

# HPE Gen9 服务器

## H240/P440/P840 系列阵列卡离线 SSA 扩容阵列

### 目录

一. 适用范围与注意事项	1
二. 配置准备	1
1. 连接 iLO 与启用远程控制台	1
2. SPP 镜像获取	2
3. USB Key Utility 获取	2
三. 配置步骤	2
1. 启用 Smart Storage Administrator	2
1.1 通过 iLO 远程控制台启用 SSA	2
1.2 通过可引导 U 盘启用 SSA	3
2. 扩容阵列	7
2.1 磁盘阵列扩容	7
2.2 逻辑卷空间扩容	9
附录：通过 USB Key Utility 制作可引导 SSA U 盘	11

### 一. 适用范围与注意事项

- 本文档旨在说明 HPE Gen9 系列服务器 H240/P440/P840 系列阵列卡离线使用 Smart Storage Administrator 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. 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>

## 2. SPP 镜像获取

若通过可引导 U 盘启用 SSA，需要提前准备 SPP。

具体方法请参考：<https://zhiliao.h3c.com/Theme/details/216398>

## 3. USB Key Utility 获取

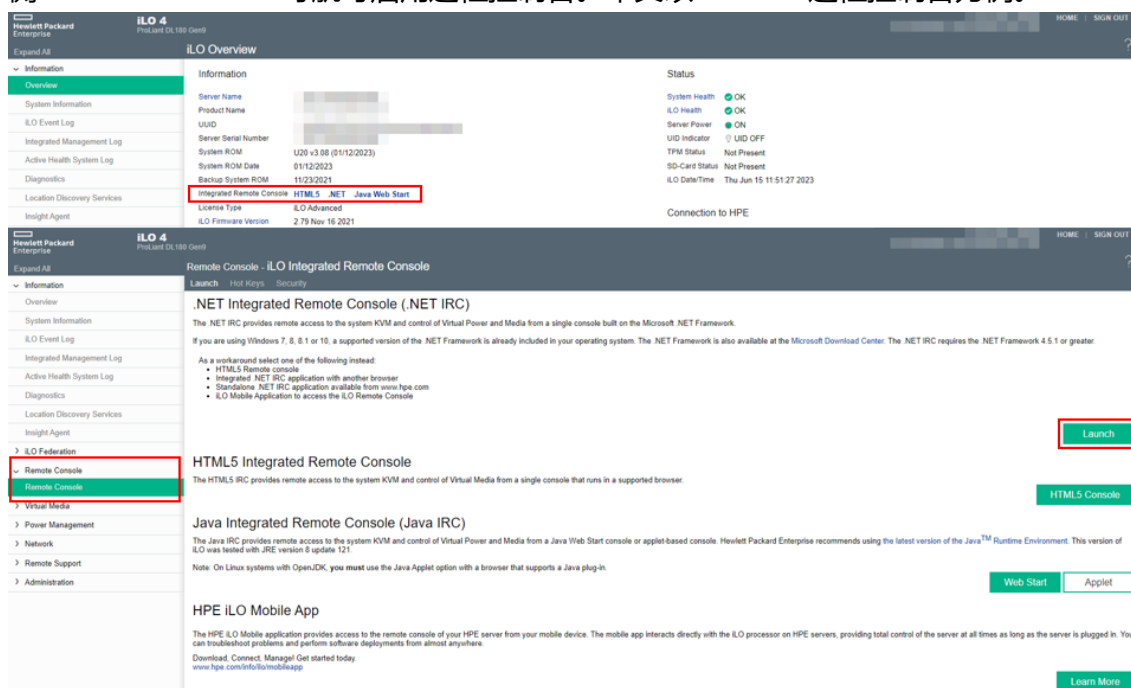
下载链接：[适用于 Windows 的 USB Key Utility | HPE Support](#)

## 三. 配置步骤

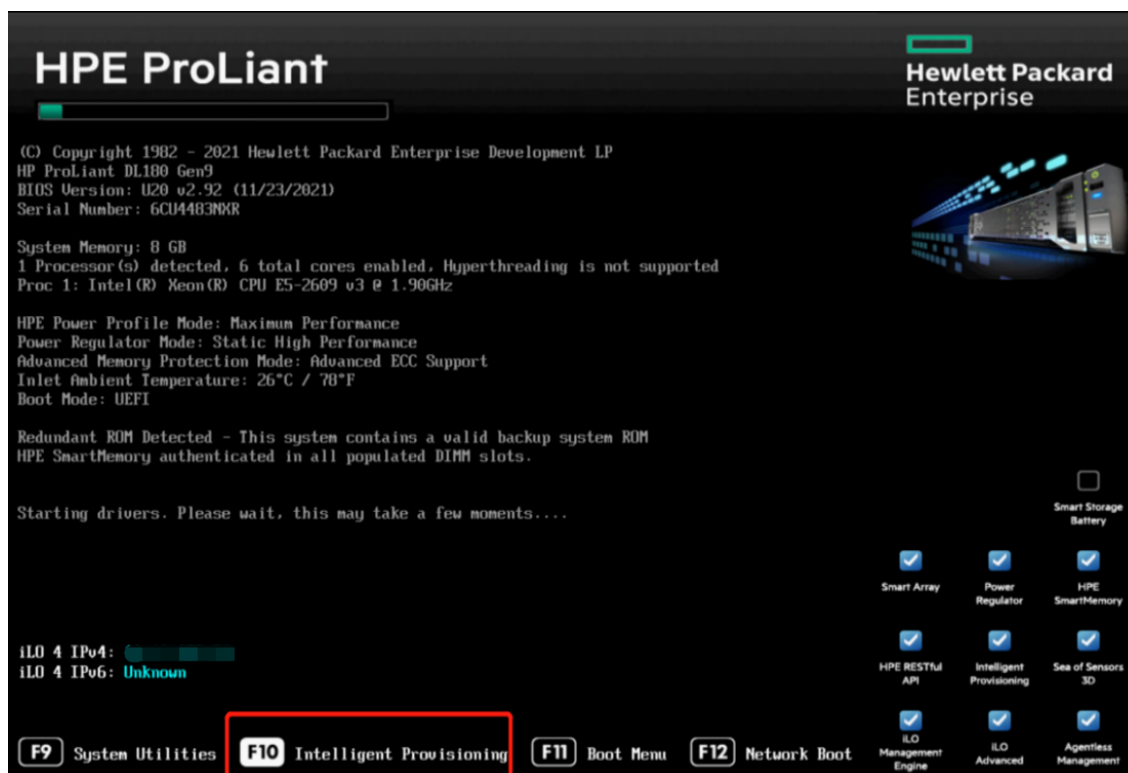
### 1. 启用 Smart Storage Administrator

#### 1.1 通过 iLO 远程控制台启用 SSA

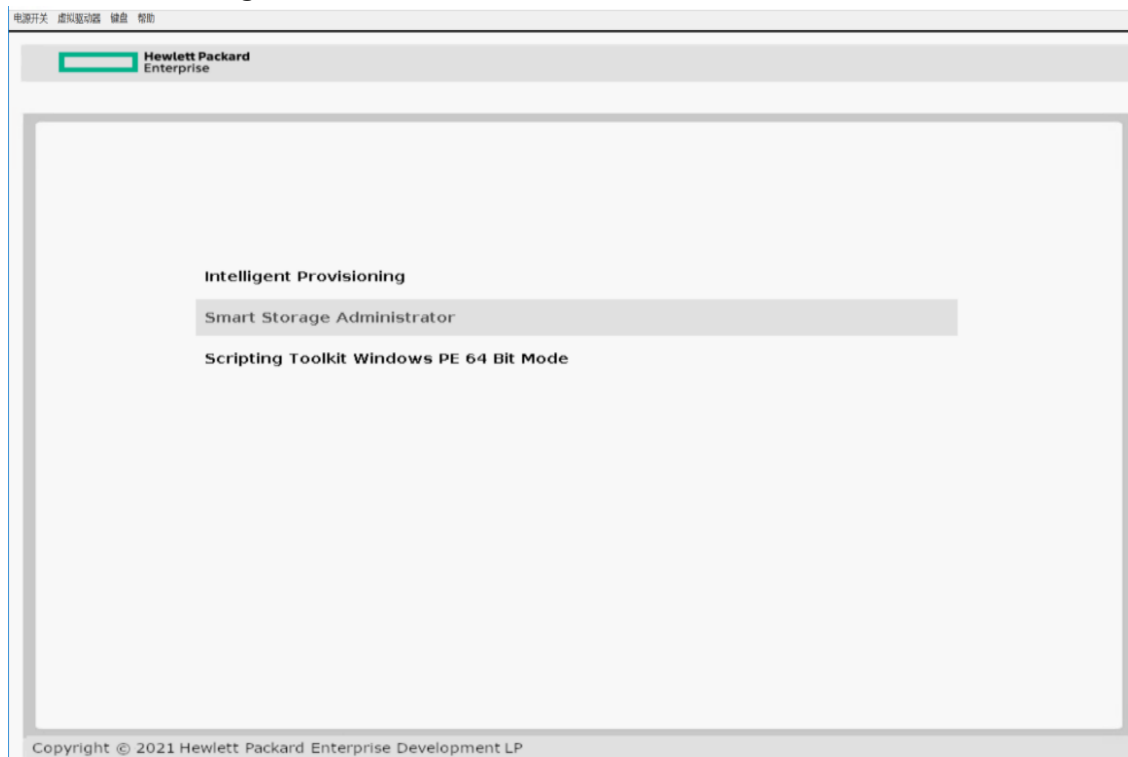
1) iLO 4 页面 **Information -> Overview** 的 Integrated Remote Console 选项，或页面左侧 Remote Console 导航可启用远程控制台。本文以 HTML5 远程控制台为例。



