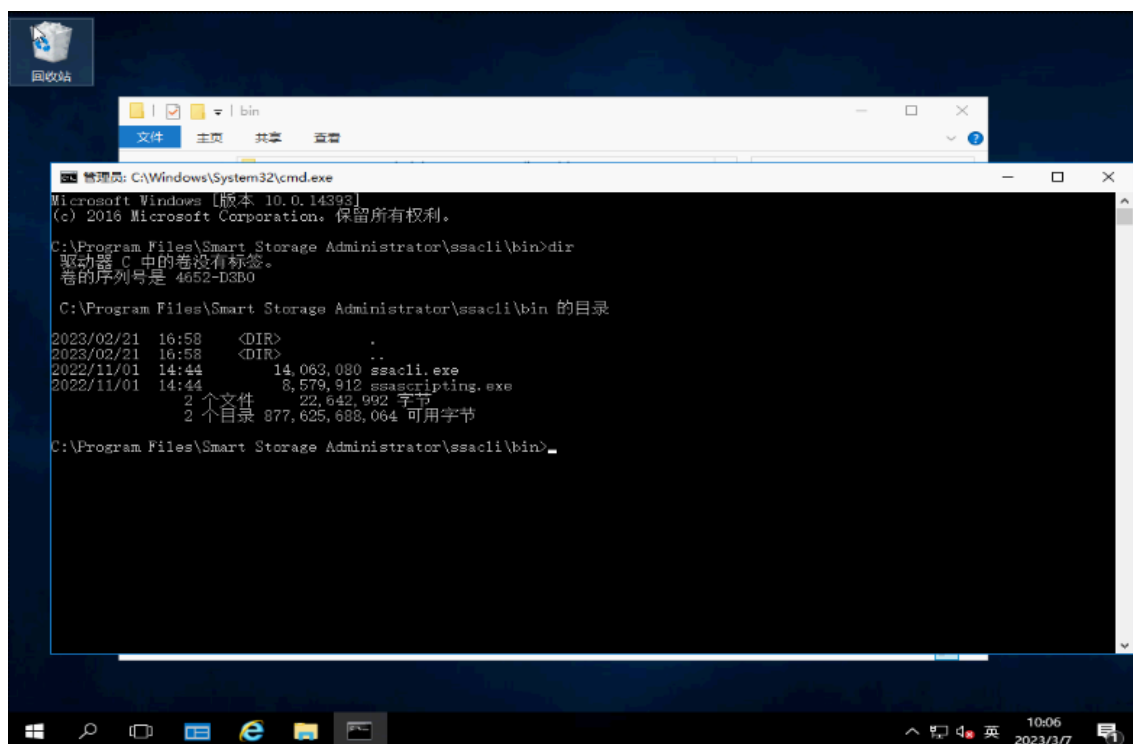
2.2 通过远程桌面或第三方 RDP 工具访问系统 (Windows Server)



