

如何使用EFI外壳将安全恶意软件分析设备引导到恢复模式并向引导选项添加恢复模式

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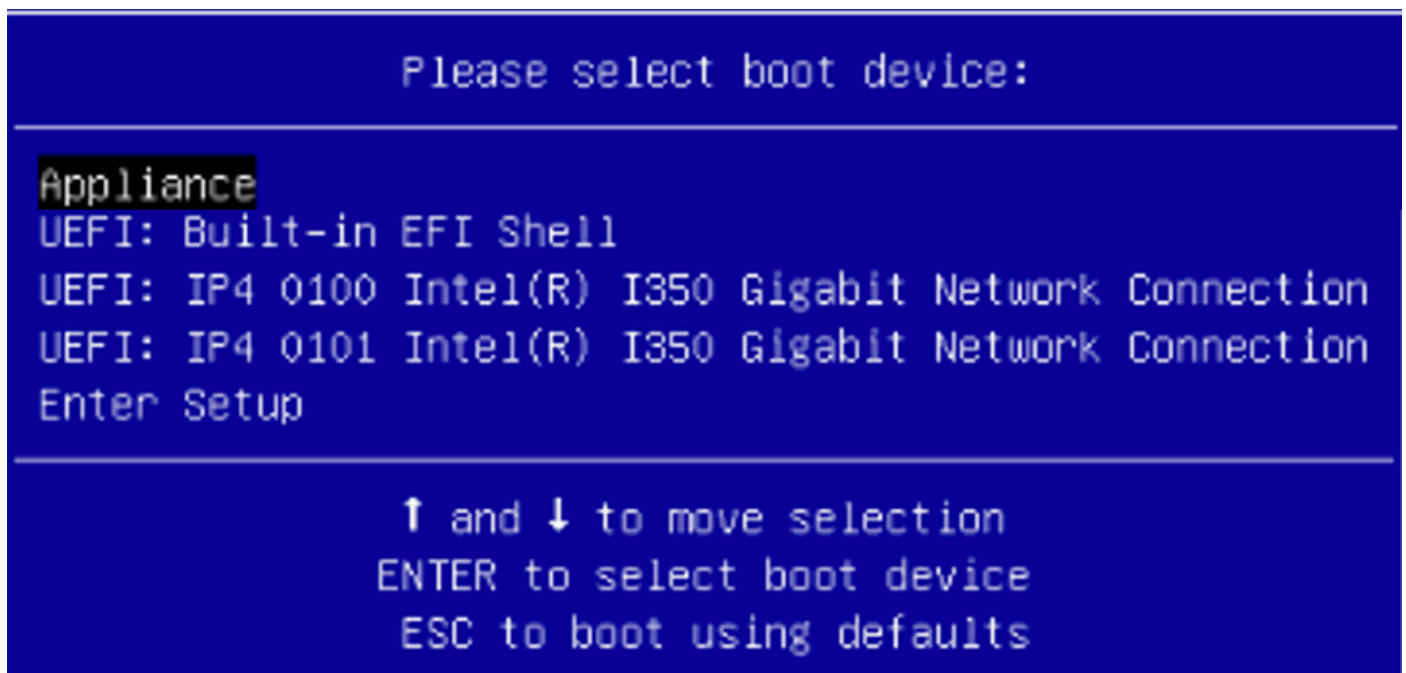
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简介