2) 重启服务器，自检界面按 **F10**。



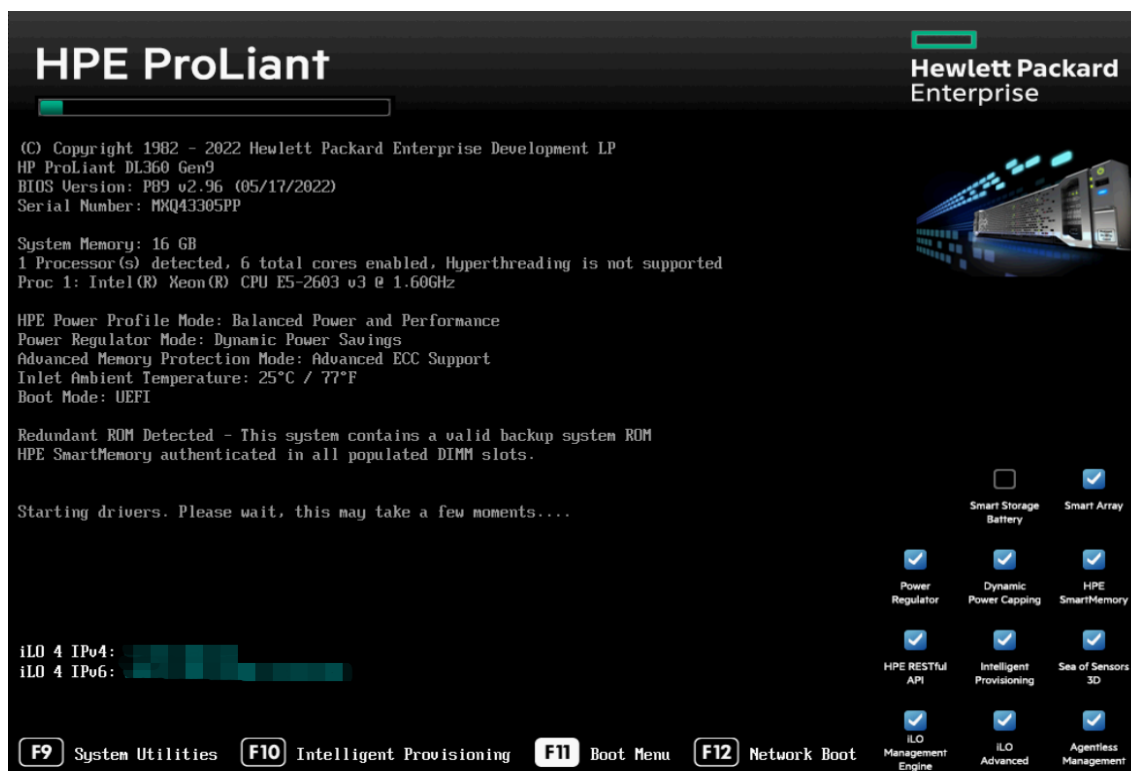
3) 选择 Smart Storage Administrator, 按 **Enter** 进入。



