

HPE Gen9 服务器 B140i 系列阵列卡 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 Gen9 系列服务器 B140i 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 Gen9 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](#)

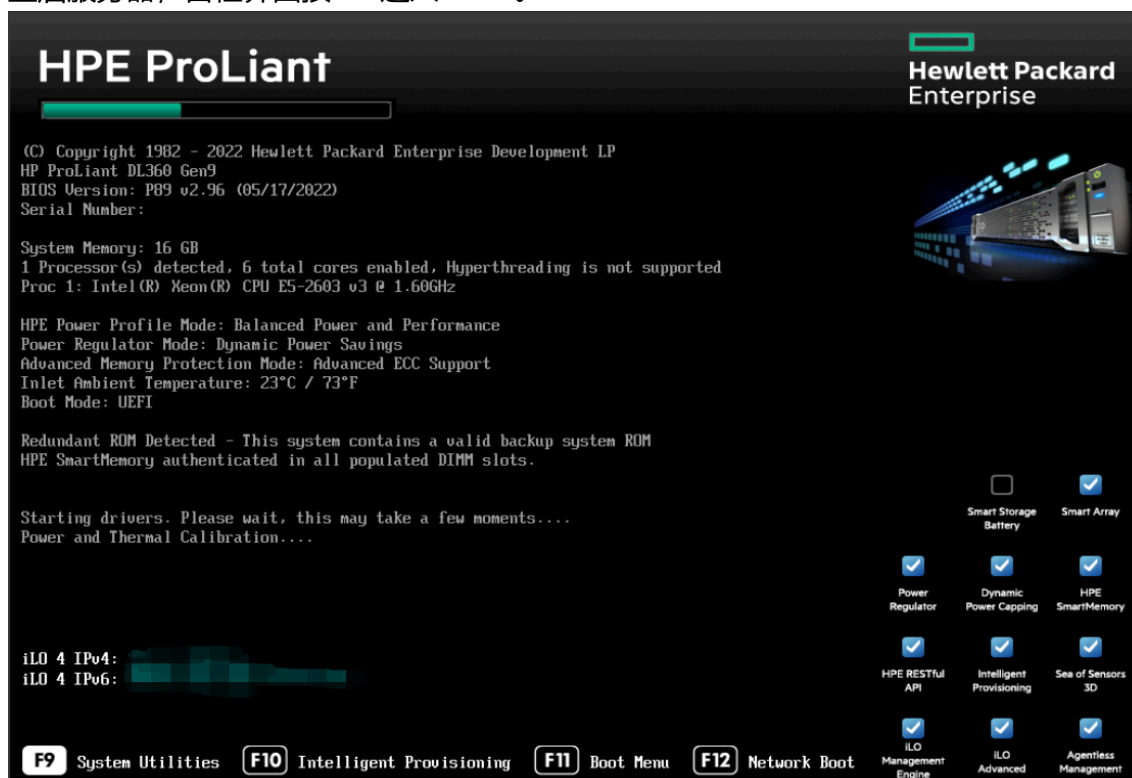
2. 连接 iLO 与启用远程控制台

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

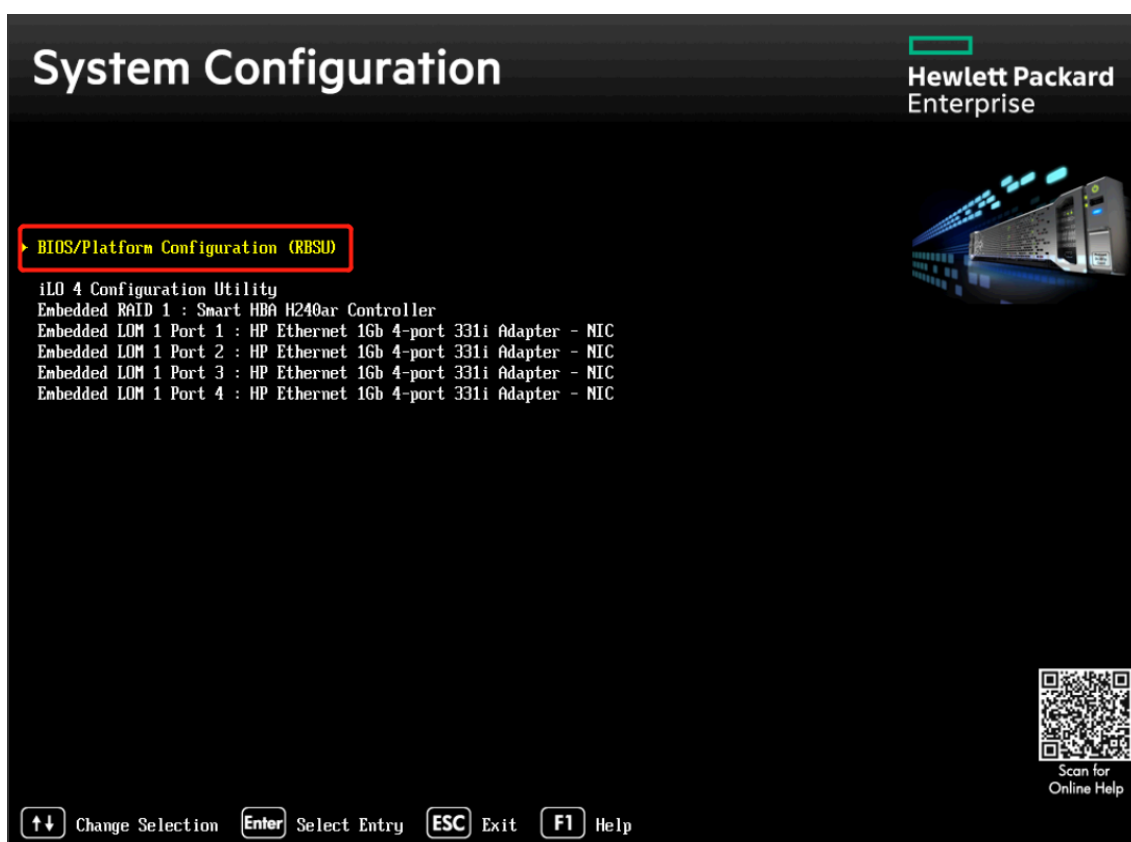
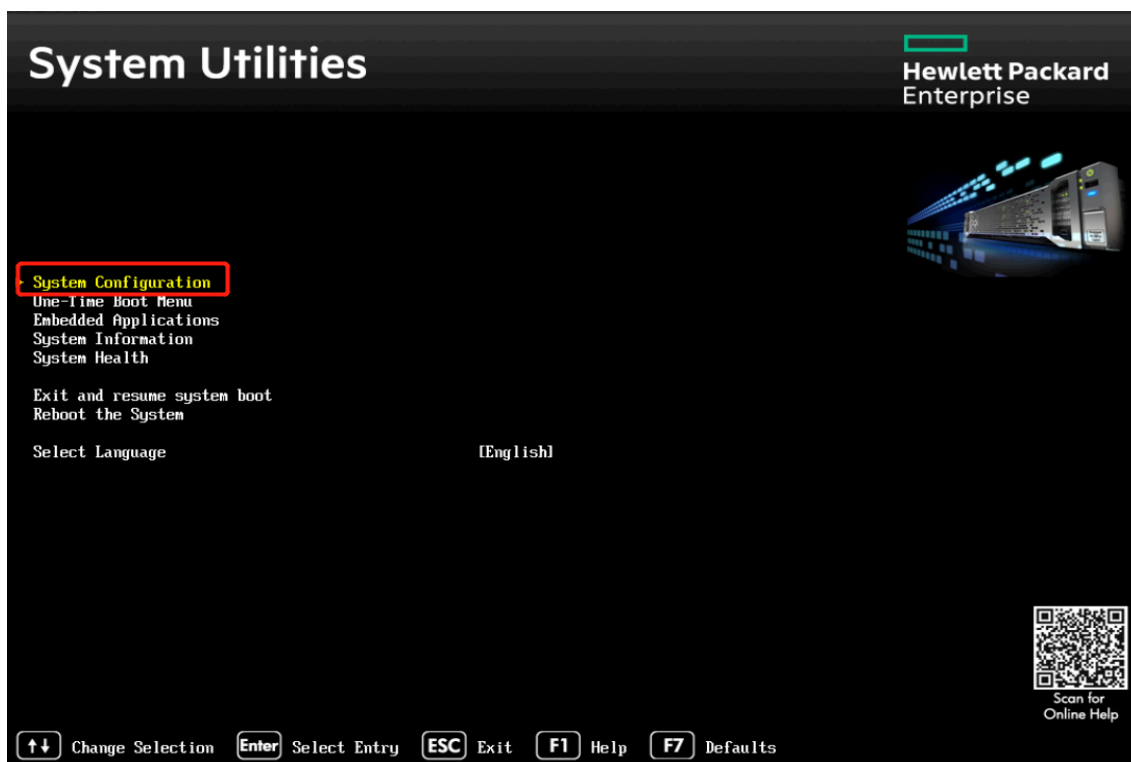
- 1) 重启服务器，自检界面按 **F9** 进入 BIOS。