本文档介绍如何使用EFI外壳将安全恶意软件分析设备引导到恢复模式以及将恢复模式添加到引导选项的步骤。

问题

您将能够看到，如图所示，BIOS窗口中未显示恢复模式：



要在此场景中引导到恢复模式，我们必须使用下一节中介绍的步骤。

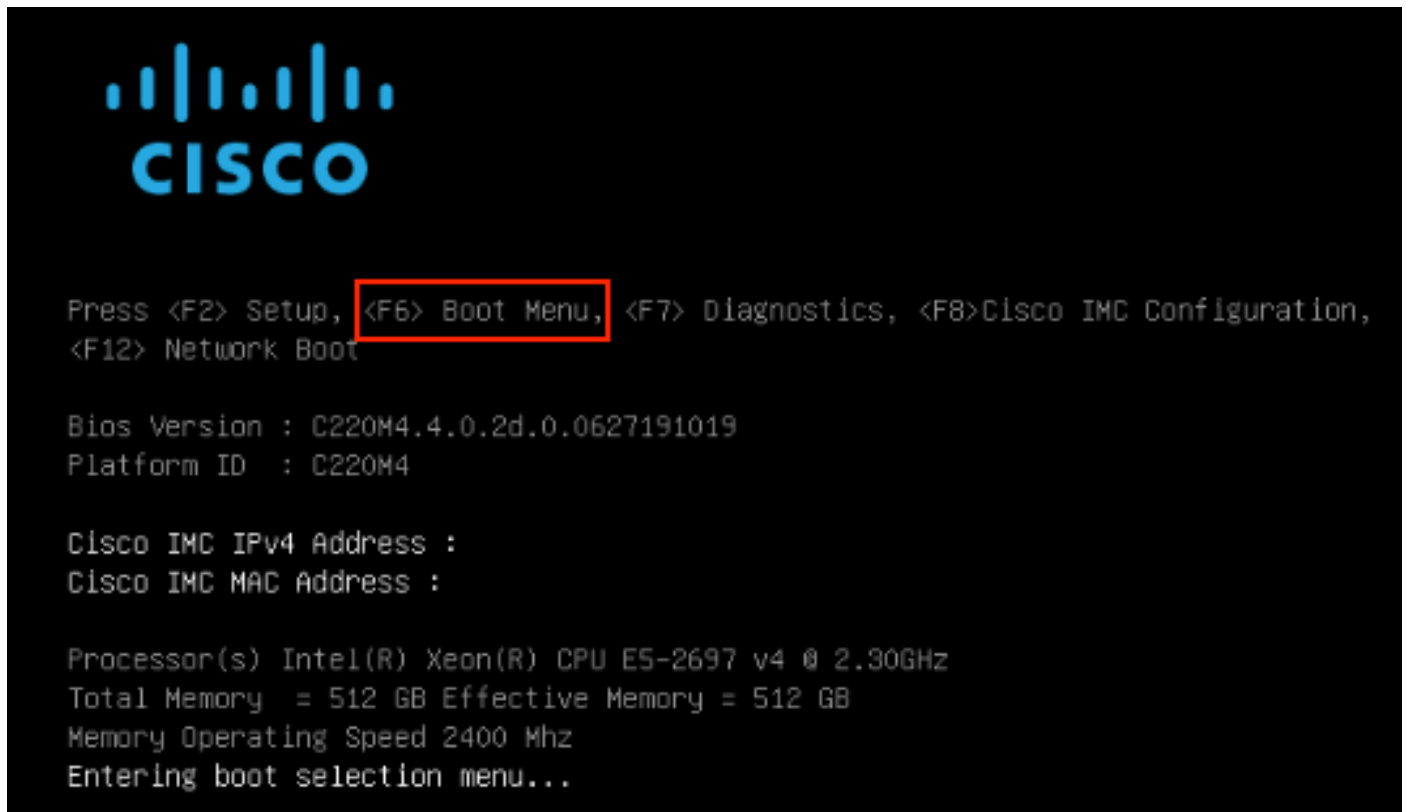
解决方案

EFI外壳

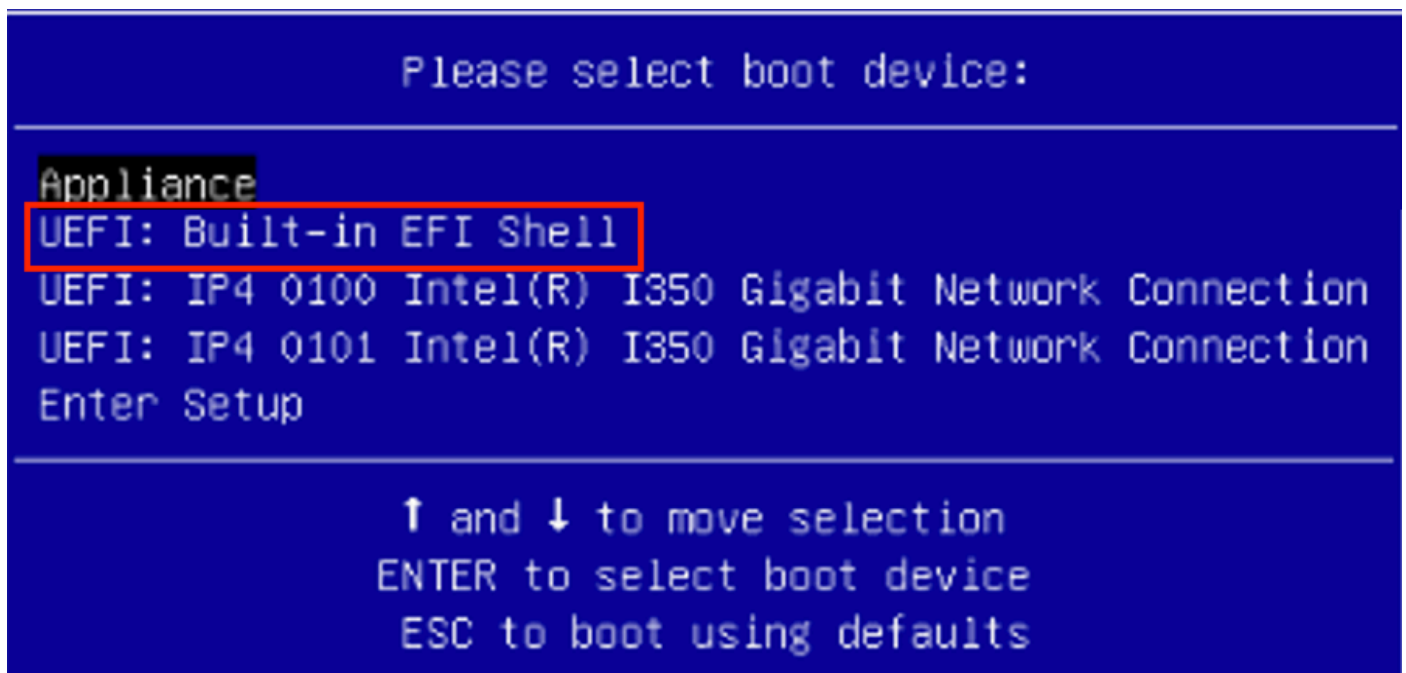
步骤1.将KVM适配器连接到外部显示器和键盘，并将其插入位于设备前面的KVM端口。如果CIMC可用且已配置，则可以使用远程KVM。