## 1.2 通过可引导 U 盘启用 SSA

注：制作可引导 SSA U 盘的方法请参考附录。

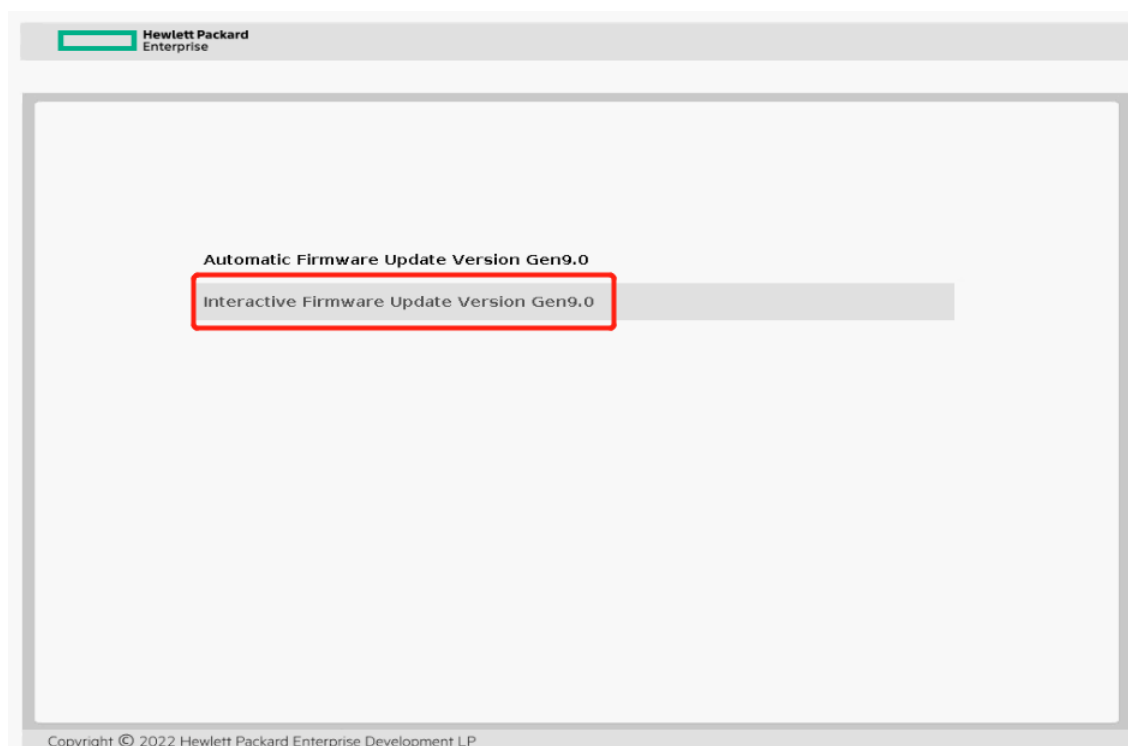
1) 插入启动 U 盘，重启服务器，自检界面按 **F11**。



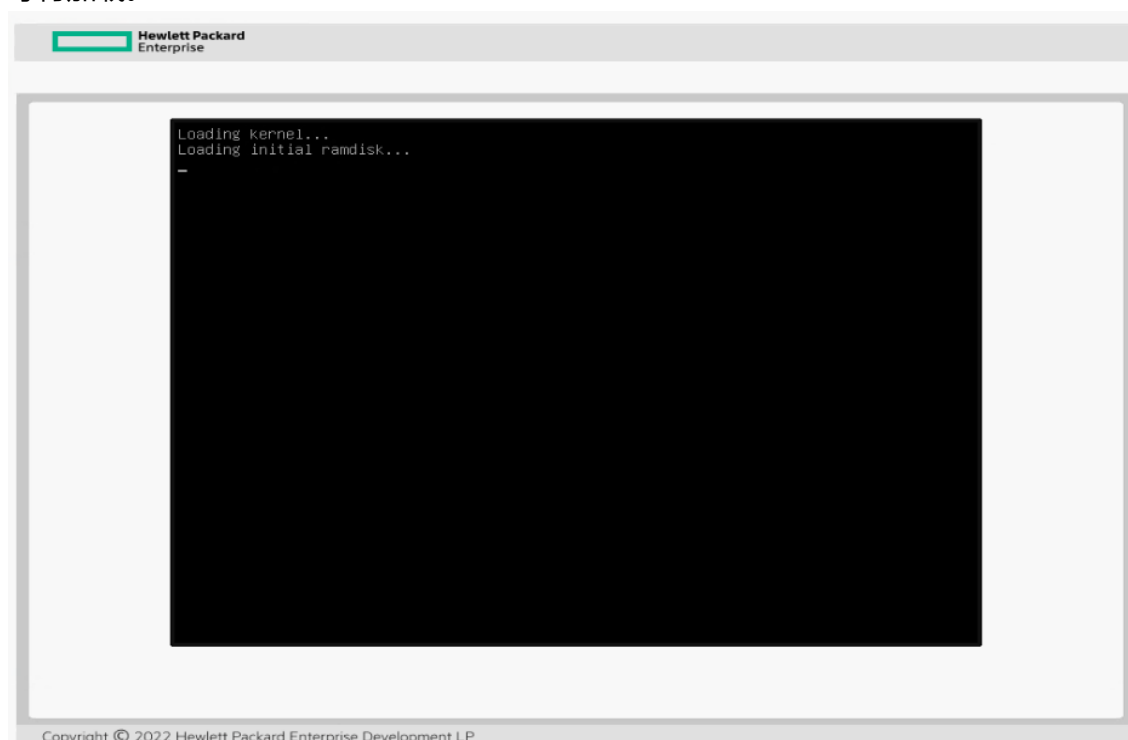
2) 选择从 USB 启动。



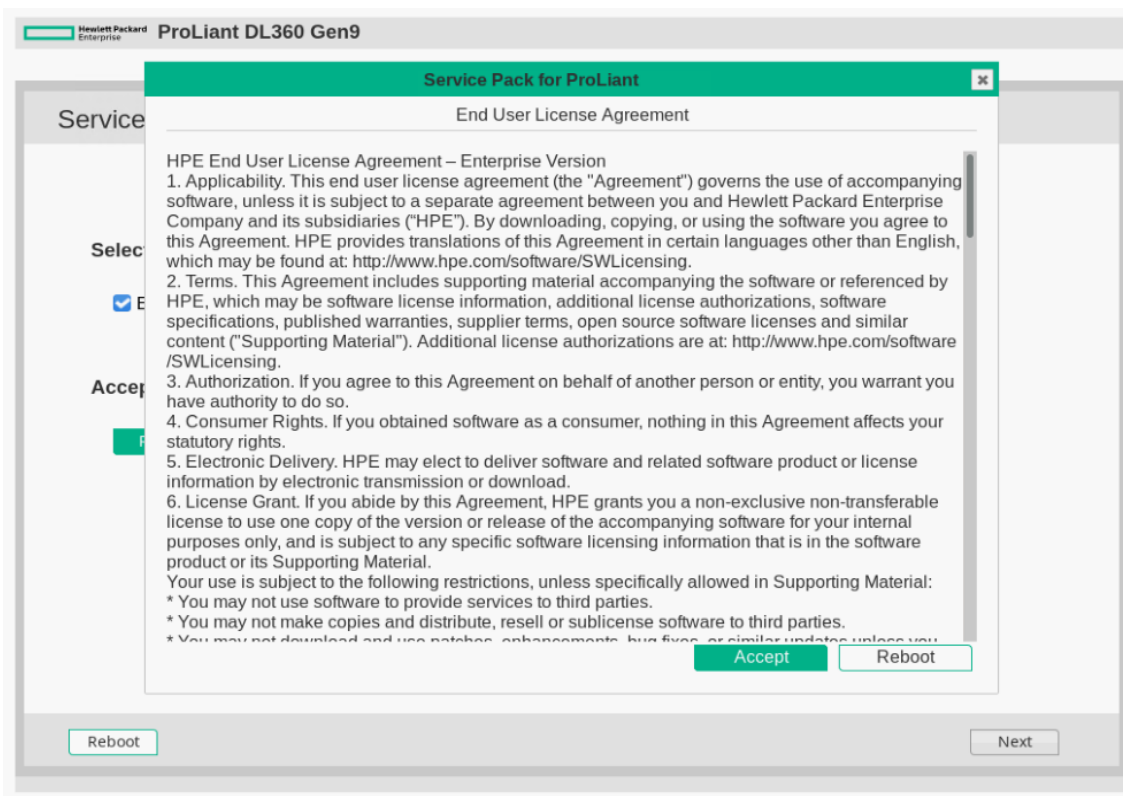
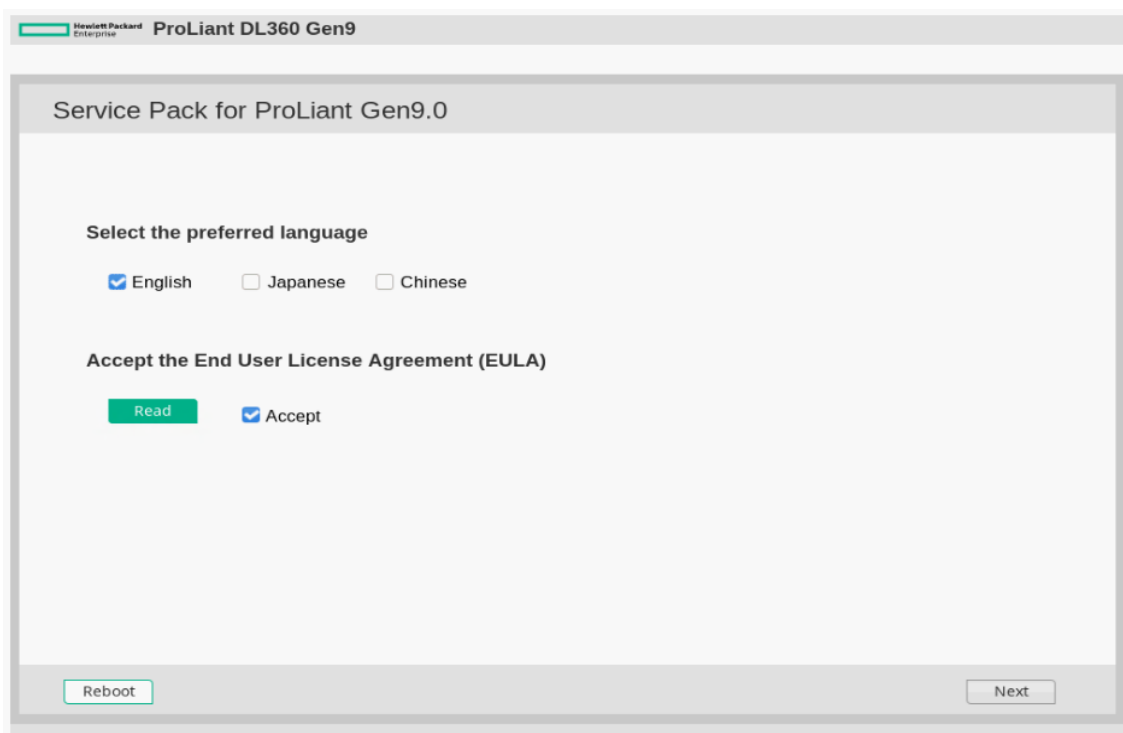
3) 选择 Interactive 交互式。