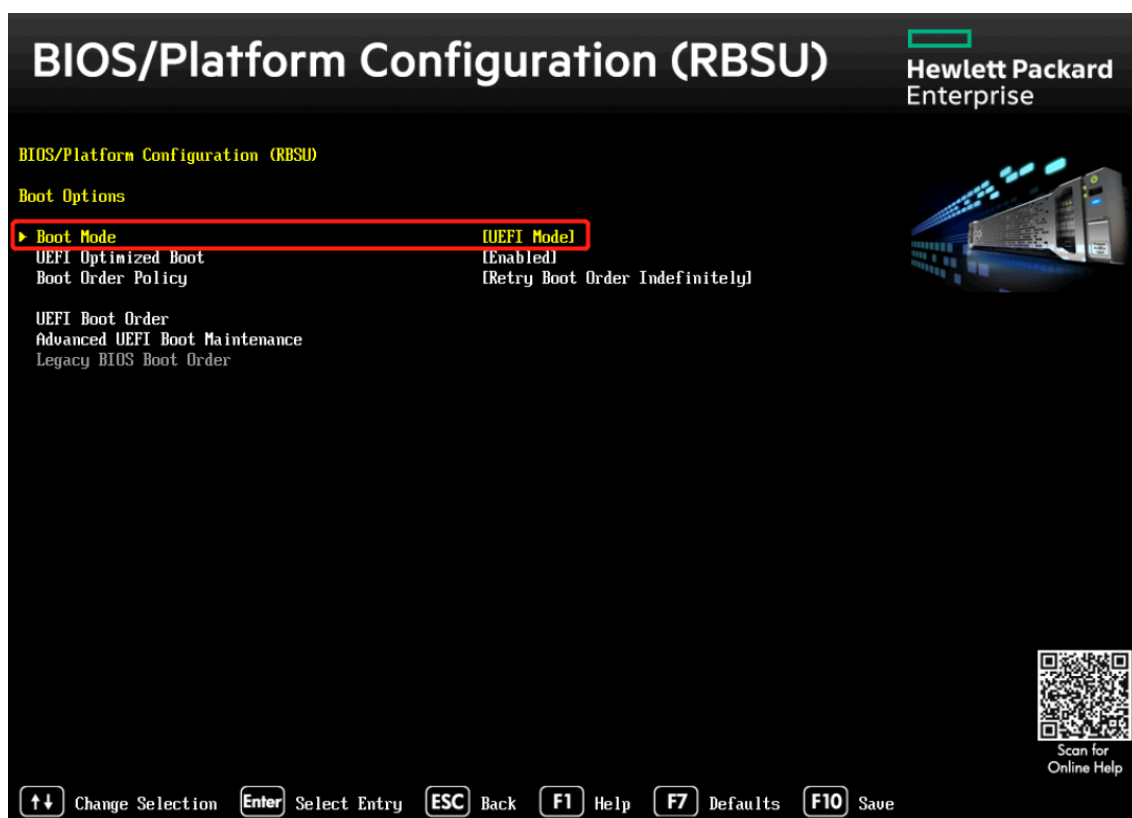
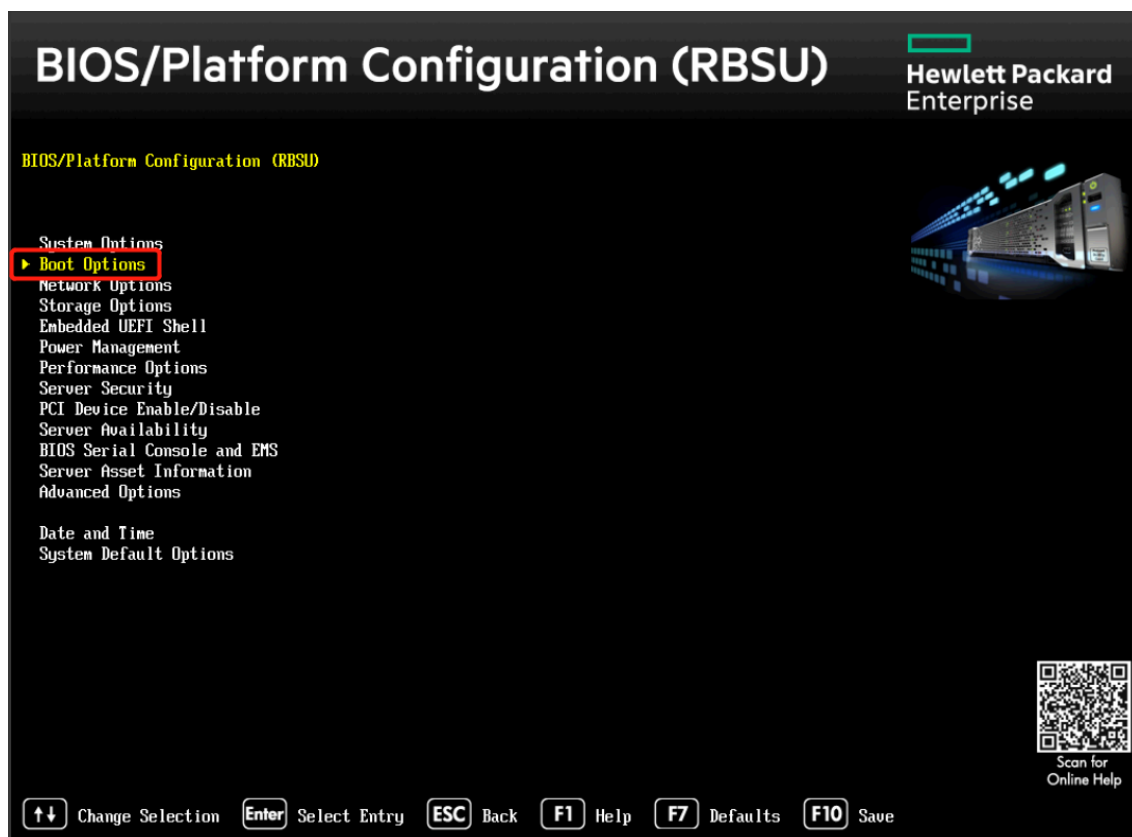


- 2) 确认当前引导模式。

选择 System Configuration -> BIOS/Platform Configuration(RBSU) -> Boot Options, 确认当前启动模式为 UEFI, 若不是请修改成 UEFI 模式。

