

Dual Window Grub Bootloader

If Windows update overwrites the Grub bootloader. Simple way to restore is to copy the debian bootloader (grubx64.efi) over the windows bootloader. We do the following steps:

1. Save the bootloader installed by Windows: `copy E:\EFI\Microsoft\Boot\bootmgfw.efi E:\EFI\Microsoft\Boot\bootmgfw.efi.original`
2. Copy the debian grub bootloader over the bootloader installed by Microsoft (bootmgfw.efi). `copy E:\EFI\debian\grubx64.efi E:\EFI\Microsoft\Boot\bootmgfw.efi`
3. Add an entry in Grub boot menu to start the original windows loader.

Correct within Windows

Open CMD prompt as "Administrator" and mount the EFT partition as E: drive with:

```
mountvol E: /S

E:\EFI>dir
Volume in drive E has no label.
Volume Serial Number is 502B-5BC6

Directory of E:\EFI

06-12-2016  20:05    <DIR>          .
06-12-2016  20:05    <DIR>          ..
06-12-2016  20:05    <DIR>          Microsoft
13-02-2021  19:01    <DIR>          Boot
27-11-2021  20:18    <DIR>          HP
13-02-2021  08:35    <DIR>          debian
               0 File(s)                0 bytes
               6 Dir(s)          160.800.768 bytes free
```

copy the debian grub bootloader over the bootloader installed by Microsoft (bootmgfw.efi).

```
copy E:\EFI\debian\grubx64.efi E:\EFI\Microsoft\Boot\bootmgfw.efi
```

Add Windows entry in grub

Add the following lines to: `/etc/grub.d/40_custom`

```
menuentry 'WIN 10 (on /dev/sda1)' --class windows --class os
$menuentry_id_option 'Win10-efi-502B-5BC6' {
    insmod part_gpt
    insmod fat
    set root='hd0,gpt1'
    if [ x$feature_platform_search_hint = xy ]; then
```

```
        search --no-floppy --fs-uuid --set=root --hint-bios=hd0,gpt1 --
hint-efi=hd0,gpt1 --hint-baremetal=ahci0,gpt1 502B-5BC6
    else
        search --no-floppy --fs-uuid --set=root 502B-5BC6
    fi
    chainloader /EFI/Microsoft/Boot/bootmgfw.efi.original.20221209
}
```

Change Bootorder

```
efibootmgr -v

BootCurrent: 0001
Timeout: 5 seconds
BootOrder: 0002,0001,3001,0000,2001,2002
Boot0000* Notebook Hard Drive - SAMSUNG MZNTY128HDHP-000H1 BBS(HD,Notebook
Hard Drive - SAMSUNG MZNTY128HDHP-000H1,0x500).....-
.....A.....'|.....A.....
.....
Boot0001* Windows Boot Manager HD(1,GPT,76a20ae2-4fb2-11ec-bae4-
fc39c25e3ce4,0x800,0x82000)/File(\EFI\Microsoft\Boot\bootmgfw.efi)RC
Boot0002* debian HD(1,GPT,76a20ae2-4fb2-11ec-bae4-
fc39c25e3ce4,0x800,0x82000)/File(\EFI\debian\shimx64.efi)
Boot2001* EFI USB Device RC
Boot2002* EFI DVD/CDROM RC
Boot3001* Internal Hard Disk or Solid State Disk RC
```

Change the boot order:

```
efibootmgr -o 0002,0001,3001,0000,2001,2002
```

BCDedit

```
C:\WINDOWS\system32>bcdedit

Windows Boot Manager
-----
identifier          {bootmgr}
device              partition=\Device\HarddiskVolume1
path                \EFI\Microsoft\Boot\bootmgfw.efi
description         Windows Boot Manager
locale              nl-NL
inherit             {globalsettings}
default             {current}
resumeobject        {6beefd36-680a-11eb-ac07-a7444769703e}
displayorder        {current}
```

```

toolsdisplayorder    {memdiag}
timeout              0

Windows Boot Loader
-----
identifier           {current}
device               partition=C:
path                 \WINDOWS\system32\winload.efi
description           Windows 10
locale               nl-NL
inherit              {bootloadersettings}
recoverysequence     {5c5834f8-aff6-11e9-ac26-ce270aa00281}
displaymessageoverride Recovery
recoveryenabled      Yes
isolatedcontext      Yes
allowedinmemorysettings 0x15000075
osdevice             partition=C:
systemroot           \WINDOWS
resumeobject         {6beefd36-680a-11eb-ac07-a7444769703e}
nx                   OptIn
bootmenupolicy       Standard

```

```

bcdedit /set {bootmgr} path \EFI\debian\grubx64.efi
bcdedit /set {bootmgr} path \EFI\Microsoft\Boot\bootmgfw.efi

bcdedit /enum firmware
bcdedit /timeout 10
bcdedit /copy {current} /d "Linux"

```

```

Windows Boot Manager
-----
identifier           {6beefd39-680a-11eb-ac07-a7444769703e}
device               partition=\Device\HarddiskVolume1
path                 \EFI\Microsoft\Boot\bootmgfw.efi
description           Linux
locale               nl-NL
inherit              {globalsettings}
default              {current}
resumeobject         {6beefd36-680a-11eb-ac07-a7444769703e}
displayorder         {current}
toolsdisplayorder    {memdiag}
timeout              10

```

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