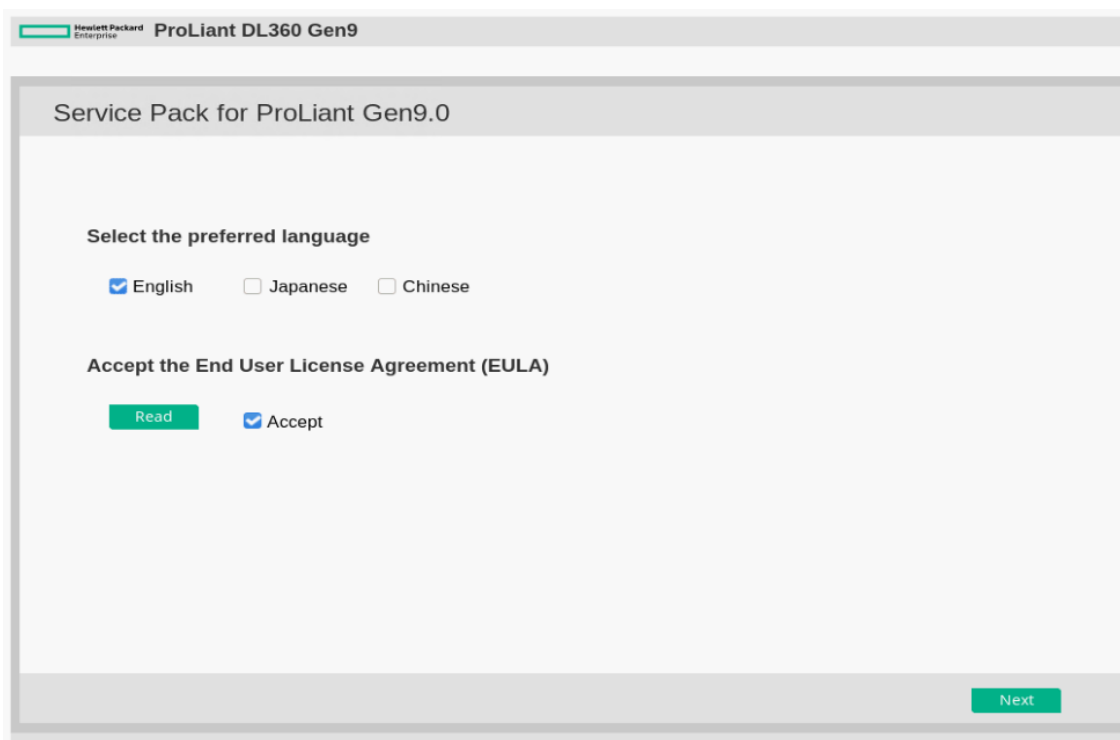


4) 等待加载。

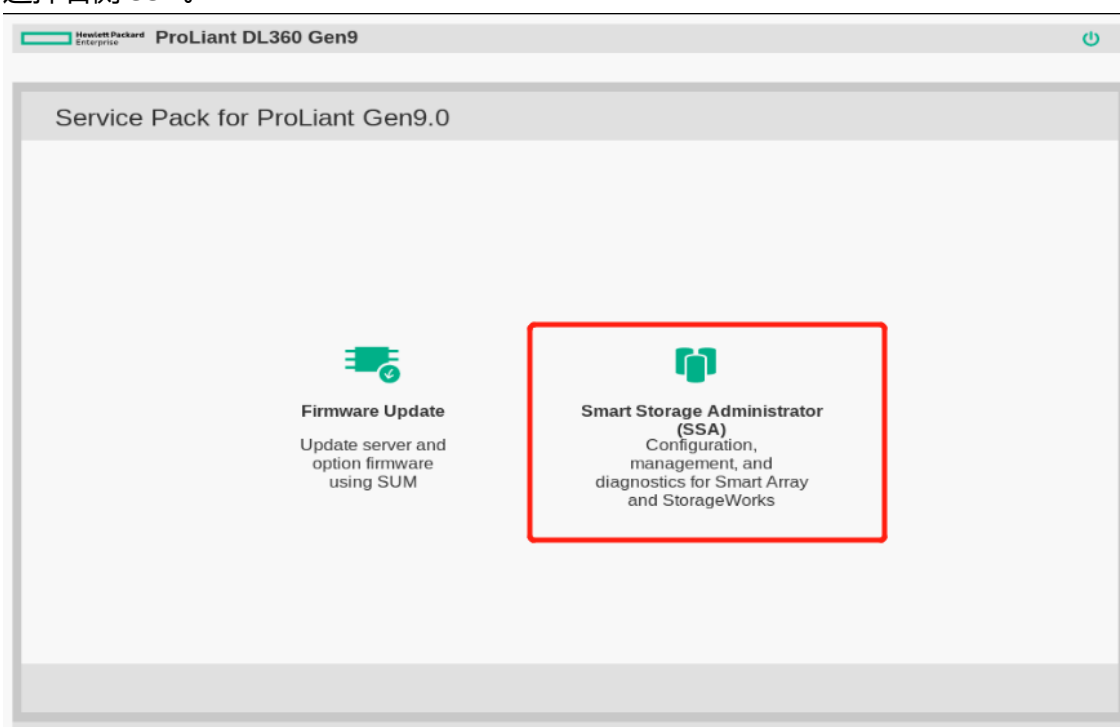


5) 选择语言，接受许可，点击 **Next**。





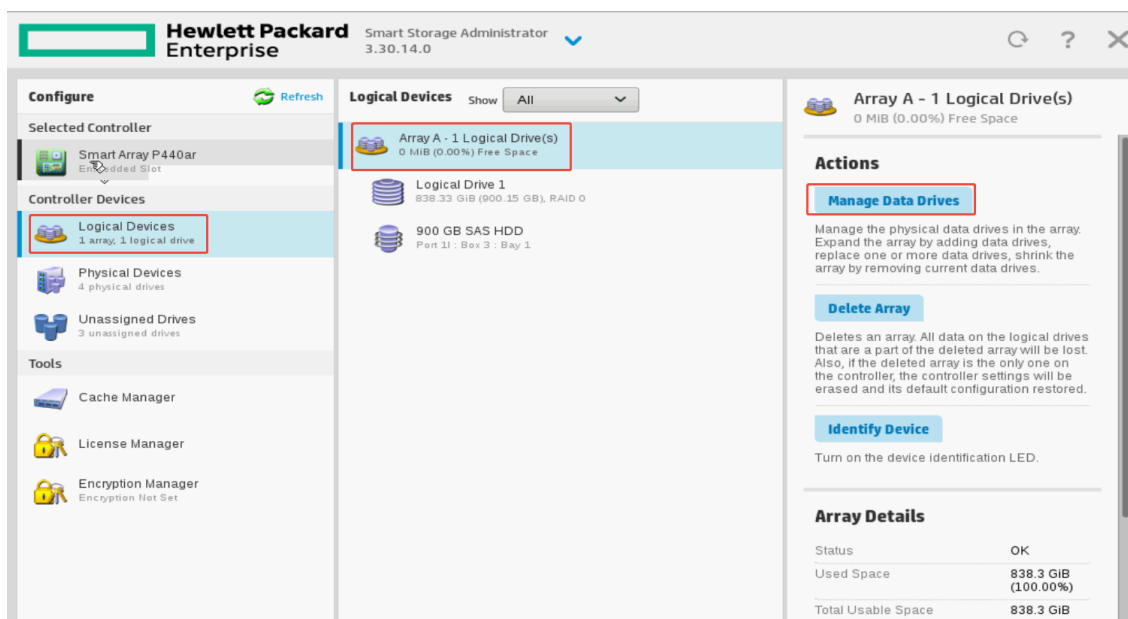
6) 选择右侧 SSA。



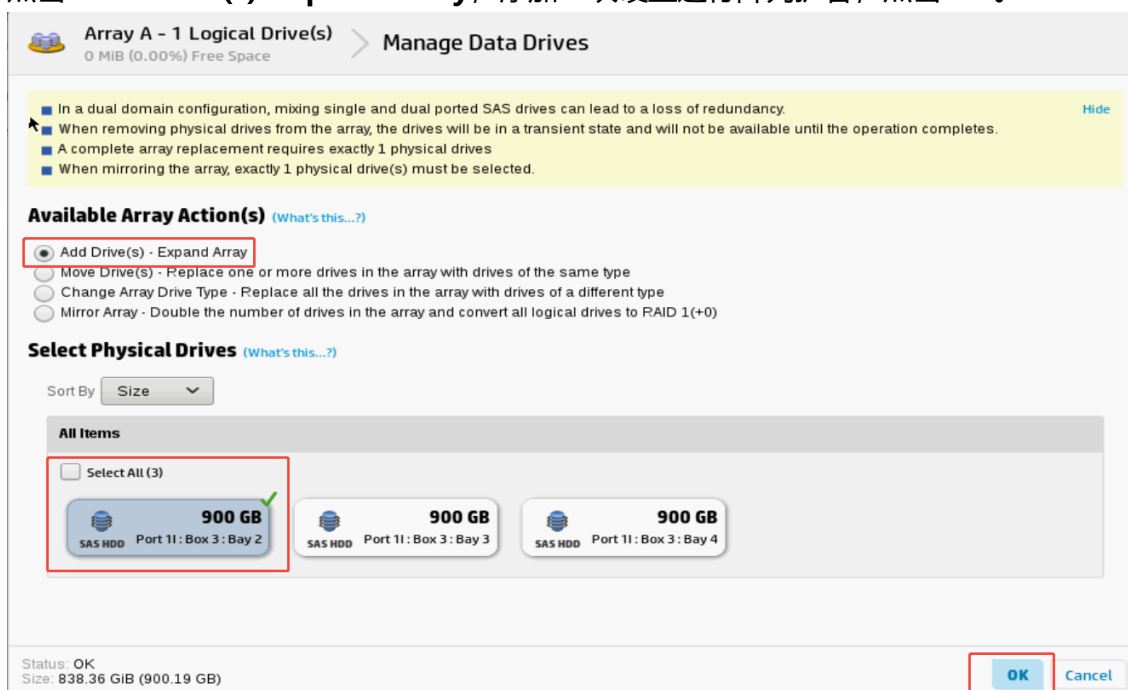
2. 扩容阵列

2.1 磁盘阵列扩容

- 1) 选择 P440 ar 阵列卡, 点击 **Logical Devices -> Logical Drive 1** 选项。选择右侧 **Manage Data Drives** 选项。本文档以 1 块硬盘的 RAID0 扩容硬盘为例。



2) 点击 **Add Drive(s)-Expand Array**，添加 1 块硬盘进行阵列扩容，点击 **OK**。



3) 由此可以看到操作已经成功执行。

**Array A - 1 Logical Drive(s)**  
838.3 GiB (0.00%) Free Space > Manage Data Drives

■ Operation executed successfully.

### Array Details

Status	OK
Unused Space	838.3 GiB (0.00%)
Used Space	838.3 GiB (100.00%)
Total Usable Space	1.6 TiB
Acceleration Mode	Independent: Caching can be enabled or disabled for each individual logical drive

### Logical Drives

Logical Drive 1	838.33 GiB (900.15 GB)
-----------------	------------------------

### Physical Drives

900 GB SAS HDD at Port 11 : Box 3 : Bay 2  
900 GB SAS HDD at Port 11 : Box 3 : Bay 1

### Device Path

Smart Array P440ar in Embedded Slot

**Finish**

**Hewlett Packard Enterprise** Smart Storage Administrator 3.30.14.0

#### Configure

Selected Controller: Smart Array P440ar Embedded Slot

Controller Devices:

- Logical Devices: 1 array, 1 logical drive
- Physical Devices: 4 physical drives
- Unassigned Drives: 2 unassigned drives

Tools:

- Cache Manager
- License Manager
- Encryption Manager: Encryption Not Set

#### Logical Devices

Array A - 1 Logical Drive(s)  
838.3 GiB (0.00%) Free Space

Logical Drive 1  
838.33 GiB (900.15 GB), RAID 0

900 GB SAS HDD  
Port 11 : Box 3 : Bay 1

900 GB SAS HDD  
Port 11 : Box 3 : Bay 2

#### Array A - 1 Logical Drive(s)

838.3 GiB (0.00%) Free Space

##### Actions

- Create Logical Drive**  
Creates a logical drive from the free space on the selected array. Various parameters are available for selection such as the fault tolerance, size of the logical drive, and strip size.
- Delete Array**  