注: 此阵列卡 RAID 功能仅支持 UEFI 模式。

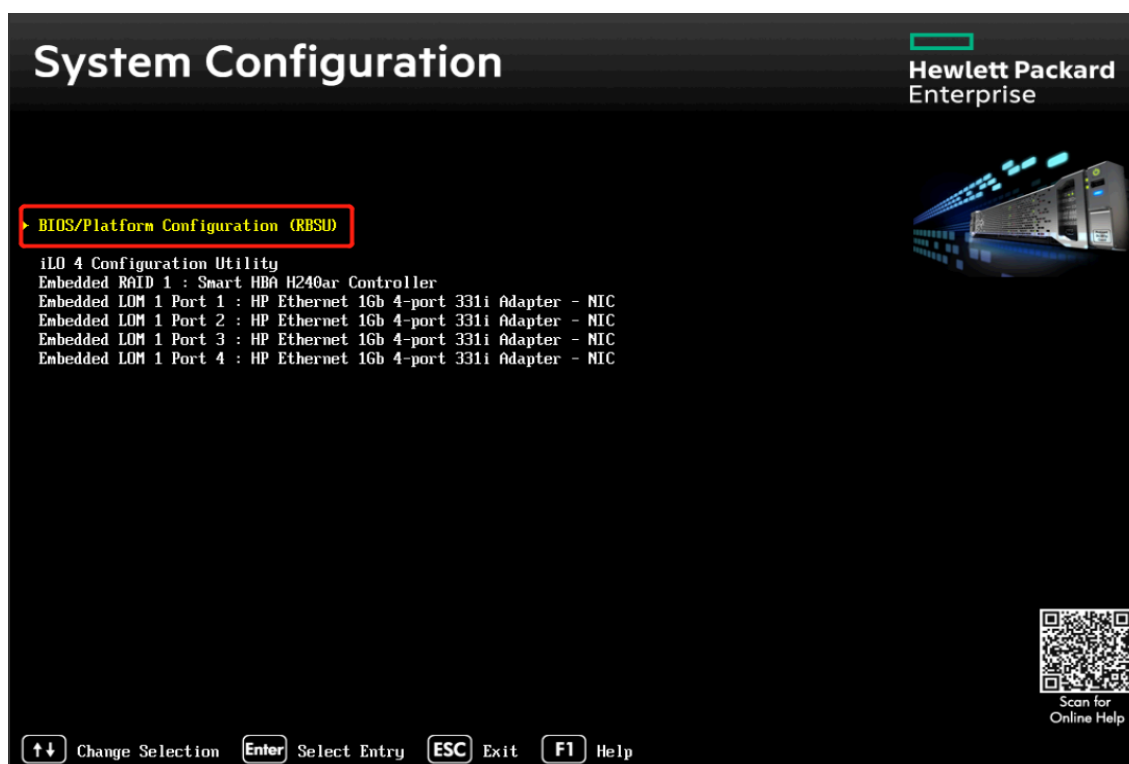
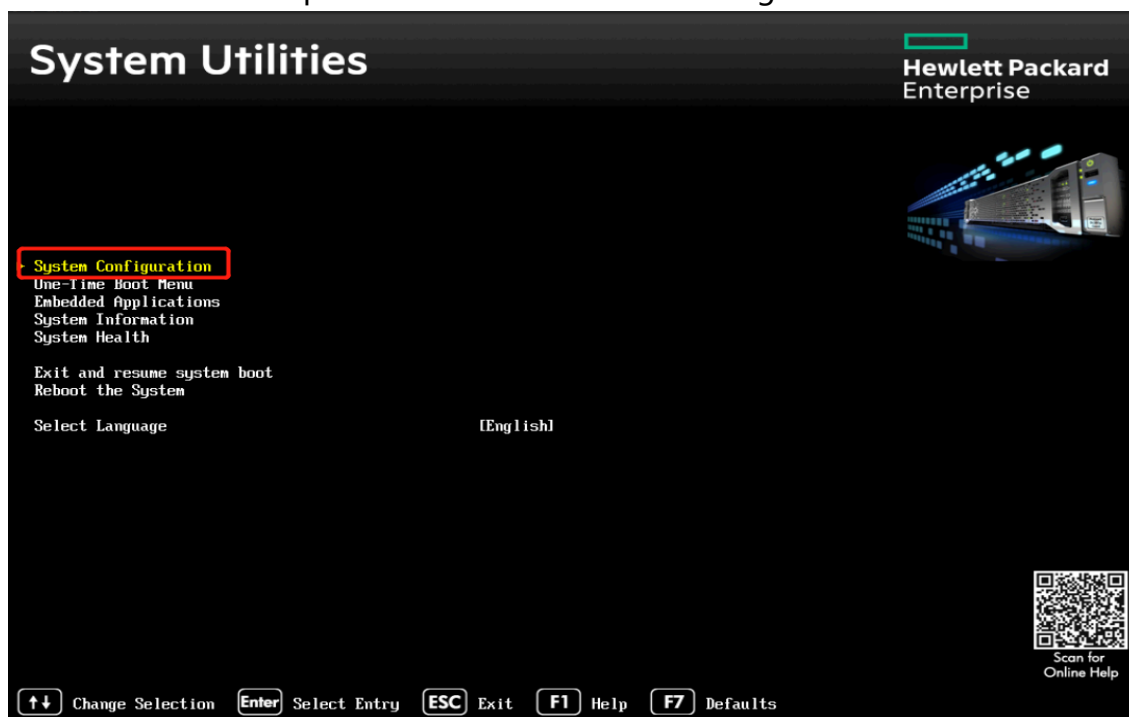