3. 将 Smart Storage Administrator (SSA) CLI 工具保存到系统下

3.1 Windows Server

3.1.1 通过 iLO 启用远程控制台将工具挂载到系统下



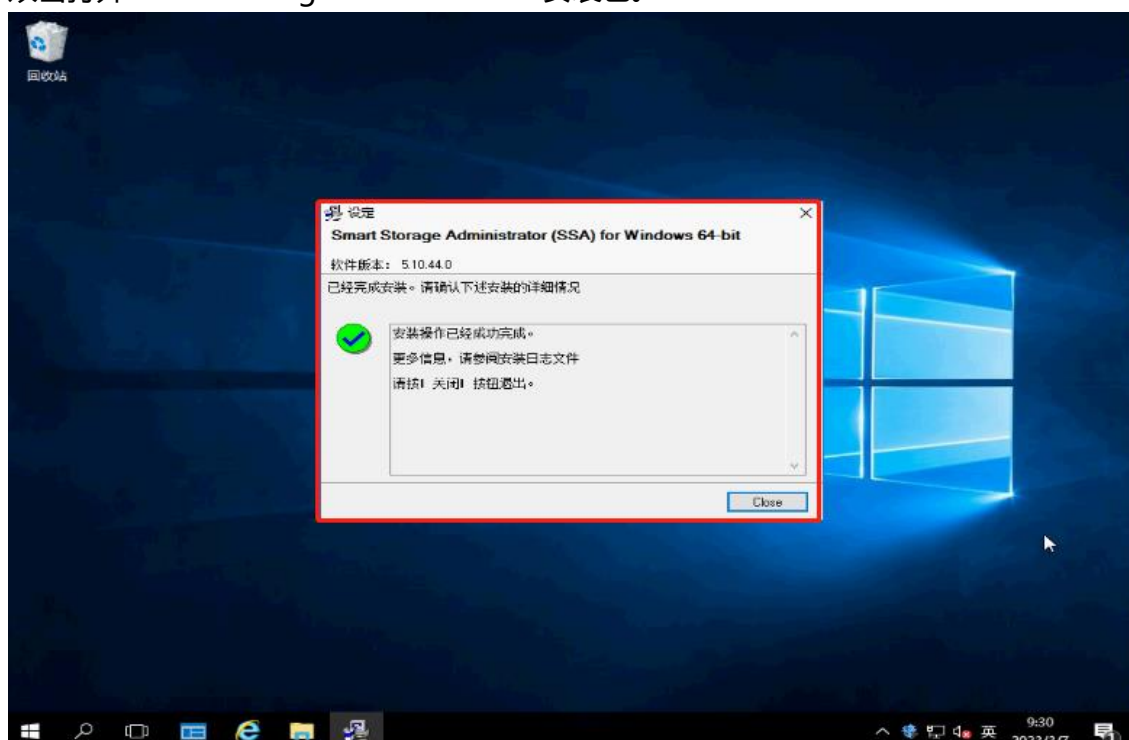
3.1.2 通过 U 盘将文件挂载到系统下

U 盘接入服务器后，在系统下直接访问挂载点。

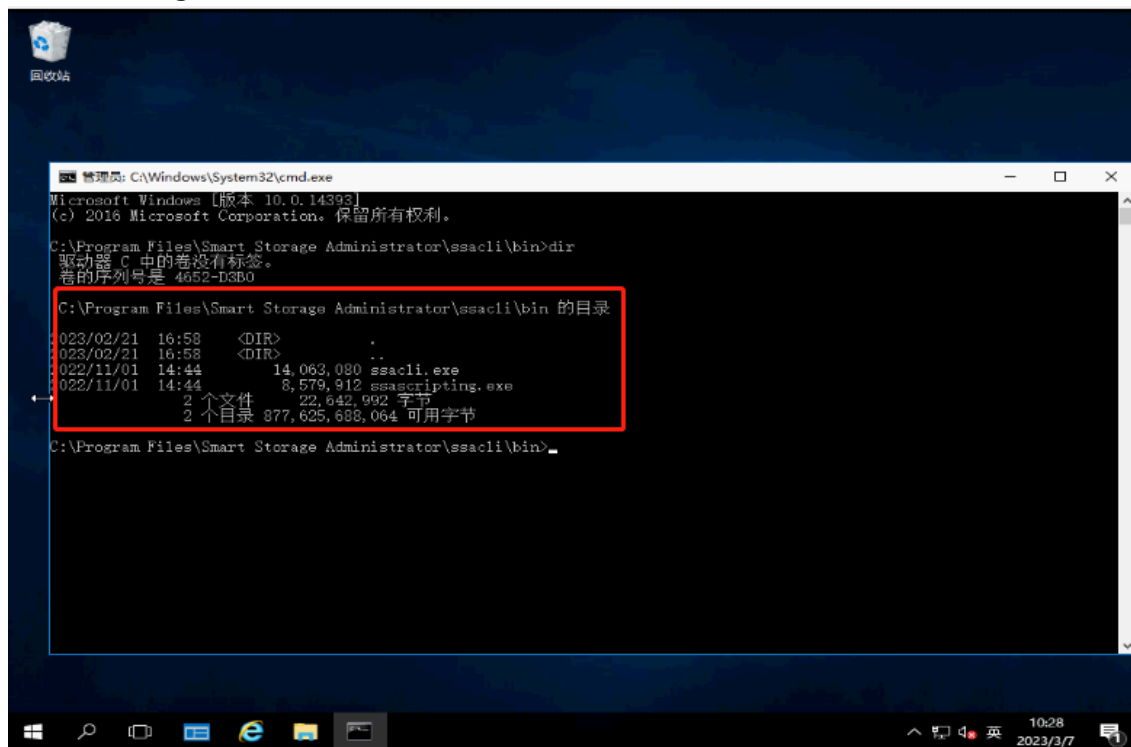
4. 安装 Smart Storage Administrator (SSA) CLI