Deletes an array. All data on the logical drives that are a part of the deleted array will be lost. Also, if the deleted array is the only one on the controller, the controller settings will be erased and its default configuration restored.
- Identify Device**  
Turn on the device identification LED.

##### Array Details

## 2.2 逻辑卷空间扩容

- 1) 扩容硬盘后查看逻辑卷信息当前两块成员盘但容量为单盘容量大小，原因是扩容后的硬盘容量是处于未使用的状态。

**Hewlett Packard Enterprise** Smart Storage Administrator 3.30.14.0

#### Configure

Selected Controller: Smart Array P440ar Embedded Slot

Controller Devices:

- Logical Devices: 1 array, 1 logical drive
- Physical Devices: 4 physical drives
- Unassigned Drives: 2 unassigned drives

Tools:

- Cache Manager

#### Logical Devices

Array A - 1 Logical Drive(s)  
838.3 GiB (0.00%) Free Space

Logical Drive 1  
838.33 GiB (900.15 GB), RAID 0

- 900 GB SAS HDD  
Port 11 : Box 3 : Bay 1
- 900 GB SAS HDD  
Port 11 : Box 3 : Bay 2

#### Logical Drive 1

838.33 GiB (900.15 GB), RAID 0

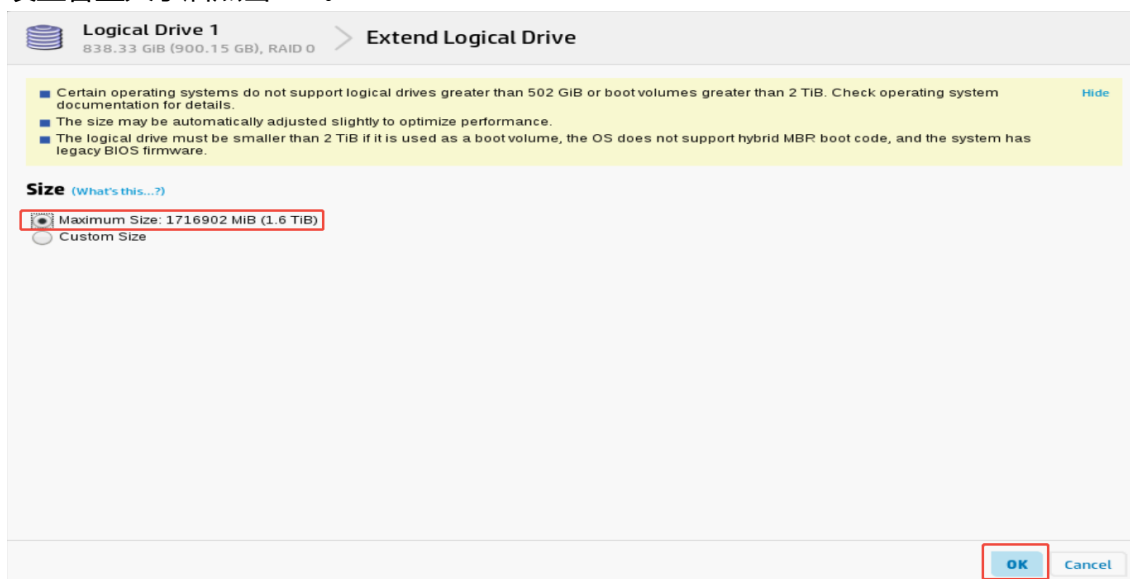
##### Actions

- Migrate RAID/Strip Size**  
Modifies the current RAID or strip size for a logical drive. Changes in these settings can provide more or less unused space as well as allowing for fine tuning of performance on the logical drive.
- Extend Logical Drive**  
Increases the capacity of an existing logical drive by specifying a new size. Once the task is completed, OS partitioning software can be used to take advantage of the available space.

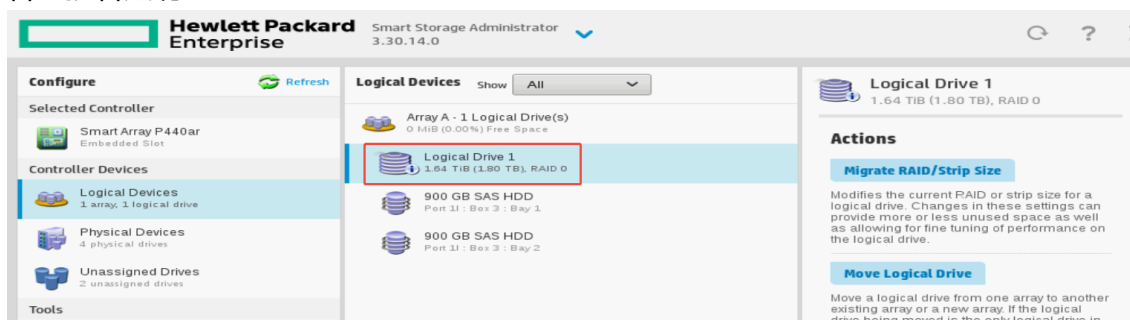
2) 在 Logical Drive 1 内找到 **Extend logical Drive** 点击进入。



3) 设置容量大小后点击 **OK**。



4) 容量扩容成功。



## 附录：通过 USB Key Utility 制作可引导 SSA U 盘

1) HPE 官网下载 USB KEY 工具。

[https://support.hpe.com/hpesc/public/swd/detail?swItemId=MTX\\_360731071b404454b454390208](https://support.hpe.com/hpesc/public/swd/detail?swItemId=MTX_360731071b404454b454390208)

### Drivers & software

#### USB Key Utility for Windows

By downloading, you agree to the terms and conditions of the [Hewlett Packard Enterprise Software License Agreement](#).