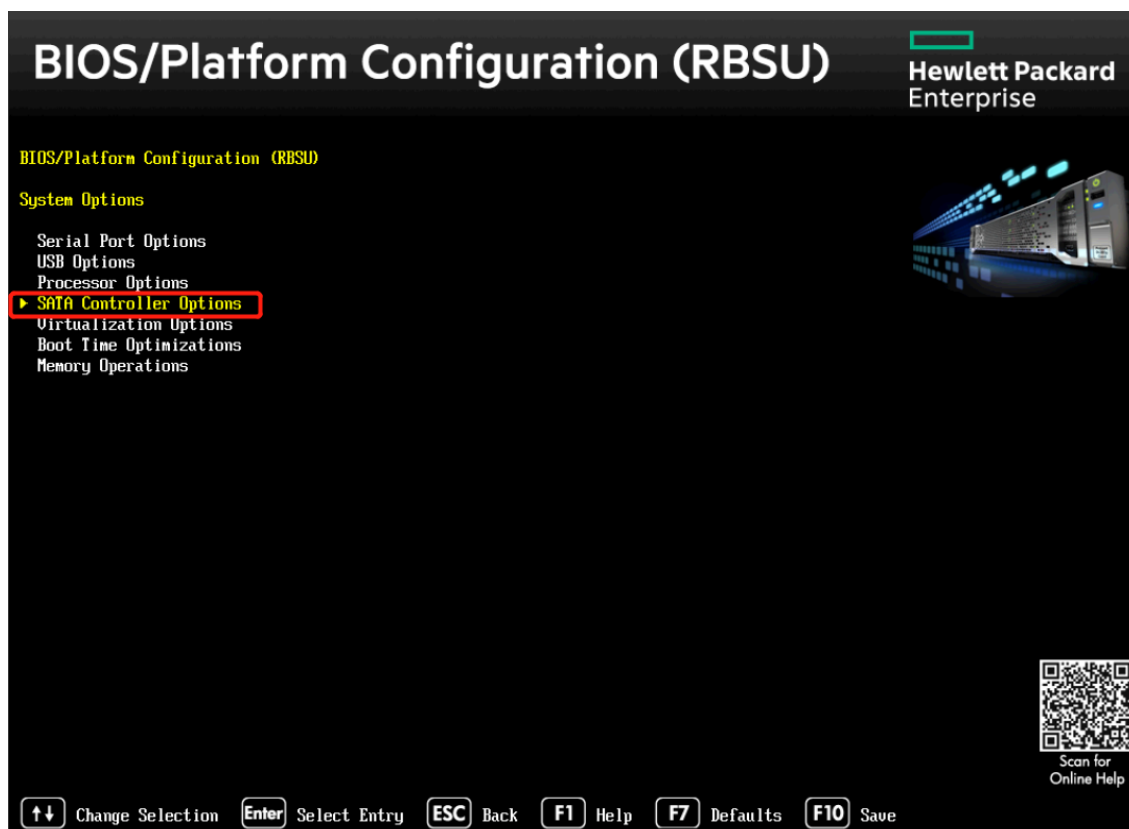
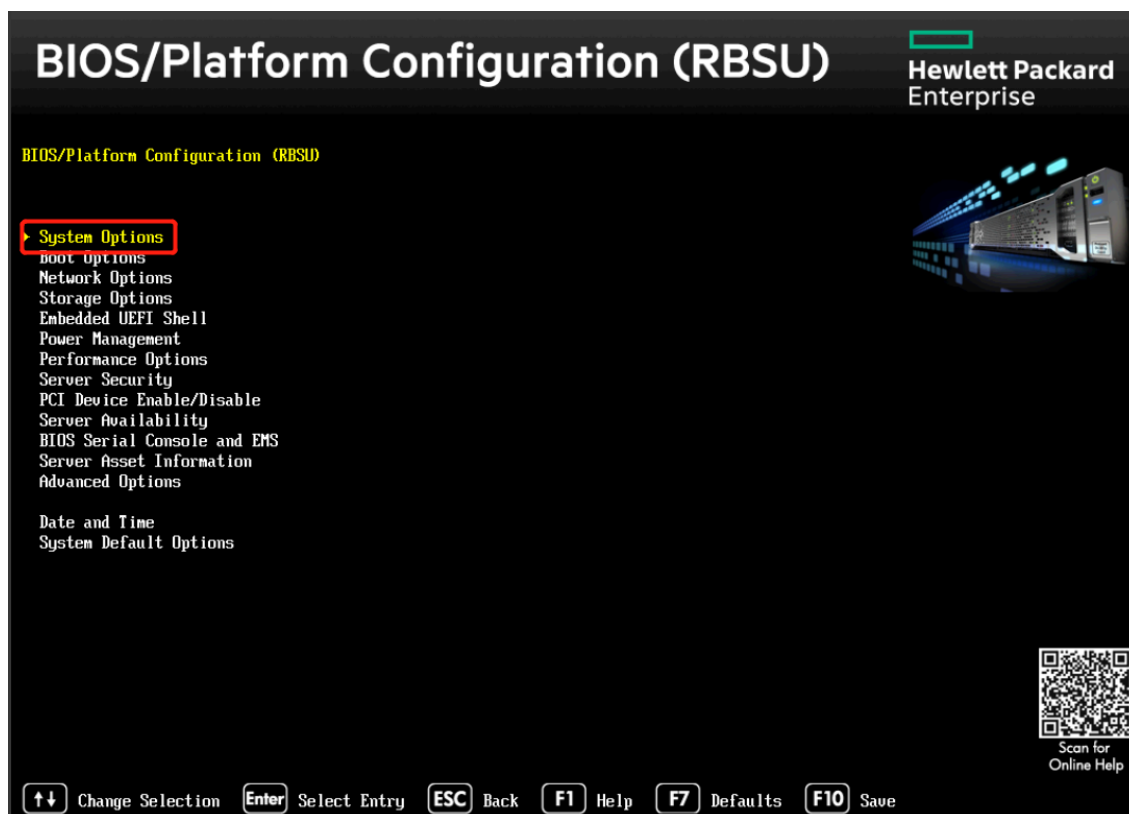


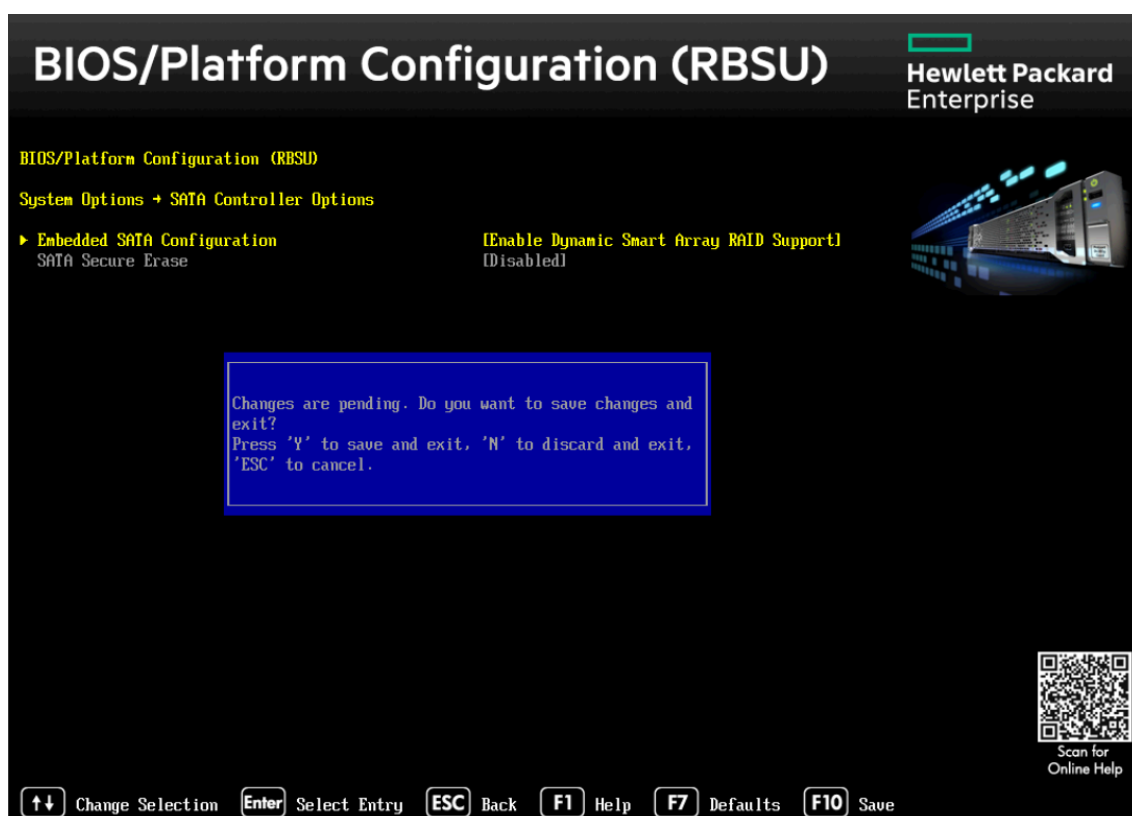
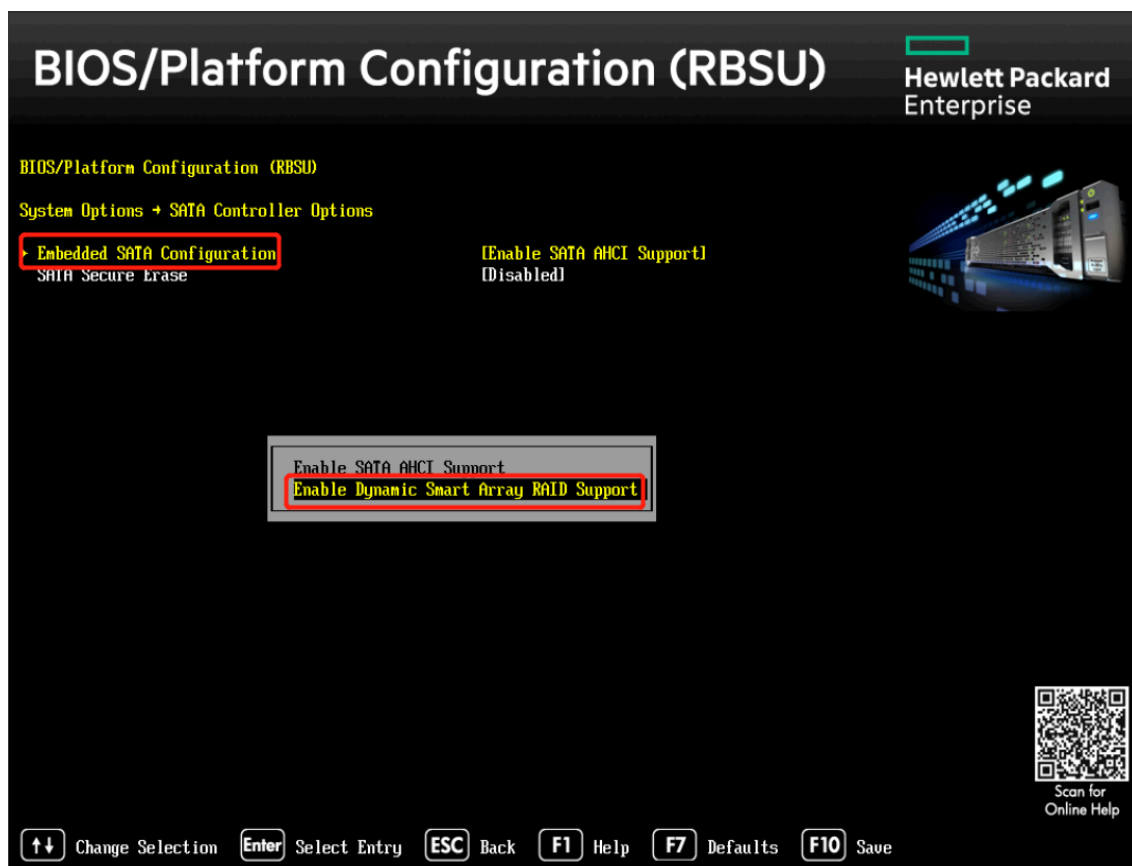
3) 开启 SR100i 的阵列功能。