步骤2.重新启动设备。

步骤3.在BIOS窗口中按F6，查看可能的引导目标列表。



步骤4.选择UEFI:内置EFI外壳。



步骤5.在启动脚本完成之后，按ESC键进入EFI Shell。

步骤6.可用文件系统的列表。

```
UEFI Interactive Shell v2.0. UEFI v2.40 (American Megatrends, 0x0005000B). Revision 1.02
Mapping table
fs0: Alias(s):HD29a0b::blk1:
    PciRoot(0x0)/Pci(0x2,0x2)/Pci(0x0,0x0)/Ctrl(0x0)/Scsi(0x0,0x0)/HD(1,GPT,7303FEC6-7E81-4D8B-961C-AE562681960F,0x800,0x400000)
fs1: Alias(s):HD29b0b::blk5:
    PciRoot(0x0)/Pci(0x2,0x2)/Pci(0x0,0x0)/Ctrl(0x0)/Scsi(0x1,0x0)/HD(1,GPT,C65AF6B6-C149-4184-B744-EB15CD03805B,0x800,0x400000)
blk0: Alias(s):
    PciRoot(0x0)/Pci(0x2,0x2)/Pci(0x0,0x0)/Ctrl(0x0)/Scsi(0x0,0x0)
blk4: Alias(s):
    PciRoot(0x0)/Pci(0x2,0x2)/Pci(0x0,0x0)/Ctrl(0x0)/Scsi(0x1,0x0)
blk2: Alias(s):
    PciRoot(0x0)/Pci(0x2,0x2)/Pci(0x0,0x0)/Ctrl(0x0)/Scsi(0x0,0x0)/HD(2,GPT,900A83C7-D4F4-44C3-B6D3-35D2DCC6249F,0x400800,0x4000000)
blk3: Alias(s):
    PciRoot(0x0)/Pci(0x2,0x2)/Pci(0x0,0x0)/Ctrl(0x0)/Scsi(0x0,0x0)/HD(3,GPT,D5A6A81E-85F9-464B-9277-3E4A89B43D65,0x800800,0xD5A6FDF)
blk6: Alias(s):
    PciRoot(0x0)/Pci(0x2,0x2)/Pci(0x0,0x0)/Ctrl(0x0)/Scsi(0x1,0x0)/HD(2,GPT,ED9A0467-38FD-4DCF-A409-057CEC64FA1E,0x400800,0x2B9A8CFDF)
Press ESC in 5 seconds to skip startup.nsh or any other key to continue.
Shell> _
```

步骤7.此时，您需要找到位于其中一个文件系统上的“恢复”目录。

步骤8.导航到该目录。

```
Shell> fs1:
fs1:\> dir
Directory of: fs1:\
03/16/2022 17:12          31,736 meta_contents.tar.xz
10/26/2020 11:29           149 startup.nsh
12/21/2016 23:42 <DIR>      4,096 efi
04/30/2021 08:28      836,030,464 recovery.rosfs
          3 File(s) 836,062,349 bytes
          1 Dir(s)

fs1:\> cd efi
fs1:\efi> dir
Directory of: fs1:\efi\
12/21/2016 23:42 <DIR>      4,096 .
12/21/2016 23:42 <DIR>         0 ..
04/30/2021 08:28 <DIR>      4,096 Recovery
          0 File(s) 0 bytes
          3 Dir(s)

fs1:\efi> cd Recovery
fs1:\efi\Recovery> dir
Directory of: fs1:\efi\Recovery\
12/21/2016 23:42 <DIR>      4,096 .
12/21/2016 23:42 <DIR>      4,096 ..
04/30/2021 08:28          18,255,144 boot.efi
          1 File(s) 18,255,144 bytes
          2 Dir(s)
```