4.1 Windows Server

1) 双击打开 Smart Storage Administrator 安装包。



- 2) 进入到默认安装路径：C:\Program Files\Smart Storage Administrator\ssaccli\bin，打开 Smart Storage Administrator CLI 工具。



5. 获取阵列卡编号、逻辑盘编号和物理盘编号（命令通用）
- ./ssaccli ctrl all show status 查看服务器阵列卡信息
 - ./ssaccli ctrl slot=0 ld all show 查看服务器逻辑盘信息
 - ./ssaccli ctrl slot=0 pd all show 查看服务器物理驱动器的信息

```

C:\Program Files\Smart Storage Administrator\ssaccli\bin>. \ssaccli.exe ctrl all show status
HPE Smart Array S100i SR Gen10 in Slot 0b
Controller Status: OK

C:\Program Files\Smart Storage Administrator\ssaccli\bin>. \ssaccli.exe ctrl slot=0b ld all show
HPE Smart Array S100i SR Gen10 in Slot 0b
Array A
logicaldrive 1 (931.48 GB, RAID 0, OK)

C:\Program Files\Smart Storage Administrator\ssaccli\bin>. \ssaccli.exe ctrl slot=0b pd all show
HPE Smart Array S100i SR Gen10 in Slot 0b
Array A
physicaldrive 11:0:1 (port 11:box 0:bay 1, SATA HDD, 1 TB, OK)
Unassigned
physicaldrive 11:0:2 (port 11:box 0:bay 2, SATA HDD, 1 TB, OK)
physicaldrive 11:0:3 (port 11:box 0:bay 3, SATA HDD, 1 TB, OK)

C:\Program Files\Smart Storage Administrator\ssaccli\bin>
  
```

6. 创建与删除阵列

6.1 创建阵列

1) 例如用 11:0:2 硬盘创建 raid0。

`./ssaccli ctrl slot=0 create type=ld drives=11:0:2 raid=0`

```

C:\Program Files\Smart Storage Administrator\ssaccli\bin>. \ssaccli.exe ctrl slot=0b create type=ld drives=11:0:2 raid=0
C:\Program Files\Smart Storage Administrator\ssaccli\bin>. \ssaccli.exe ctrl slot=0b pd all show
HPE Smart Array S100i SR Gen10 in Slot 0b
Array A
physicaldrive 11:0:1 (port 11:box 0:bay 1, SATA HDD, 1 TB, OK)
Array B
physicaldrive 11:0:2 (port 11:box 0:bay 2, SATA HDD, 1 TB, OK)
Unassigned
physicaldrive 11:0:3 (port 11:box 0:bay 3, SATA HDD, 1 TB, OK)
  
```

2) 创建 raid1 阵列。

`./ssaccli ctrl slot=0 create type=ld drives=11:0:2,11:0:3 raid=1`

```

C:\Program Files\Smart Storage Administrator\ssaccli\bin>. \ssaccli.exe ctrl slot=0b create type=ld drives=11:0:2,11:0:3 raid=1
C:\Program Files\Smart Storage Administrator\ssaccli\bin>. \ssaccli.exe ctrl slot=0b pd all show
HPE Smart Array S100i SR Gen10 in Slot 0b
Array A
physicaldrive 11:0:1 (port 11:box 0:bay 1, SATA HDD, 1 TB, OK)
Array B
physicaldrive 11:0:2 (port 11:box 0:bay 2, SATA HDD, 1 TB, OK)
physicaldrive 11:0:3 (port 11:box 0:bay 3, SATA HDD, 1 TB, OK)

C:\Program Files\Smart Storage Administrator\ssaccli\bin>
  