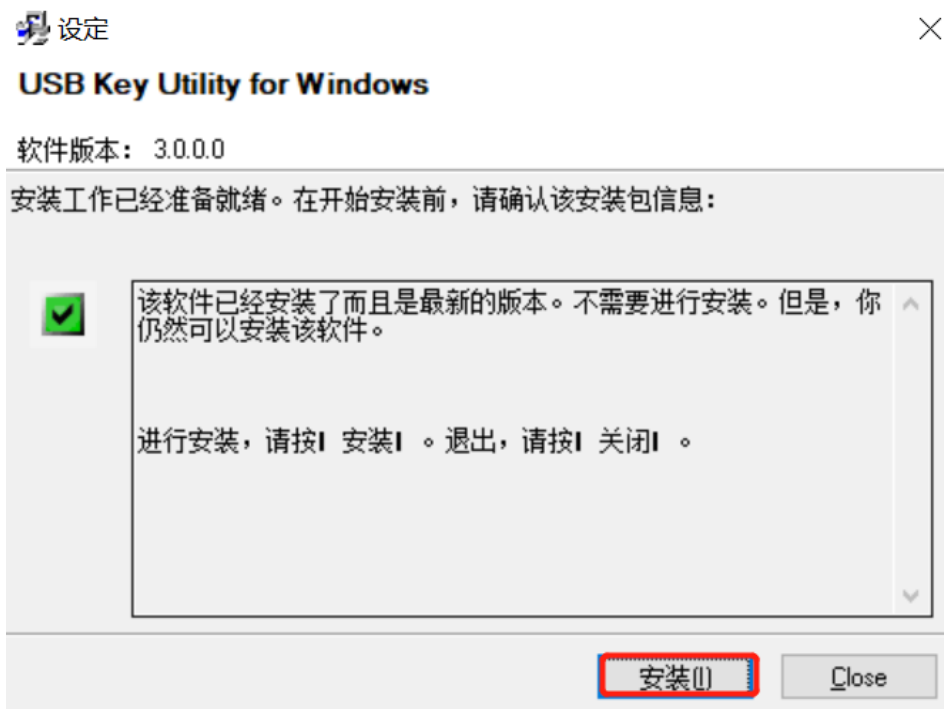
**Note:** Some software requires a valid warranty, current Hewlett Packard Enterprise support contract, or a license fee.

Type:	Utility - Tools
Version:	3.0.0.0 (12 Jul 2017)
Upgrade Requirement:	Optional ⓘ
Operating System(s):	Microsoft Windows 10 (64-bit) Microsoft Windows 7 (64-bit) Microsoft Windows 7 Enterprise (64-bit) Microsoft Windows 7 Professional (64-bit) Microsoft Windows 8 (64-bit) Microsoft Windows 8.1 (64-bit) Microsoft Windows HPC Server 2008 R2 Microsoft Windows Server 2008 R2 Microsoft Windows Server 2012 Microsoft Windows Server 2012 Essentials Microsoft Windows Server 2012 R2 Microsoft Windows Server 2016 Microsoft Windows Storage Server 2008 R2 Microsoft Windows Storage Server 2008 x64 Editions Microsoft Windows Storage Server 2012 Microsoft Windows Storage Server 2012 R2
File name:	cp029814.exe (3.1 MB)