步骤9.执行命令fs1:\efi\Recovery\boot.efi

步骤10.设备引导到恢复模式。

```
>>
>>
>> help
COMMANDS:
  configure -- show|set: View or modify configuration variables
  comms     -- listening|open|all: Show open connections
  destroy-data -- Reset appliance to be a target for the restore process
  exit      -- Exit tgsh.
  graphql   -- Following content until the next empty line is treated as a GraphQL query to run
  halt      -- Halt appliance
  help      -- List available commands, or 'help COMMAND' for details.
  netconfig -- Update configured network settings
  netconfig-apply -- Modify active network configuration to match saved settings
  netinfo   -- routes|firewall|address|stats: Show network configuration and status
  opadmin   -- import|check: Sync from, or validate, new configuration format
  passwd    -- Change password for this account
  ping      -- ping [-c count] [-I interface] host: ping a remote host
  poweroff  -- Power off appliance
  reboot    -- Reboot appliance
  reconfigure -- single|with-reinstall: Nondestructively rerun configuration in single-user mode, with or without preceding reinstall
  service   -- {status|start|stop|restart} [svc-name]: Toggle ThreatGRID services
  support-mode -- status|start|stop: Toggle support mode
  traceroute -- Determine the path used to a network location
  version   -- Shows appliance version
>>
```