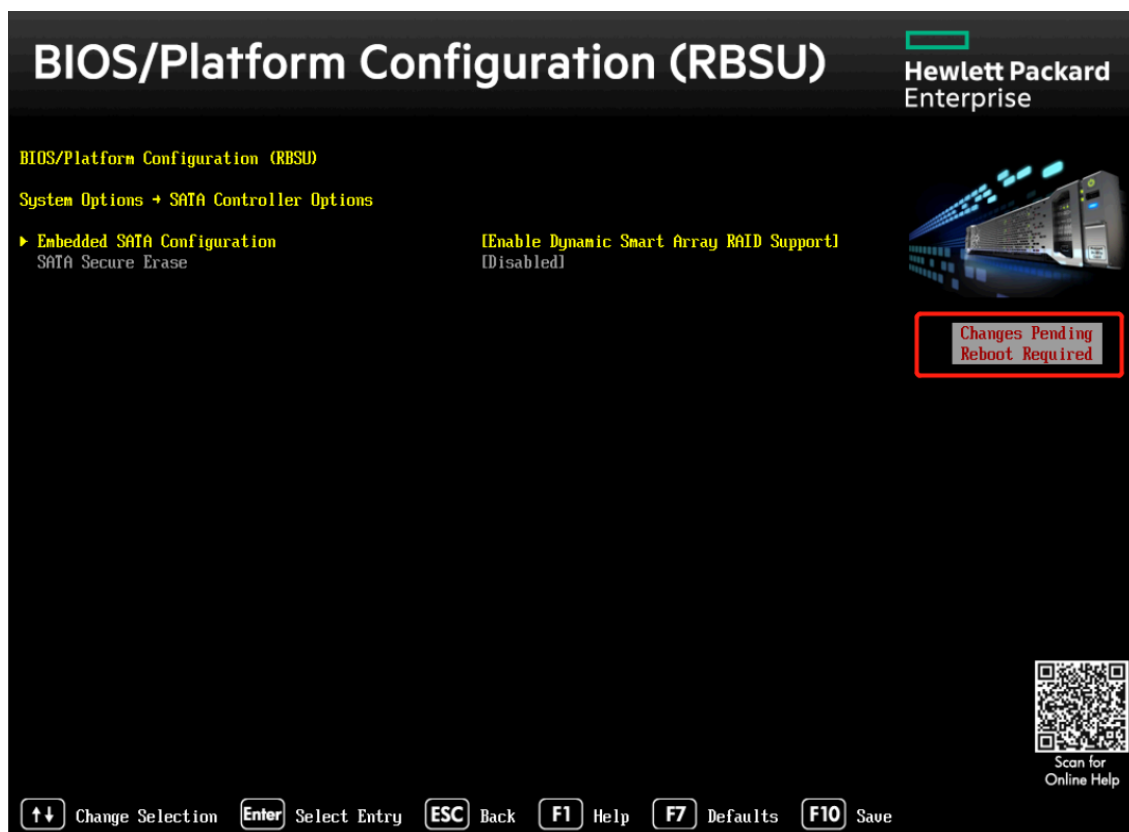
将板载 SATA 控制器的模式修改成 Dynamic Smart Array RAID Support, 按 “Y” 确认, 退出重启生效。