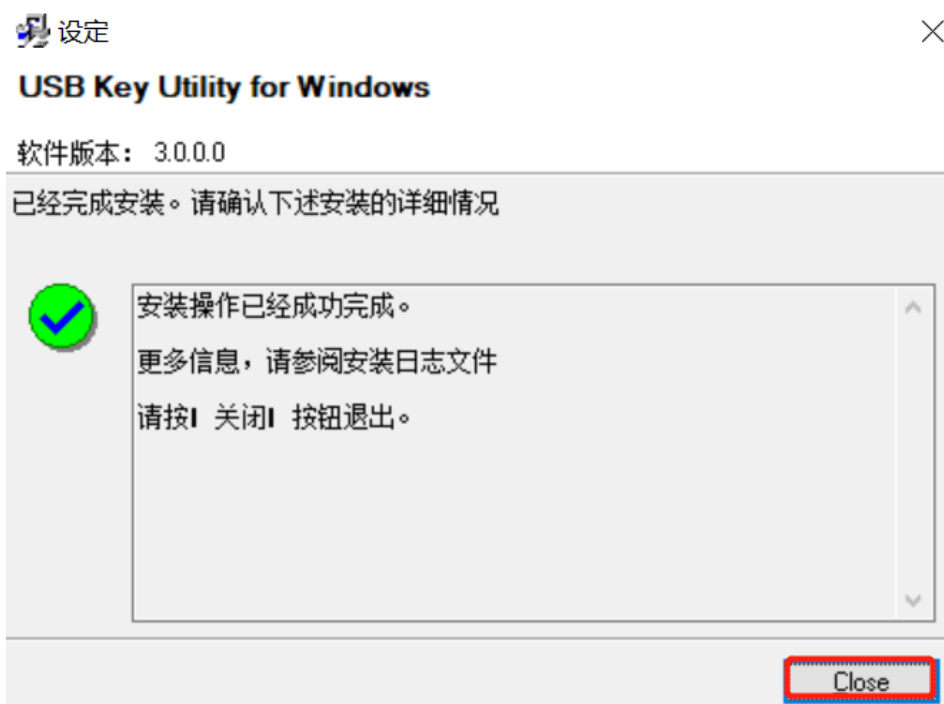
Download

2) 双击.exe 包，点击**安装**。

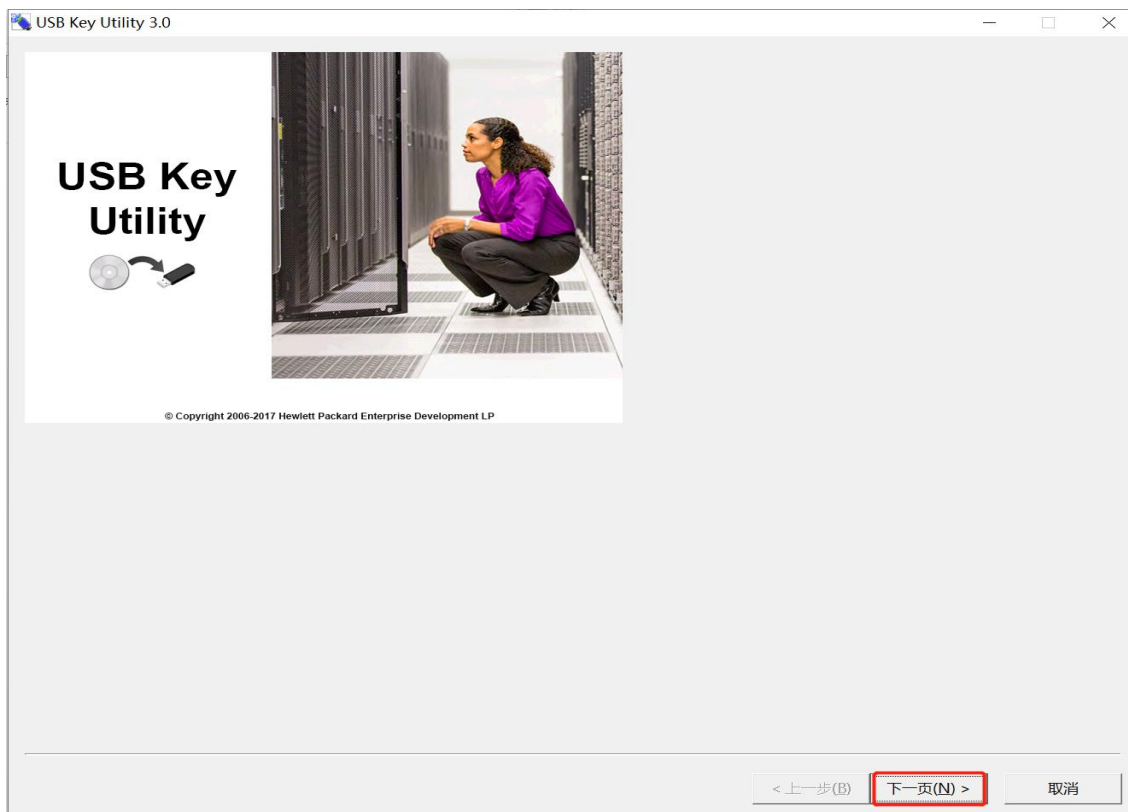




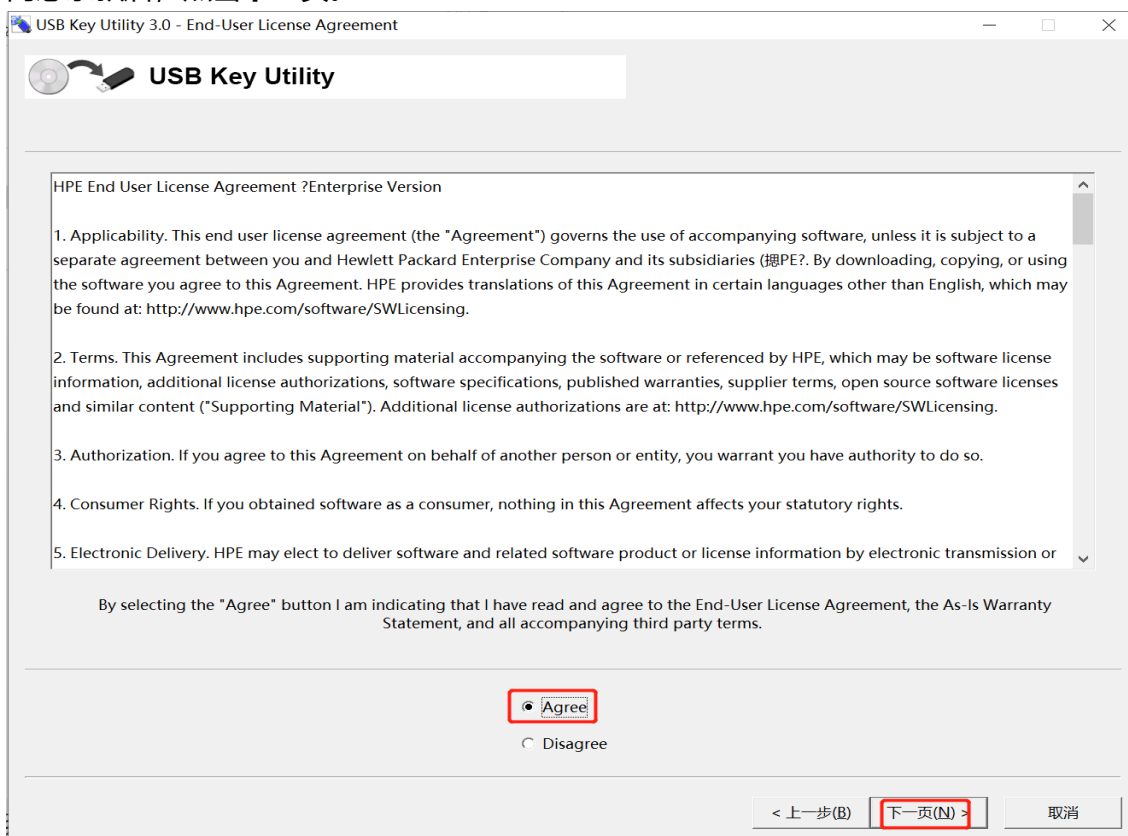
点击 **Close**。



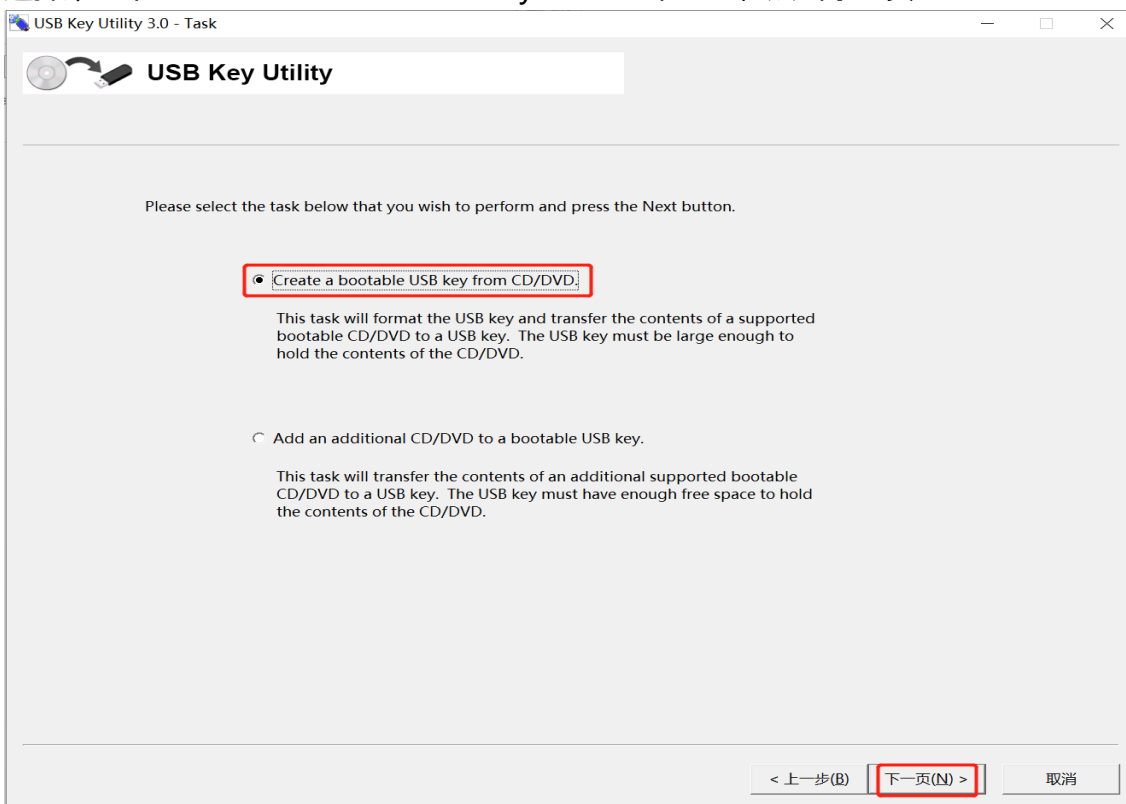
3) 找到下载好的工具，打开点击**下一页**。



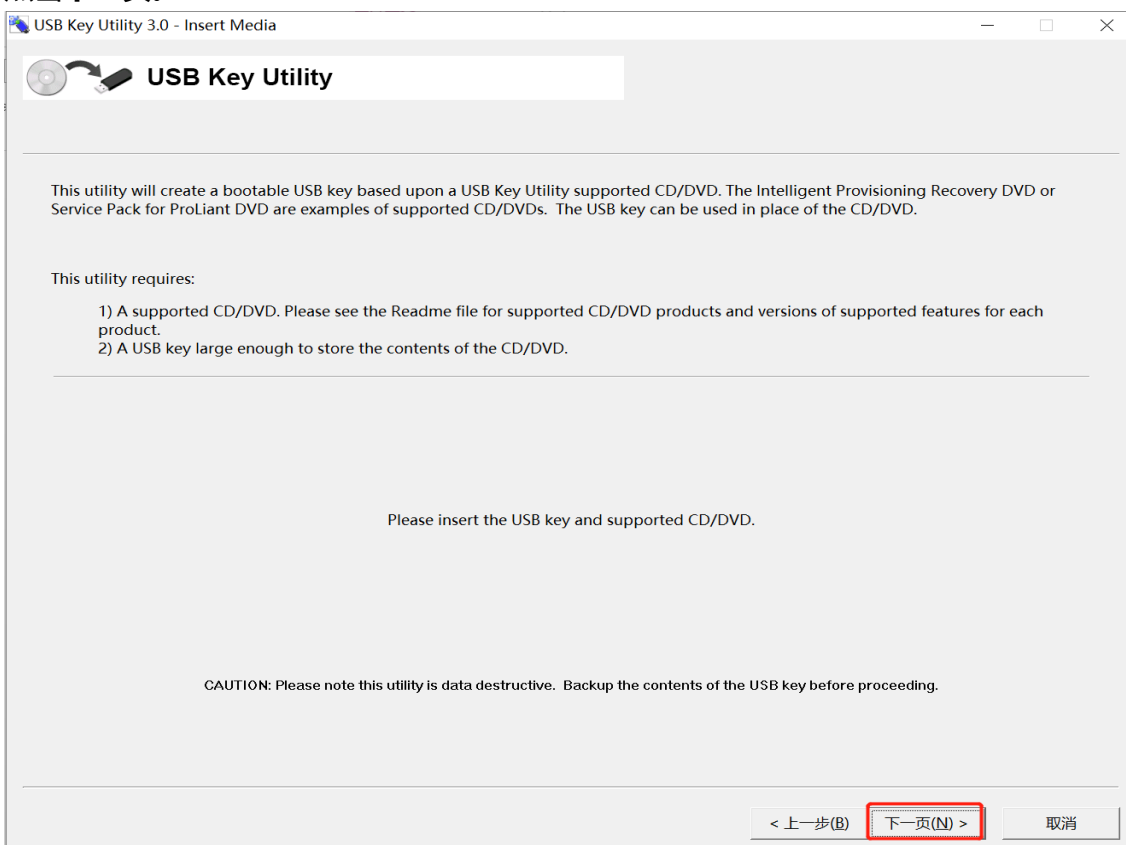