将恢复模式添加到引导选项

步骤1.将KVM适配器连接到外部显示器和键盘，并将其插入位于设备前面的KVM端口。如果CIMC可用且已配置，则可以使用远程KVM。

步骤2.重新启动设备。

步骤3.在BIOS窗口中按F6，查看可能的引导目标列表。



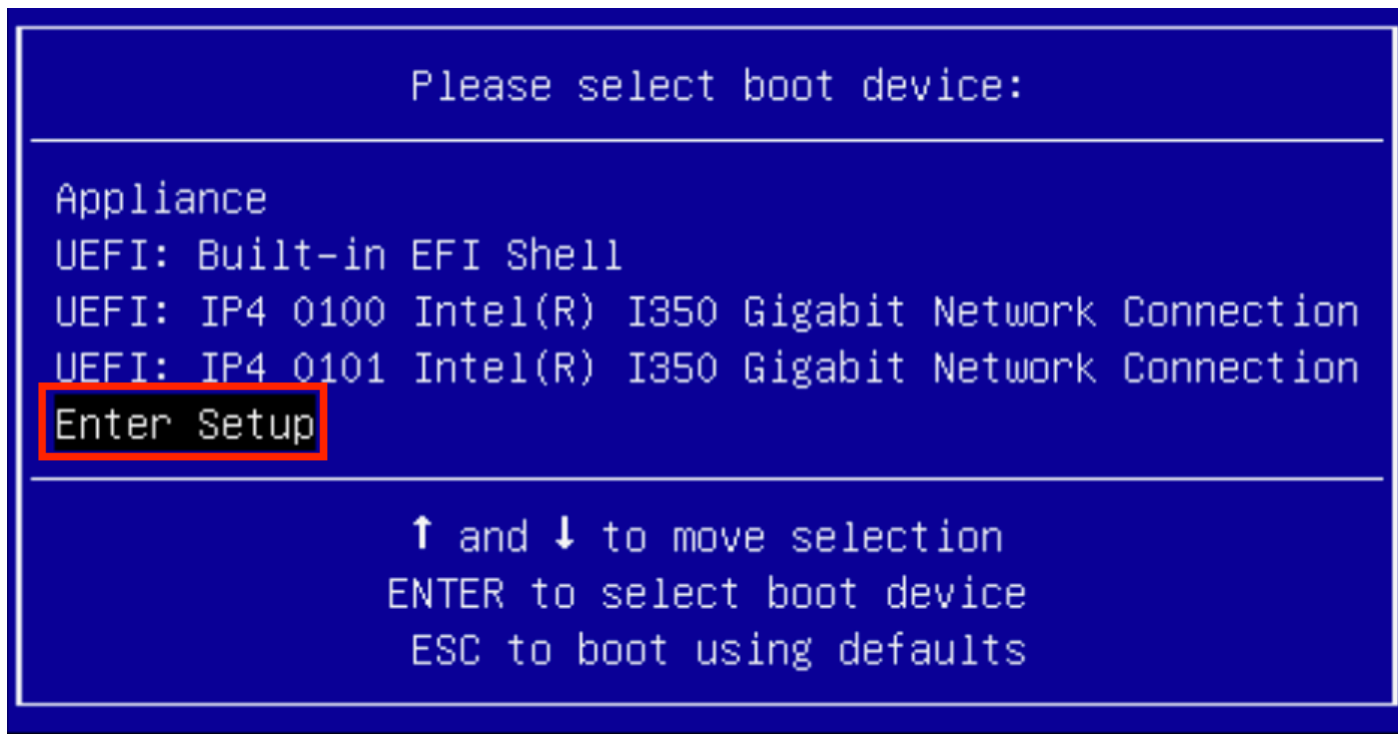
```
Press <F2> Setup, <F6> Boot Menu, <F7> Diagnostics, <F8>Cisco IMC Configuration,
<F12> Network Boot

Bios Version : C220M4.4.0.2d.0.0627191019
Platform ID  : C220M4

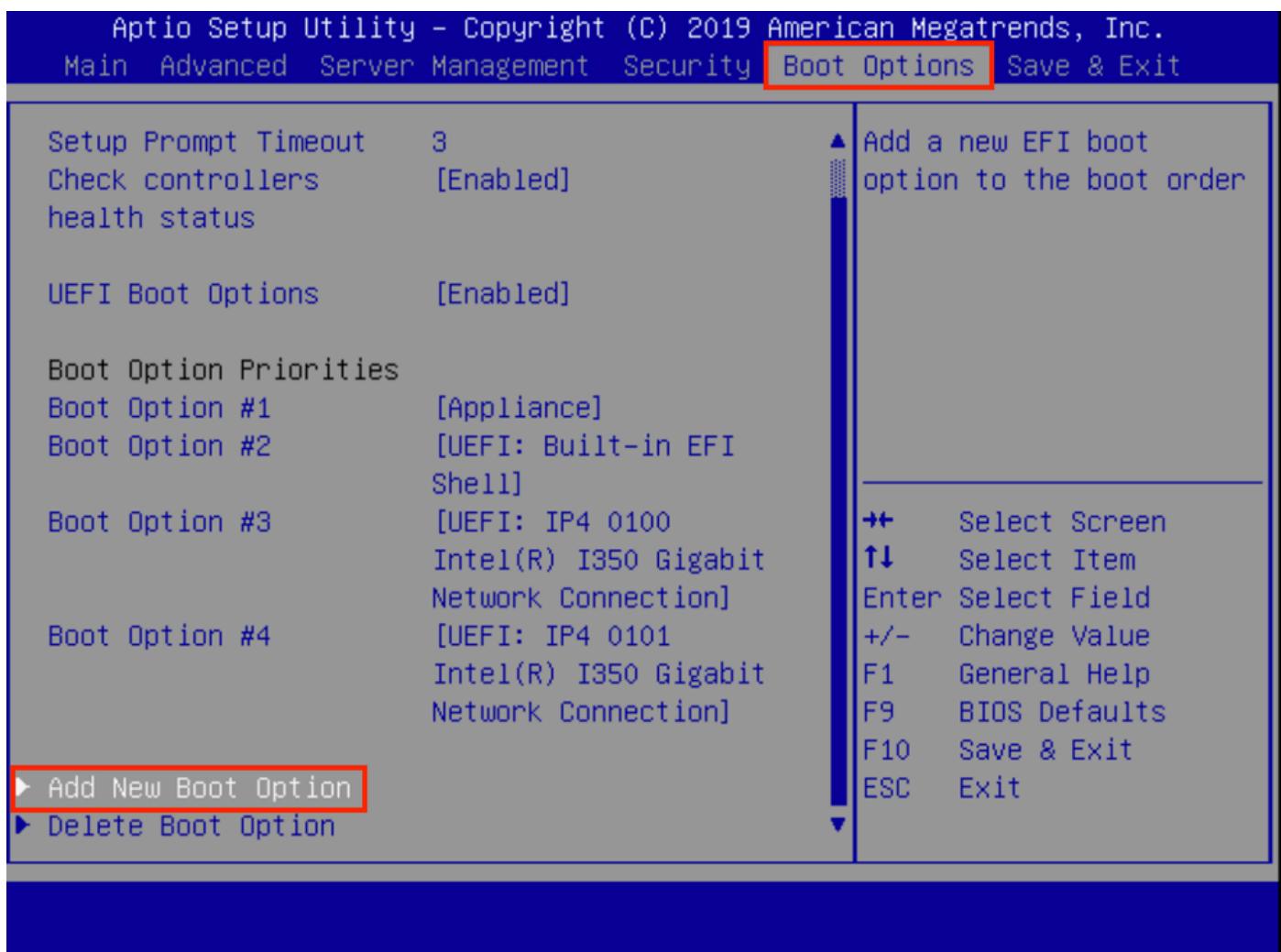
Cisco IMC IPv4 Address :
Cisco IMC MAC Address :

Processor(s) Intel(R) Xeon(R) CPU E5-2697 v4 @ 2.30GHz
Total Memory = 512 GB Effective Memory = 512 GB
Memory Operating Speed 2400 Mhz
Entering boot selection menu...
```