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

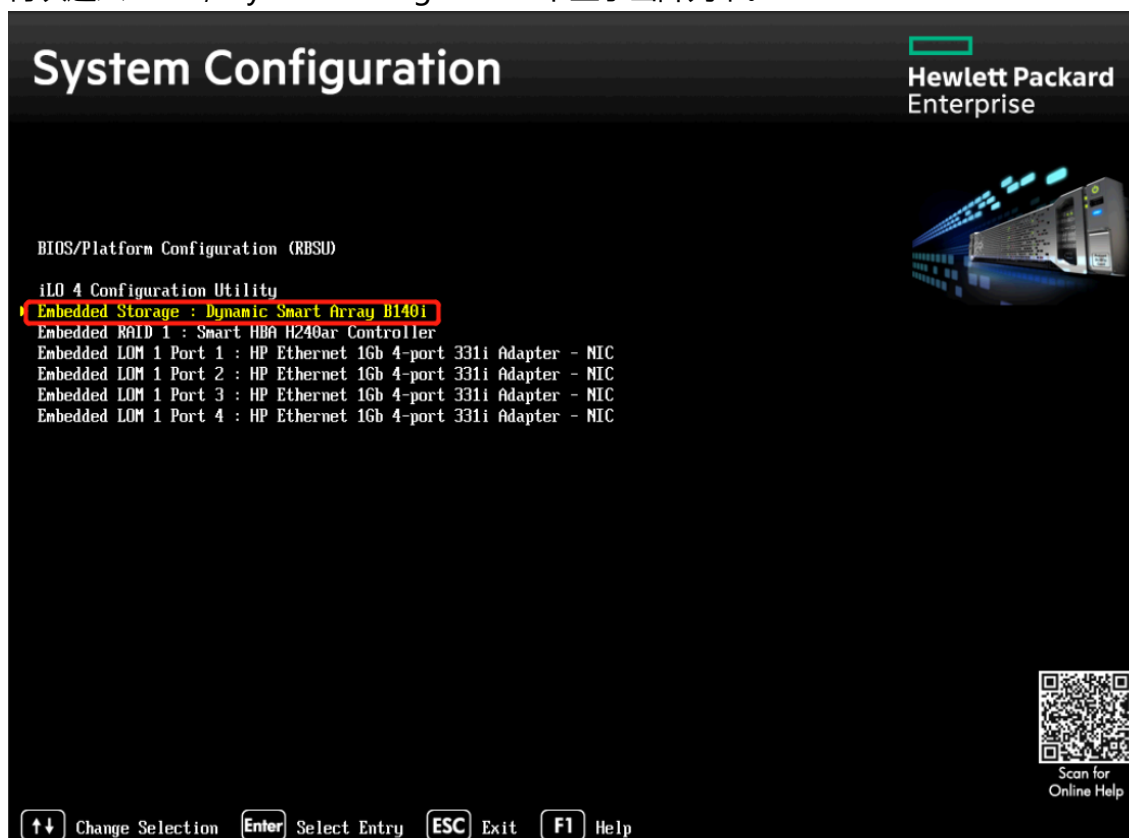








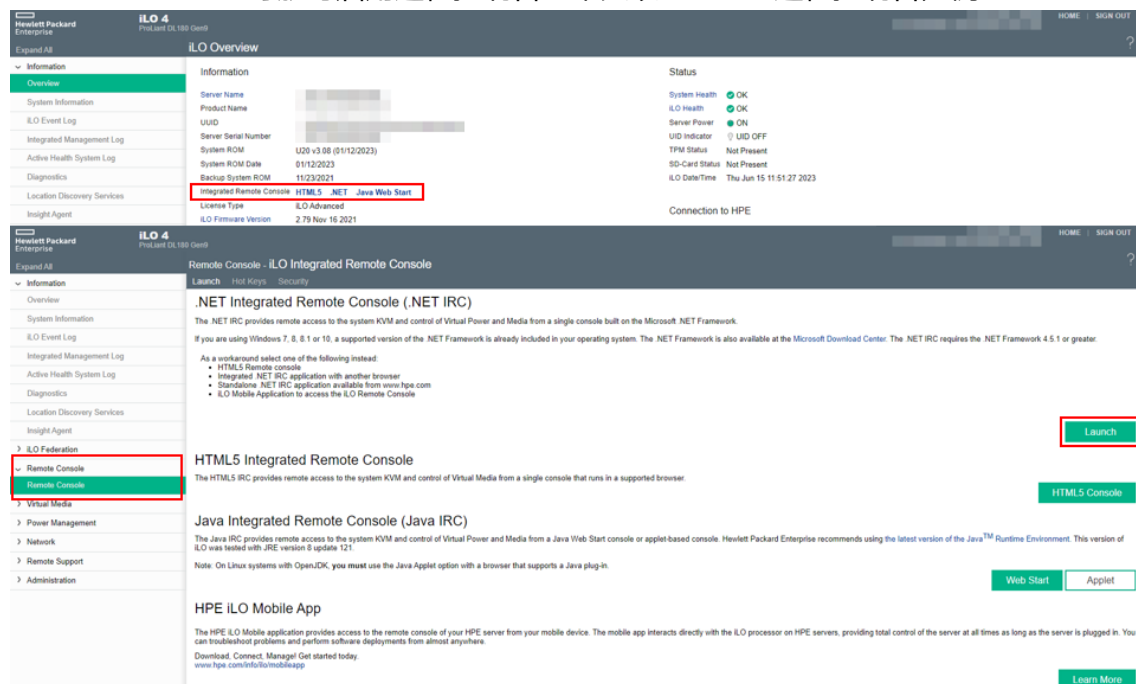
4) 再次进入 BIOS, System Configuration 下显示出阵列卡。



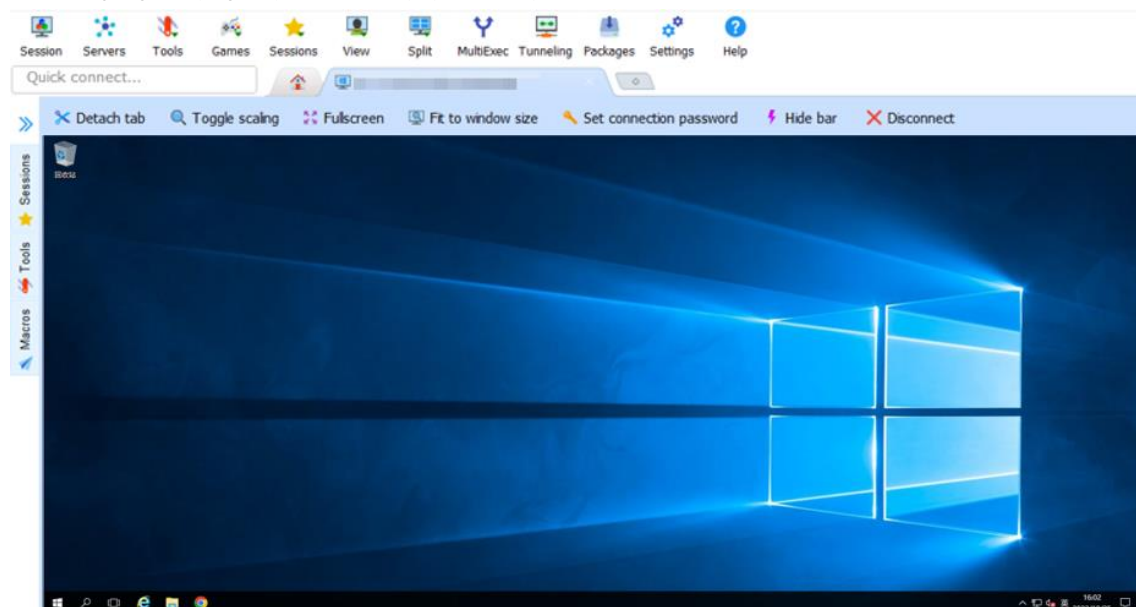
2. 访问系统

2.1 通过 iLO 启用远程控制台访问系统

iLO 4 页面 Information -> Overview 的 Integrated Remote Console 选项，或页面左侧 Remote Console 导航可启用远程控制台。本文以 HTML5 远程控制台为例。