4) 同意条款后，点击下一页。



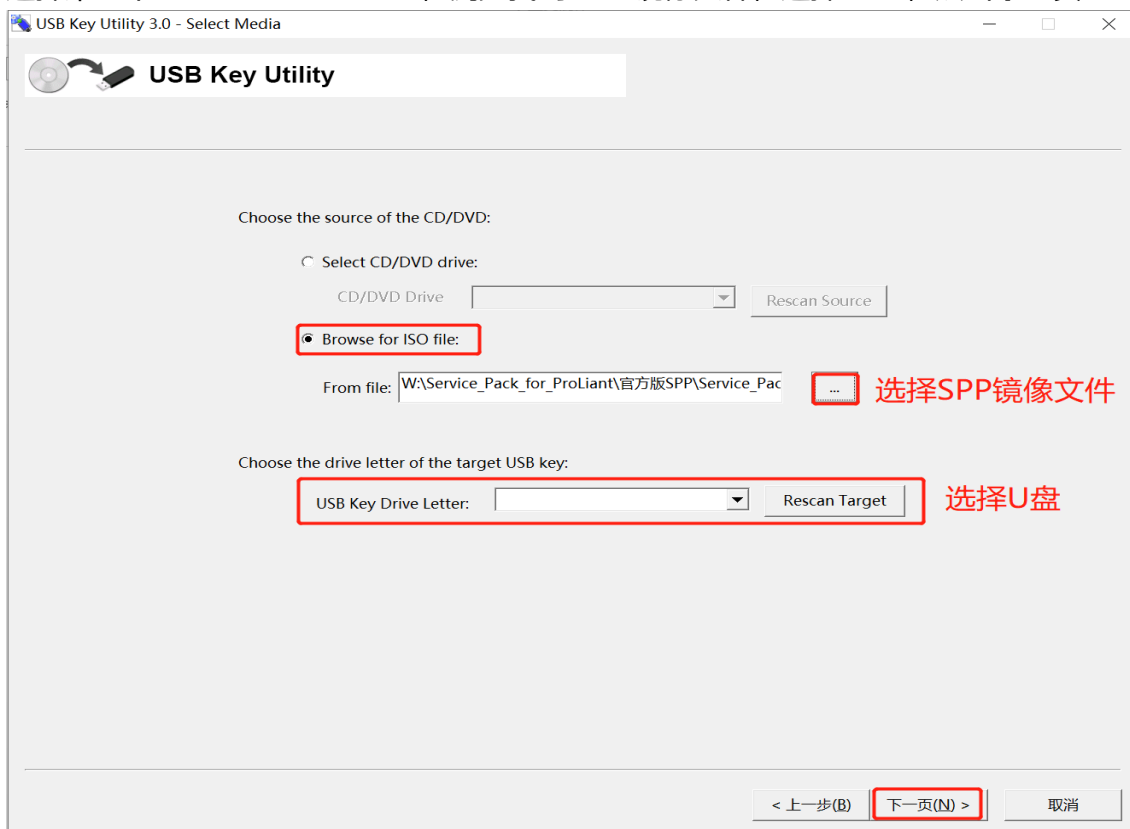
5) 选择第一个 Create a bootable USB Key from CD/DVD，点击**下一页**。



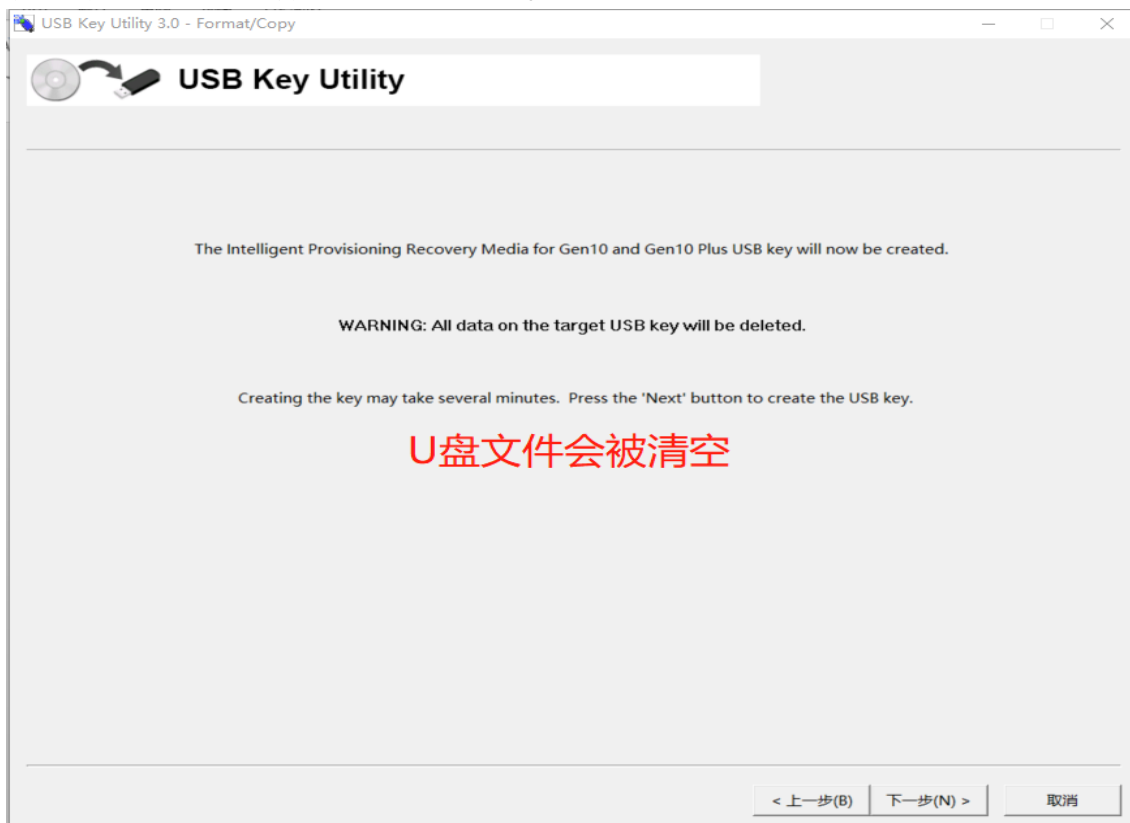
6) 点击**下一页**。



7) 选择第二个 Browse for ISO file, 浏览找到 SPP 镜像文件, 选择 U 盘, 点击**下一页**。



8) 提示会清空 U 盘里的数据, 点击**下一步**即可。



9) 等待一段时间后制作完成。