步骤4.选择“输入设置”。



步骤5.导航至“引导选项”，滚动到底部，然后选择“添加新引导选项”。



步骤6.选择“添加引导选项”并键入“恢复”。

Add New Boot Option

Add boot option

Path for boot option

Boot option File Path

Create

Specify name for new boot option

Add boot option
Recovery_

→← Select Screen
↑↓ Select Item
Enter Select Field
+/- Change Value
F1 General Help
F9 BIOS Defaults
F10 Save & Exit
ESC Exit

步骤7.选择Path for boot选项，然后选择适当的File System。

Add New Boot Option

Enter the path to the boot option in the format

Add boot option

Recovery

Path for boot option

fsx:\path\filename.efi

Boot option File Path

Select a File System

PCI(2|2)\PCI(0|0)\DevicePath(Type 1, SubType 5)SCSI(0,0)\HD(Part1,Sig7303f

PCI(2|2)\PCI(0|0)\DevicePath(Type 1, SubType 5)SCSI(1,0)\HD(Part1,Sigc65af

↑↓ Select Item
Enter Select Field
+/- Change Value
F1 General Help
F9 BIOS Defaults
F10 Save & Exit
ESC Exit

步骤8.选择<efi>、<Recovery>和<boot.efi>。

Select a File to Boot

<efi>

Select a File to Boot

<...>

<Recovery>

Select a File to Boot

<...>

boot.efi

步骤9.选择“创建”。

Add New Boot Option

Creates the newly
formed boot option

Add boot option

Recovery

Path for boot option

Boot option File Path

\efi\Recovery\boot.efi

Create

←→ Select Screen

↑↓ Select Item

Enter Select Field

+/- Change Value

F1 General Help