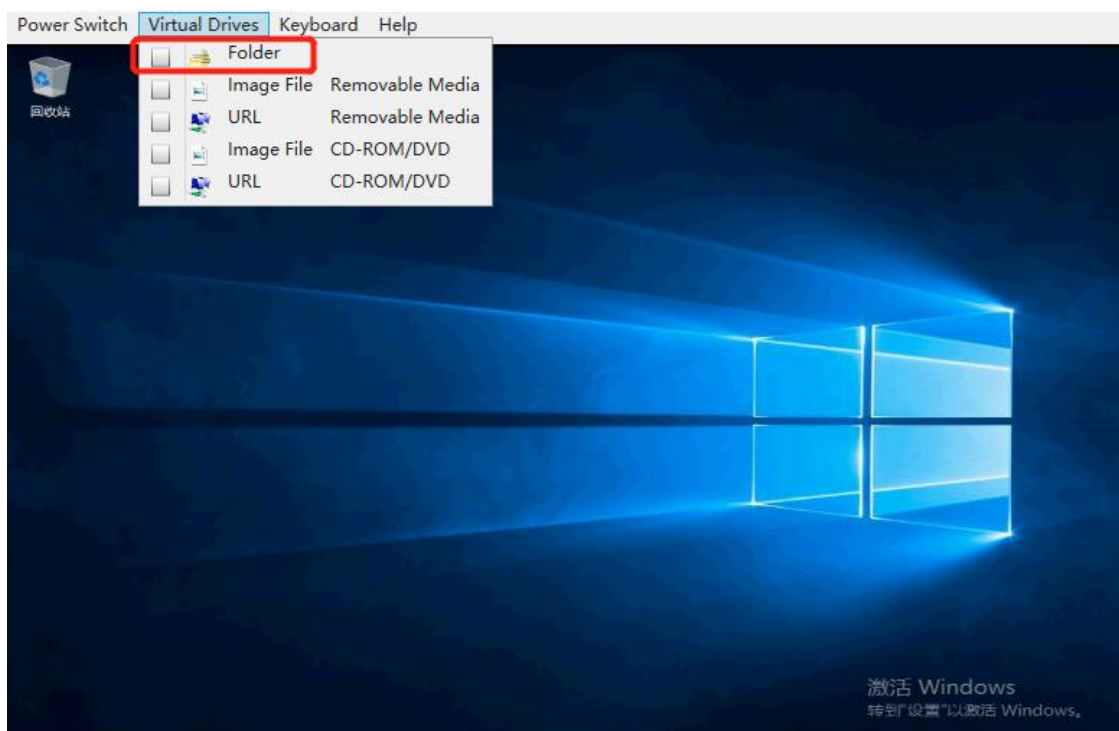


2.2 通过远程桌面或第三方 RDP 工具访问系统



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

3.1.1 通过 iLO 启用远程控制台将工具挂载到系统下

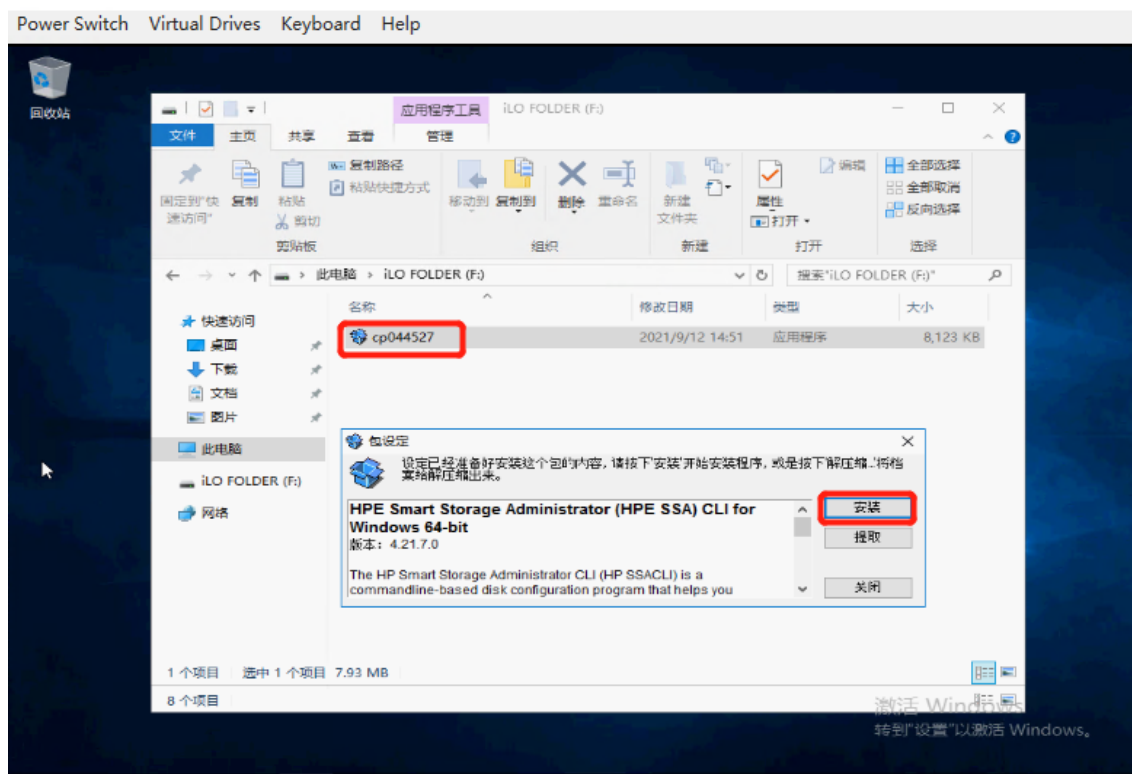


3.1.2 通过 U 盘将文件挂载到系统下

U 盘接入服务器后，在系统下直接访问挂载点。

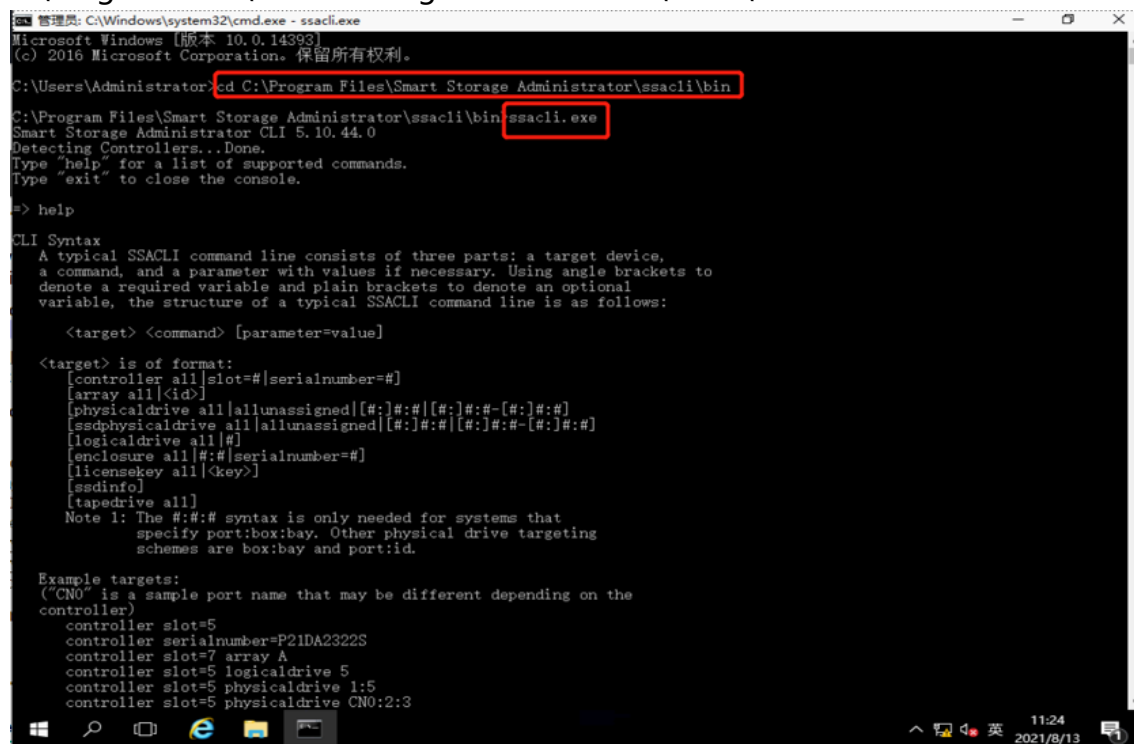
4. 安装 Smart Storage Administrator (SSA) CLI

1) 双击开始安装 SSACLI 工具。



- 2) 进入到默认安装路径，打开 Smart Storage Administrator CLI 工具。

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



```

C:\Users\Administrator>cd C:\Program Files\Smart Storage Administrator\ssacli\bin
C:\Program Files\Smart Storage Administrator\ssacli\bin>ssacli.exe
Smart Storage Administrator CLI 5.10.44.0
Detecting Controllers...Done.
Type "help" for a list of supported commands.
Type "exit" to close the console.
=> help
CLI Syntax
A typical SSA CLI command line consists of three parts: a target device,
a command, and a parameter with values if necessary. Using angle brackets to
denote a required variable and plain brackets to denote an optional
variable, the structure of a typical SSA CLI command line is as follows:

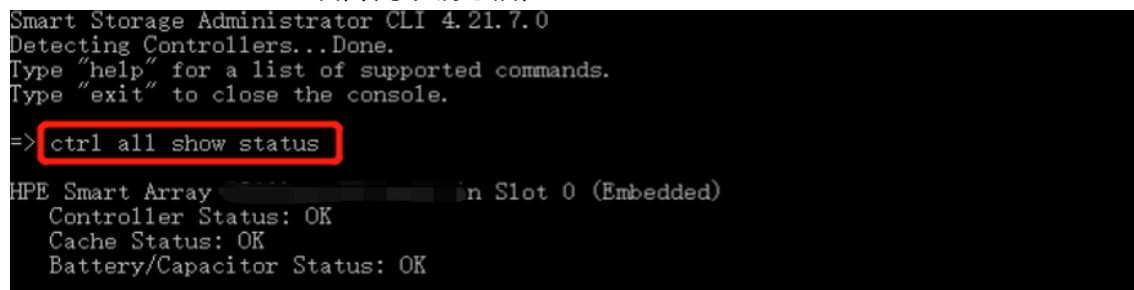
<target> <command> [parameter=value]

<target> is of format:
[controller all|slot=#|serialnumber=#]
[array all|<id>]
[physicaldrive all|allunassigned|[#]:#|[#]:#-[#]:#]
[ssdphysicaldrive all|allunassigned|[#]:#|[#]:#-[#]:#]
[logicaldrive all|<#>]
[enclosure all|<#>|serialnumber=#]
[licensekey all|<key>]
[ssdinfo]
[tapedrive all]
Note 1: The #:# syntax is only needed for systems that
specify port:box:bay. Other physical drive targeting
schemes are box:bay and port:ld.

Example targets:
("CNO" is a sample port name that may be different depending on the
controller)
controller slot=5
controller serialnumber=P21DA2322S
controller slot=7 array A
controller slot=5 logicaldrive 5
controller slot=5 physicaldrive 1:5
controller slot=5 physicaldrive CNO:2:3
  