```

6.2 删除阵列

./ssacli ctrl slot=0 array B delete forced 命令删除阵列 B。

```
C:\Program Files\Smart Storage Administrator\ssacli\bin>.\ssacli.exe ctrl slot=0b array B delete forced
Warning: Deleting an array can cause other array letters to become renamed.
E.g. Deleting array A from arrays A,B,C will result in two remaining
arrays A,B ... not B,C

C:\Program Files\Smart Storage Administrator\ssacli\bin>.\ssacli.exe ctrl slot=0b pd all show
HPE Smart Array S100i SR Gen10 in Slot 0b

Array A
    physicaldrive 11:0:1 (port 11:box 0:bay 1, SATA HDD, 1 TB, OK)
Unassigned
    physicaldrive 11:0:2 (port 11:box 0:bay 2, SATA HDD, 1 TB, OK)
    physicaldrive 11:0:3 (port 11:box 0:bay 3, SATA HDD, 1 TB, OK)

C:\Program Files\Smart Storage Administrator\ssacli\bin>
```

7. 创建与删除热备

- ✚ **Dedicated(专用)**: 当硬盘损坏时, 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。
- ✚ **注意**: 给 RAID0 逻辑卷创建热备盘时, 需要使用./ssacli ctrl slot=0 modify spareactivationmode=predictive 命令调整热备盘替换的模式为“硬盘预损坏即替换”。

7.1 创建热备

7.1.1 创建专属热备

./ssacli ctrl slot=0 Array A add spares=11:0:2 sparetype= dedicated

```
C:\Program Files\Smart Storage Administrator\ssacli\bin>.\ssacli.exe ctrl slot=0b array A add spares=11:0:2 sparetype=dedicated
C:\Program Files\Smart Storage Administrator\ssacli\bin>.\ssacli.exe ctrl slot=0b pd all show
HPE Smart Array S100i SR Gen10 in Slot 0b

Array A
    physicaldrive 11:0:1 (port 11:box 0:bay 1, SATA HDD, 1 TB, OK)
    physicaldrive 11:0:2 (port 11:box 0:bay 2, SATA HDD, 1 TB, OK, spare)
Unassigned
    physicaldrive 11:0:3 (port 11:box 0:bay 3, SATA HDD, 1 TB, OK)

C:\Program Files\Smart Storage Administrator\ssacli\bin>
```

7.1.2 创建自动替换热备

./ssacli ctrl slot=0 Array A add spares=11:0:2 sparetype= autoreplace

```
C:\Program Files\Smart Storage Administrator\ssacli\bin>.\ssacli.exe ctrl slot=0b array A add spares=1I:0:2 sparetype=auto replace
Warning: Any existing spare drives of a different spare type will be removed.
Continue? (y/n)y

C:\Program Files\Smart Storage Administrator\ssacli\bin>.\ssacli.exe ctrl slot=0b pd all show
HPE Smart Array S100i SR Gen10 in Slot 0b

Array A
    physicaldrive 1I:0:1 (port 1I:box 0:bay 1, SATA HDD, 1 TB, OK)
    physicaldrive 1I:0:2 (port 1I:box 0:bay 2, SATA HDD, 1 TB, OK, auto replace spare)
    Unassigned
    physicaldrive 1I:0:3 (port 1I:box 0:bay 3, SATA HDD, 1 TB, OK)

C:\Program Files\Smart Storage Administrator\ssacli\bin>
```

7.2 删除热备

./ssacli ctrl slot=0 Array A remove spares=1I:0:2 命令删除热备。

```
C:\Program Files\Smart Storage Administrator\ssacli\bin>.\ssacli.exe ctrl slot=0b array A remove spares=1I:0:2
C:\Program Files\Smart Storage Administrator\ssacli\bin>.\ssacli.exe ctrl slot=0b pd all show
HPE Smart Array S100i SR Gen10 in Slot 0b

Array A
    physicaldrive 1I:0:1 (port 1I:box 0:bay 1, SATA HDD, 1 TB, OK)
    Unassigned
    physicaldrive 1I:0:2 (port 1I:box 0:bay 2, SATA HDD, 1 TB, OK)
    physicaldrive 1I:0:3 (port 1I:box 0:bay 3, SATA HDD, 1 TB, OK)

C:\Program Files\Smart Storage Administrator\ssacli\bin>
```