F9 BIOS Defaults

F10 Save & Exit

ESC Exit

步骤10.创建新的引导选项。

Add New Boot Option

Creates the newly
formed boot option

Add boot option Recovery

Path for boot option

Boot option File Path \efi\Recovery\boot.efi

Create

SUCCESS

Boot Option Created Successfully

OK

Select Screen

Select Item

Select Field

+/- Change Value

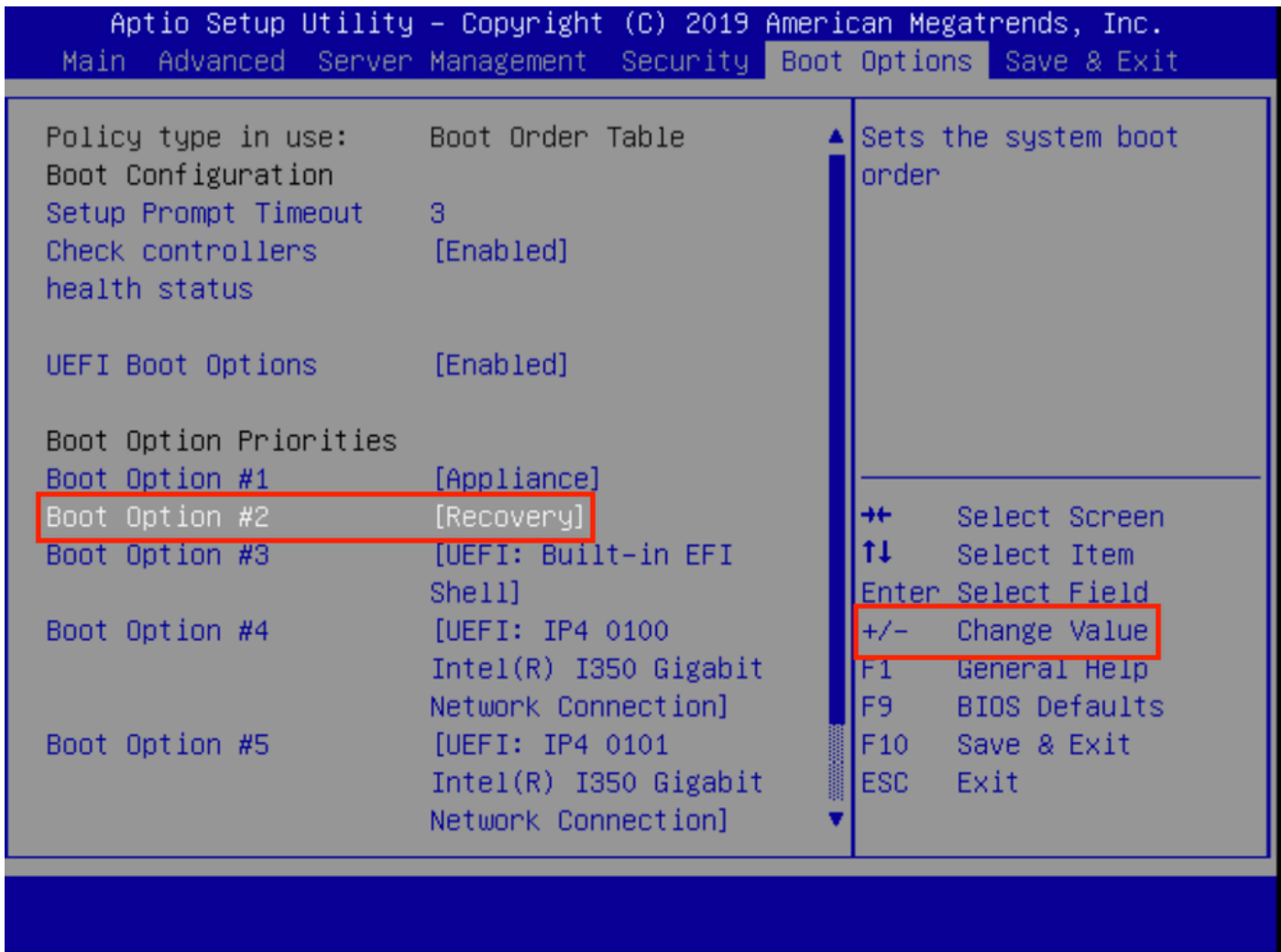
F1 General Help

F9 BIOS Defaults

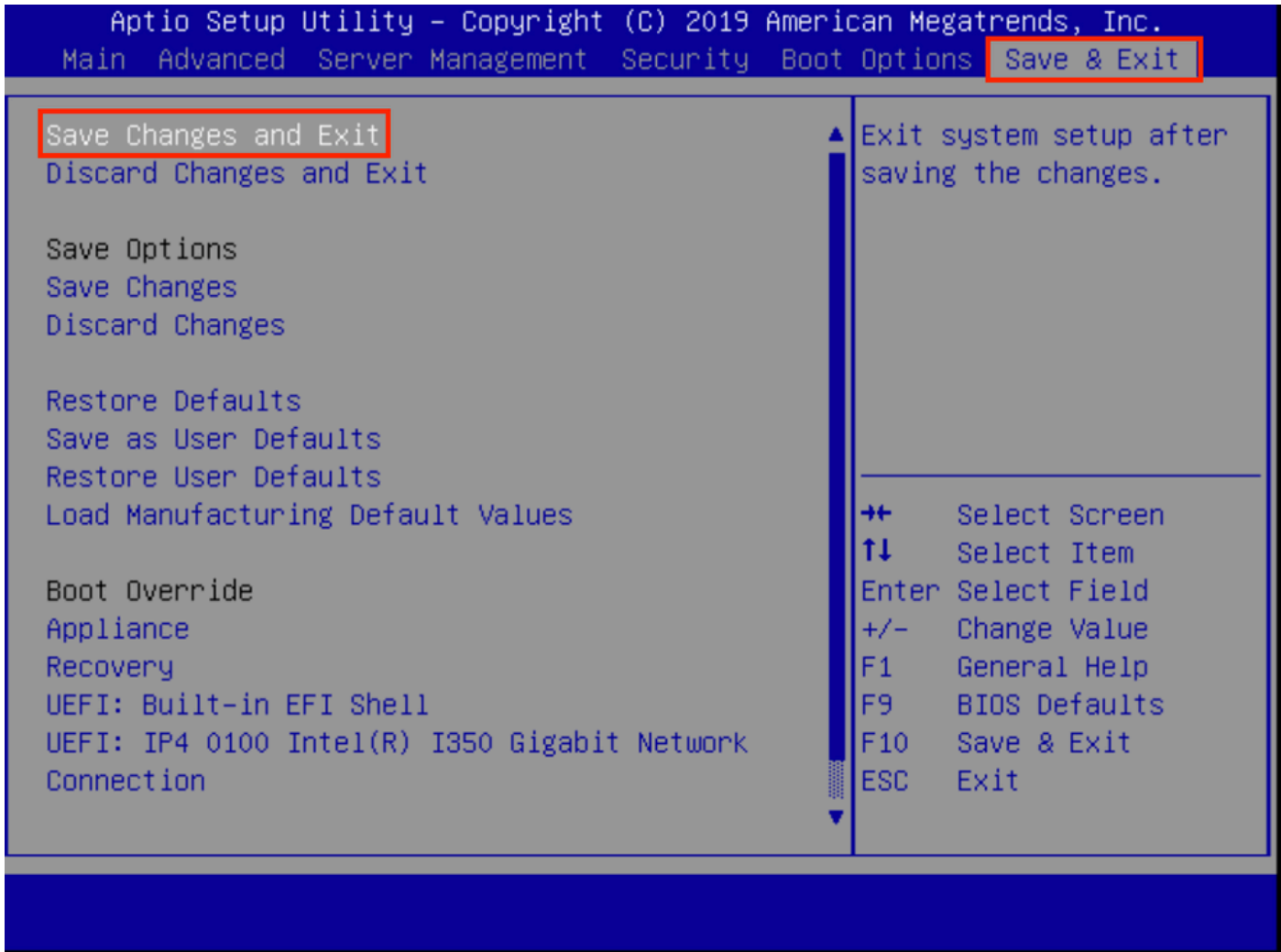
F10 Save & Exit

ESC Exit

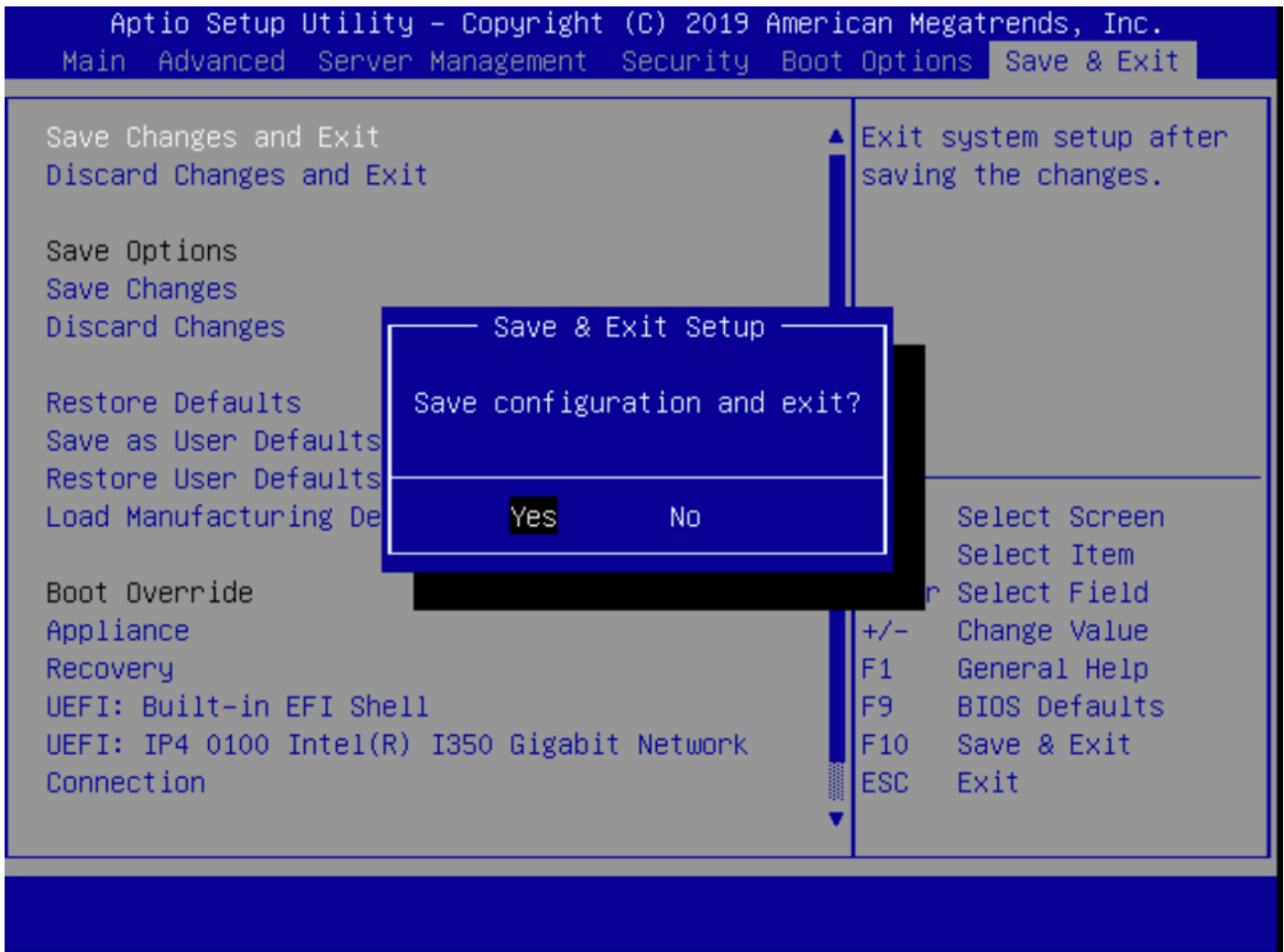
步骤12.将“恢复”选项放在#2处，并带有+/- 按钮。



步骤13. 导航至“保存并退出”，然后选择“保存更改并退出”。



步骤14.确认更改。



步骤15.设备正常启动。

有关详细信息，请参阅[安全恶意软件分析设备管理指南](#)。