```

5. 获取阵列卡编号、逻辑盘编号和物理盘编号

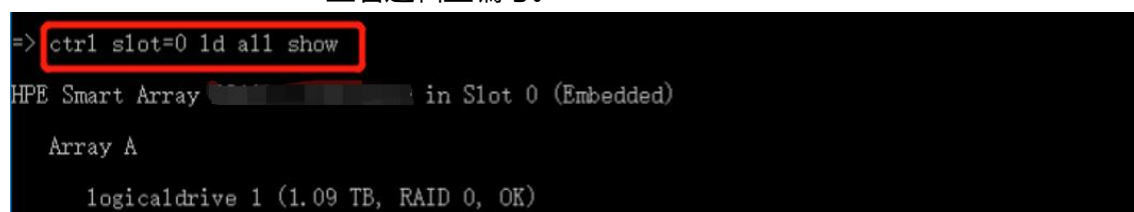
- 1) ctrl all show status 查看阵列卡编号槽位。



```

Smart Storage Administrator CLI 4.21.7.0
Detecting Controllers...Done.
Type "help" for a list of supported commands.
Type "exit" to close the console.
=> ctrl all show status
HP Smart Array [redacted] in Slot 0 (Embedded)
Controller Status: OK
Cache Status: OK
Battery/Capacitor Status: OK
  
```

- 2) ctrl slot=0 ld all show 查看逻辑盘编号。



```

=> ctrl slot=0 ld all show
HP Smart Array [redacted] in Slot 0 (Embedded)

Array A

logicaldrive 1 (1.09 TB, RAID 0, OK)
  
```

- 3) ctrl slot=0 pd all show 查看物理盘编号。

```
=> ctrl slot=0 pd all show
HPe Smart Array [REDACTED] in Slot 0 (Embedded)

Array A

    physicaldrive 1I:3:1 (port 1I:box 3:bay 1, SAS HDD, 1.2 TB, OK)

Unassigned

    physicaldrive 1I:3:2 (port 1I:box 3:bay 2, SAS HDD, 1.2 TB, OK)
    physicaldrive 1I:3:3 (port 1I:box 3:bay 3, SAS HDD, 1.2 TB, OK)
    physicaldrive 1I:3:4 (port 1I:box 3:bay 4, SAS HDD, 1.2 TB, OK)
```

6. 创建与删除阵列

6.1 创建阵列

1) 例如用 1I:3:2 这块硬盘创建阵列 B，阵列级别为 raid0。

ctrl slot=0 create type=ld drives=1I:3:2 raid=0

```
=> ctrl slot=0 create type=ld drives=1I:3:2 raid=0
Warning: One or more selected drives are currently exposed to the OS. This
        action will cause the physical drive(s) to be removed from the
        operating system. Continue? (y/n)y
```

2) 创建成功。

```
=> ctrl slot=0 pd all show
HPe Smart Array [REDACTED] in Slot 0 (Embedded)

Array A

    physicaldrive 1I:3:1 (port 1I:box 3:bay 1, SAS HDD, 1.2 TB, OK)

Array B

    physicaldrive 1I:3:2 (port 1I:box 3:bay 2, SAS HDD, 1.2 TB, OK)

Unassigned

    physicaldrive 1I:3:3 (port 1I:box 3:bay 3, SAS HDD, 1.2 TB, OK)
    physicaldrive 1I:3:4 (port 1I:box 3:bay 4, SAS HDD, 1.2 TB, OK)

=>
```

6.2 删除阵列

ctrl slot=0 array B delete forced 删除阵列 B。

```
=> ctrl slot=0 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

=> ctrl slot=0 pd all show
HPe Smart Array [REDACTED] in Slot 0 (Embedded)

Array A

    physicaldrive 1I:3:1 (port 1I:box 3:bay 1, SAS HDD, 1.2 TB, OK)

Unassigned

    physicaldrive 1I:3:2 (port 1I:box 3:bay 2, SAS HDD, 1.2 TB, OK)
    physicaldrive 1I:3:3 (port 1I:box 3:bay 3, SAS HDD, 1.2 TB, OK)
    physicaldrive 1I:3:4 (port 1I:box 3:bay 4, SAS HDD, 1.2 TB, OK)

=>
```

7. 创建与删除热备

7.1 创建热备

7.1.1 创建 dedicated 专用热备。

ctrl slot=0 array B add spares=1I:3:4 sparetype=dedicated

```
=> ctrl slot=0 array B add Spares=1I:3:4 sparetype=dedicated
=> ctrl slot=0 ld all show

HPE Smart Array P816i-a SR Gen10 in Slot 0 (Embedded)

Array A
    logicaldrive 1 (1.09 TB, RAID 0, OK)

Array B
    logicaldrive 2 (1.09 TB, RAID 1, OK)

=> ctrl slot=0 pd all show

HPE Smart Array P816i-a SR Gen10 in Slot 0 (Embedded)

Array A
    physicaldrive 1I:3:1 (port 1I:box 3:bay 1, SAS HDD, 1.2 TB, OK)

Array B
    physicaldrive 1I:3:2 (port 1I:box 3:bay 2, SAS HDD, 1.2 TB, OK)
    physicaldrive 1I:3:3 (port 1I:box 3:bay 3, SAS HDD, 1.2 TB, OK)
    physicaldrive 1I:3:4 (port 1I:box 3:bay 4, SAS HDD, 1.2 TB, OK, spare)
```

7.1.2 创建 auto-replace 自动替换热备。

ctrl slot=0 array B add spares=1I:3:4 sparetype=auto-replace

```
=> ctrl slot=0 array B add Spares=1I:3:4 sparetype=auto-replace
Error: Available options are:
    dedicated
    autoreplace

=> ctrl slot=0 array B add Spares=1I:3:4 sparetype=autoreplace
Warning: Any existing spare drives of a different spare type will be removed.
Continue? (y/n)y

=> ctrl slot=0 pd all show

HPE Smart Array P816i-a SR Gen10 in Slot 0 (Embedded)

Array A
    physicaldrive 1I:3:1 (port 1I:box 3:bay 1, SAS HDD, 1.2 TB, OK)

Array B
    physicaldrive 1I:3:2 (port 1I:box 3:bay 2, SAS HDD, 1.2 TB, OK)
    physicaldrive 1I:3:3 (port 1I:box 3:bay 3, SAS HDD, 1.2 TB, OK)
    physicaldrive 1I:3:4 (port 1I:box 3:bay 4, SAS HDD, 1.2 TB, OK, auto replace spare)
```

7.2 删除热备

ctrl slot=0 array B remove spares=1I:3:4 删除阵列 B 的热备盘。

```
=> ctrl slot=0 array B remove spares=1I:3:4
=> ctrl slot=0 pd all show

HPE Smart Array P816i-a SR Gen10 in Slot 0 (Embedded)

Array A
    physicaldrive 1I:3:1 (port 1I:box 3:bay 1, SAS HDD, 1.2 TB, OK)

Array B
    physicaldrive 1I:3:2 (port 1I:box 3:bay 2, SAS HDD, 1.2 TB, OK)
    physicaldrive 1I:3:3 (port 1I:box 3:bay 3, SAS HDD, 1.2 TB, OK)

Unassigned
    physicaldrive 1I:3:4 (port 1I:box 3:bay 4, SAS HDD, 1.2 TB, OK)
```